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OPERATING SYSTEM = NOS 2.8.7 871/871. 23/09/20. PRINTED = 24/05/28. 19.16.42.												
UJN = COMPASS				FAMILY = CYBER				JOB ORIGIN = BATCH.				
CREATING JSN = AACN				USER NAME = INSTALL				SERVICE CLASS = BATCH.				

////

1

DECKS ARE LISTED IN THE ORDER OF THEIR OCCURRENCE ON A NEW PROGRAM LIBRARY IF ONE IS CREATED BY THIS UPDATE

1	YANK\$\$\$ CCPS	1
2		2
3		3
4	DECKS WRITTEN TO COMPILE FILE	4
5		5
6		6
7	CCPS	7
8		8
9		9
10	THIS UPDATE REQUIRED 62200B WORDS OF MEMORY.	10
11		11
12		12
13		13
14		14
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19		19
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1412THE

1	CPUREL	*CALL	COMCARG	CPUREL	CPUREL	7	1
2	CPUREL	*CALL	COMCCDD	CPUREL	CPUREL	15	2
3	CPUREL	*CALL	COMCCFD	CPUREL	CPUREL	23	3
4	CPUREL	*IF -DEF,SC2MACRO			F4720B	5	4
5	CPUREL	*CALL	COMCCIO	CPUREL	CPUREL	31	5
6	CPUREL	*ENDIF			F4720B	6	6
7	CPUREL	*CALL	COMCCOD	CPUREL	CPUREL	38	7
8	CPUREL	*CALL	COMCCPT	CPUREL	CPUREL	46	8
9	CPUREL	*CALL	COMCDXB	CPUREL	CPUREL	54	9
10	CPUREL	*CALL	COMCMNS		F4720C	431	10
11	CPUREL	*CALL	COMCMOS		F4720C	441	11
12	CPUREL	*CALL	COMCMVE	CPUREL	CPUREL	63	12
13	CPUREL	*IF -DEF,SC2MACRO			F4720B	7	13
14	CPUREL	*CALL	COMCRDC	CPUREL	CPUREL	70	14
15	CPUREL	*CALL	COMCRDH	CPUREL	CPUREL	77	15
16	CPUREL	*CALL	COMCRDO	CPUREL	CPUREL	84	16
17	CPUREL	*CALL	COMCRDS	CPUREL	CPUREL	91	17
18	CPUREL	*CALL	COMCRDW	CPUREL	CPUREL	101	18
19	CPUREL	*ENDIF			F4720B	8	19
20	CPUREL	*CALL	COMCRSR	CPUREL	CPUREL	109	20
21	CPUREL	*CALL	COMCSFN	CPUREL	CPUREL	117	21
22	CPUREL	*CALL	COMCSRT	CPUREL	CPUREL	125	22
23	CPUREL	*CALL	COMCSST	CPUREL	CPUREL	133	23
24	CPUREL	*IF -DEF,SC2MACRO			F4720B	9	24
25	CPUREL	*CALL	COMCSTF	CPUREL	CPUREL	141	25
26	CPUREL	*ENDIF			F4720B	10	26
27	CPUREL	*CALL	COMCSVR	CPUREL	CPUREL	149	27
28	CPUREL	*IF -DEF,SC2MACRO			F4720B	11	28
29	CPUREL	*CALL	COMCSYS	CPUREL	CPUREL	161	29
30	CPUREL	*ENDIF			F4720B	12	30
31	CPUREL	*CALL	COMCUPC	CPUREL	CPUREL	168	31
32	CPUREL	*CALL	COMCWOD	CPUREL	CPUREL	176	32
33	CPUREL	*IF -DEF,SC2MACRO			F4720B	13	33
34	CPUREL	*CALL	COMCWTC	CPUREL	CPUREL	184	34
35	CPUREL	*CALL	COMCWTH	CPUREL	CPUREL	191	35
36	CPUREL	*CALL	COMCWTO	CPUREL	CPUREL	198	36
37	CPUREL	*CALL	COMCWTS	CPUREL	CPUREL	205	37
38	CPUREL	*CALL	COMCWTW	CPUREL	CPUREL	215	38
39	CPUREL	*CALL	COMCXJR	CPUREL	CPUREL	222	39
40	CPUREL	*ENDIF			F4720B	14	40
41	CPUREL	*CALL	COMCZTB	CPUREL	CPUREL	230	41
42							42
43							43
44	CALLCPU	*CALL	COMCARG	CALLCPU	CALLCPU	25	44
45	CALLCPU	*CALL	COMCCDD	CALLCPU	CALLCPU	26	45
46	CALLCPU	*CALL	COMCCFD	CALLCPU	CALLCPU	27	46
47	CALLCPU	*IF -DEF,SC2MACRO			F4720B	15	47
48	CALLCPU	*CALL	COMCCIO	CALLCPU	CALLCPU	28	48
49	CALLCPU	*ENDIF			F4720B	16	49
50	CALLCPU	*CALL	COMCCOD	CALLCPU	CALLCPU	29	50
51	CALLCPU	*IF -DEF,SC2MACRO			CPSA289	5	51
52	CALLCPU	*CALL	COMCCPM		CPSA289	6	52
53	CALLCPU	*ENDIF			CPSA289	7	53
54	CALLCPU	*CALL	COMCCPT	CALLCPU	CALLCPU	30	54
55							55
56							56
57							57
58							58
59							59
60							60

```
CALLCPU *CALL COMCDXB
CALLCPU *CALL COMCMNS
CALLCPU *CALL COMCMOS
CALLCPU *CALL COMCMTM
CALLCPU *CALL COMCMTP
CALLCPU *CALL COMCMVE
CALLCPU *IF -DEF,SC2MACRO
CALLCPU *CALL COMCRDC
CALLCPU *CALL COMCRDH
CALLCPU *CALL COMCRDO
CALLCPU *CALL COMCRDS
CALLCPU *CALL COMCRDW
CALLCPU *ENDIF
CALLCPU *CALL COMCRSR
CALLCPU *CALL COMCSFN
CALLCPU *CALL COMCSRT
CALLCPU *CALL COMCSST
CALLCPU *IF -DEF,SC2MACRO
CALLCPU *CALL COMCSTF
CALLCPU *ENDIF
CALLCPU *CALL COMCSVR
CALLCPU *IF -DEF,SC2MACRO
CALLCPU *CALL COMCSYS
CALLCPU *ENDIF
CALLCPU *CALL COMCUPC
CALLCPU *CALL COMCWOD
CALLCPU *IF -DEF,SC2MACRO
CALLCPU *CALL COMCWTC
CALLCPU *CALL COMCWTH
CALLCPU *CALL COMCWTO
CALLCPU *CALL COMCWTS
CALLCPU *CALL COMCWTW
CALLCPU *CALL COMCXJR
CALLCPU *ENDIF
CALLCPU *CALL COMCZTB
```

```
CWEOR *CWEOR,0
```

```
COMPASS *CALL COMPCOM
COMPASS *CALL COMCCIO
COMPASS *CALL COMCRDC
COMPASS *CALL COMCRDW
COMPASS *CALL COMCWTH
COMPASS *CALL COMCWTW
COMPASS *CALL COMCSTF
COMPASS *CALL COMCCPM
COMPASS *CWEOR 14
```

```
AIDTEXT *CWEOR 14
```

```
CALLCPU CALLCPU 31
F4720C 445
F4720C 446
CALLCPU CALLCPU 32
CALLCPU CALLCPU 33
CALLCPU CALLCPU 34
F4720B 17
CALLCPU CALLCPU 35
CALLCPU CALLCPU 36
CALLCPU CALLCPU 37
CALLCPU CALLCPU 38
CALLCPU CALLCPU 39
F4720B 18
CALLCPU CALLCPU 40
CALLCPU CALLCPU 41
CALLCPU CALLCPU 42
CALLCPU CALLCPU 43
F4720B 19
CALLCPU CALLCPU 44
F4720B 20
CALLCPU CALLCPU 45
F4720B 21
CALLCPU CALLCPU 46
F4720B 22
CALLCPU CALLCPU 47
CALLCPU CALLCPU 48
F4720B 23
CALLCPU CALLCPU 49
CALLCPU CALLCPU 50
CALLCPU CALLCPU 51
CALLCPU CALLCPU 52
CALLCPU CALLCPU 53
CALLCPU CALLCPU 54
F4720B 24
CALLCPU CALLCPU 55
```

```
S013 4 CWEOR 2
```

```
CMP30 350
CMP20 44
CMP20 46
CMP20 47
CMP20 49
CMP20 50
CPSA266 6
CPSA265 64
AIDTEXT 1
```

```
NADTEXT 1
```

CWEOR2

*CWEOR,0

CWEOR2

2

1	CDCM	*CALL CDCMOPT	CDCM	6	1
2					2
3					3
4					4
5					5
6					6
7					7
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1412THE

CORRECTION IDENTS ARE LISTED IN CHRONOLOGICAL ORDER OF INSERTION

1	COMPASS	SCP05	CPC1	MCPC1	CCIO1	COPE1	CSRT1	CPC2	1
2	CMP1	CMP3	CP13226	CMP4	CMP5	CMP6	CMP7	CMP8	2
3	CMP9	CMP10	CMP11	CMP12	CMP13	CP12752	CMP5A	CMP14	3
4	CMP15	CMP16	CMP17	CMP18	CMP19	CMP20	CMP21	COMTEXT	4
5	CMP22	CMP24	CMP25	CMP26	CMP27	CMP28	CMP17A	CMP029	5
6	CMP029A	CMP030	CMP031	CMP034	CMP039	CMP041	CMP042	CMP64G	6
7	CMP043	CPC30	COMPCOM	CMP30	CMP30A	CPS001	CPS002	CPS003	7
8	CPS004	CPS005	CMP036	CMP054	CMP057	CMP069	CMP085	CWEOR	8
9	CMP052	CMP109	CMP136	CPS005A	CPS008	CPS009	CPS010	CPS011	9
10	CPS012	CPS020	CPS028	CMP165	CMP051	CMP064	CMP162	L376F	10
11	CPS038	CPS047	CMP111	HISTORY	L380	CMP146	CPS026	CPS032	11
12	CPS052	CPS056	CPS061	CPS062	CPS063	CPS064	CMP146A	L383	12
13	CMP149	CPS057	CPS066	CPS069	CPS073	L383F	L386	L393	13
14	L397	CP114	L401	L406	CPSCPRT	CP096A	L410	CPS106	14
15	CPS110	CPS112	L414	S3143CP	*L420*	CPS*76	CP139CP	CP147	15
16	CP154	CPS085	*L428*	CPS126	CPS127	CPS130	CPS135	CPS141	16
17	*L433*	*L439*	CPS150	CPS153	*L446*	CPS*77	CPSVER34	CP161CP	17
18	F7540CP	F7820CP	CPS146	CPS167	*L452*	CPS118X	CPS173	*L460*	18
19	CPS076X	CPS144	CPS147X	CPS151	CPS161	CPS164X	CPS172	CPS176	19
20	*L470*	F4720	COMCARG	COMCCDD	COMCCFD	COMCCIO	COMCCOD	COMCCPT	20
21	COMCDXB	COMCMTM	COMCMTP	COMCMVE	COMCRDC	COMCRDH	COMCRDO	COMCRDS	21
22	COMCRDW	COMCRSR	COMCSFN	COMCSRT	COMCSST	COMCSTF	COMCSVR	COMCSYS	22
23	COMCUPC	COMCWOD	COMCWTC	COMCWTH	COMCWTO	COMCWTS	COMCWTW	COMCXJR	23
24	COMCZTB	CPUREL	CALLCPU	FEAT184N	FEAT184NA	CPS*78	CPSA070	CPSA083	24
25	CPSA096	CPSA098	CPSA097	CPSA094	CPS168	CPSA104	CPSA107	*L477*	25
26	CPSA106	CPS188	CPS192	CPSA112	CPS198	*L485*	F4720A	F4720B	26
27	F4720C	F4720D	F4810A	F4810B	CPSA115	CPS202	CPSA117	CPSA119	27
28	CPSA123	CPSA125	CPSA126	*L498*	CPS*79	CPSA129	CPSA133	CPSA138	28
29	*L505*	CPSA132	CPSA134	CPSA142	CPS186	CPS191	CPS213	CPS216	29
30	CPS218	CPS227	*L508*	CPSA141	CPSA163	CPSA168	CPS219A	CPS234	30
31	CPS239	CPS243	CPS247	CPSA158	CPSA161	CPS236	CPS240	CPS*80	31
32	CPSA159	*L518*	*L528*	CPS251	F4820	F4820A	RSM4159	F233CMU	32
33	SIE7969	CPSA116	CPSA140	CPSA148	CPSA169	CPS214	CPSA181	CPSA184	33
34	CPSA187	CPSA195	CPSA196	CPSA204	CPS232	CPS0253	CPS254	CPS0257	34
35	CPS258	CPS0263	CPS0267	*L538*	CPS*81	F4830CP	AIDTEXT	CPSA197	35
36	CPSA198	CPSA200	CPSA210	CPSA213	CPSA214	CPS0275	CPS0278	CPS0279	36
37	CPS0281	*L552*	CPSA175	CPSA186	CPSA199	CPSA208	CPSA216	CPSA218	37
38	CPSA220	CPSA225	CPSA226	CPSA229	CPSA230	CPSA246	CPS211	CPS0241	38
39	CPS0287	CPS0289	CPS0303	CPS0307	*L564*	CPS*82	F4820B	NADTEXT	39
40	CPSA227	CPSA233	CPSA234	CPSA235	CPSA236	CPSA240	CPSA241	CPSA242	40
41	CPSA243	CPSA244	CPSA245	CPSA251	CPS0306	CPS0320	CPS0323	*L577*	41
42	CPSA257	CPSA259	CPS0094	CPS0325	CPS0338	CPS0340	CPS0343	CPS0345	42
43	*L587*	CPSA261	CPS2608	*L601*	CPSA265	COMCCPM	*L617*	CPSA266	43
44	*L628*	*L642*	CPSA274	CPS2627	CPS2628	*L650*	CPSA276	CPSA281	44
45	CPSA282	CPSA283	CPS0329	CPS2667	*L670*	CPSA284	CPSA286	CPSA287	45
46	CPSA288	CPSA289	CPSA292	CDCM	CDCMOPT	CWEOR2	CPSA293	CPSA295	46
47	CPSA297	CPSA300	CPS2658	CPS2659	CPS2672	*L688*	*L716*	CPS2660	47
48	*L739*	CPSA291	CPSA305	CPSA306	CPS0328	*L780*	*L797*	*L803*	48
49	*L826*	*L840*	*L847*	*L851*	*L859*	*L871*	PSRLEVEL		49

75 PURGED IDENTS WERE FOUND

DECKS ARE LISTED IN THE ORDER OF THEIR OCCURRENCE ON A NEW PROGRAM LIBRARY IF ONE IS CREATED BY THIS UPDATE

1	YANK\$\$\$	HISTORY	COMCARG	COMCCDD	COMCCFD	COMCCIO	COMCCOD	COMCCPM		1
2	COMCCPT	COMCDXB	COMCMNS	COMCMOS	COMCMTM	COMCMTP	COMCMVE	COMCRDC		2
3	COMCRDH	COMCRDO	COMCRDS	COMCRDW	COMCRSR	COMCSFN	COMCSRT	COMCSST		3
4	COMCSTF	COMCSVR	COMCSYS	COMCUPC	COMCWOD	COMCWTC	COMCWTH	COMCWTO		4
5	COMCWTS	COMCWTW	COMCXJR	COMCZTB	CPUREL	CALLCPU	CWEOR	COMPCOM		5
6	COMPASS	AIDTEXT	NADTEXT	CWEOR2	CDCMOPT	CDCM				6
7										7
8										8
9										9
10	COMMON DECKS ENCOUNTERED									10
11										11
12	HISTORY	COMCARG	COMCCDD	COMCCFD	COMCCIO	COMCCOD	COMCCPM	COMCCPT		12
13	COMCDXB	COMCMNS	COMCMOS	COMCMTM	COMCMTP	COMCMVE	COMCRDC	COMCRDH		13
14	COMCRDO	COMCRDS	COMCRDW	COMCRSR	COMCSFN	COMCSRT	COMCSST	COMCSTF		14
15	COMCSVR	COMCSYS	COMCUPC	COMCWOD	COMCWTC	COMCWTH	COMCWTO	COMCWTS		15
16	COMCWTW	COMCXJR	COMCZTB	COMPCOM	CDCMOPT					16
17										17
18										18
19	DECKS WRITTEN TO COMPILE FILE									19
20										20
21										21
22	CPUREL	CALLCPU	CWEOR	COMPASS	AIDTEXT	NADTEXT	CWEOR2	CDCM		22
23										23
24										24
25	THIS UPDATE REQUIRED 62200B WORDS OF MEMORY.									25
26										26
27										27
28										28
29										29
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1412THE

IDENT	CPU.CDD
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12

IDENT
END

CPU.CDD

ENTRY POINTS.

CDD=

3+

IDENT	CPU.CDD
ENTRY	CDD=

CPUREL 10

CPUREL	11
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COMMENT CONVERT CONSTANT TO DECIMAL DISPLAY CODE.

CPUREL	13
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COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CPUREL 14

0

CDD

CTEXT COMCCDD - CONSTANT TO DECIMAL DISPLAY CODE CONVERSION.

COMCCDD 2

12

END

CPUREL 17

60500B CM STORAGE USED

45 STATEMENTS

7 SYMBOLS

PARALLEL CPU ASSEMBLY

0.050 SECONDS

1 REFERENCES

SYMBOLIC REFERENCE TABLE.

CDD=

3

PROGRAM*

1/15 E

IDENT	CPU.CFD
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IDENT
END

CFD= 1+

CPUREL	18
CPUREL	19

CPUREL	21
CPUREL	22
COMCCFD	2
CPUREL	25

11	SYMBOLS
1	REFERENCES

CFD= 1 PROGRAM* 1/15 E

0	16	IDENT	CPU.CIO
16		END	

CI0= 10+

SYS= WNB=

END

CPUREL	32
--------	----

10 SYMBOLS
1 REFERENCES

CI0=	10	PROGRAM*	1/20 E
SYS=	0	EXTERNAL*	
WNB=	0	EXTERNAL*	

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	7	IDENT	CPU.COD
1	7		END	
2				
3				
4			ENTRY POINTS.	
5				
6			COD=	0+
7				
8				
9				
10				
11			IDENT	CPU.COD
12			ENTRY	COD=
13			COMMENT CONVERT CONSTANT TO OCTAL DISPLAY CODE.	
14			COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.	
15	0		COD	
16	7		CTEXT	COMCCOD - CONSTANT TO OCTAL DISPLAY CODE CONVERSION.
17			END	
18		60500B CM	STORAGE USED	39 STATEMENTS
19		PARALLEL CPU ASSEMBLY		7 SYMBOLS
20			0.046 SECONDS	1 REFERENCES
21				
22				
23			SYMBOLIC REFERENCE TABLE.	
24				
25	COD=	0	PROGRAM*	1/15 E
26				
27				
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1412THE

IDENT	CPU.CPT
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IDENT	CPU.CPT
END	

IDENT	CPU.CPT
END	

CPT= 0+

CPT= 0+

CPUREL	41
CPUREL	42

IDENT	CPU.CPT
ENTRY	CPT=

CPUREL	41
CPUREL	42

CPUREL	44
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CPUREL	44
CPUREL	45

COMMENT COPY PREFIX TABLE.
COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

COMCCPT	2
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CTEXT COMCCPT - COPY PREFIX TABLE.

COMCCPT	2
---------	---

CPUREL	48
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CPUREL	48
--------	----

59 STATEMENTS

8 SYMBOLS

0.061 SECONDS

1 REFERENCES

CPT= 0 PROGRAM* 1/15 E

CPT= 0 PROGRAM* 1/15 E

IDENT CPU.DXB

17

IDENT
END

IDENT	CPU.DXB
ENTRY	DXB=

CPUREL 49

CPUREL	50
--------	----

COMMENT CONVERT DISPLAY CODE TO BINARY.

CPUREL	52
--------	----

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CPUREL 53

$$\begin{array}{r} 0 \\ 17 \end{array}$$

DXB

CTEX
END

COMCDXB 2

CPUREL 56

60500B	CM	STORAGE USED
PARALLEL	CPU	ASSEMBLY

75 STATEMENTS
0.065 SECONDS

8 SYMBOLS
1 REFERENCES

SYMBOLIC REFERENCE TABLE.

DXB= 10 PROGRAM* 1/15 E

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	115	IDENT	CPU.MNS
1	115		END	
2				
3				
4			ENTRY POINTS.	
5				
6			MNS=	40+
7				
8				
9				
10				
11			IDENT	CPU.MNS
12			ENTRY	MNS=
13			SYSKOM	B1
14				
15				
16				
17			COMMENT	MOVE NON-OVERLAPPING STRING.
18	0		COMMENT	COPYRIGHT CONTROL DATA CORP. 1978.
19		MNS	CTEXT	COMCMNS - MOVE NON-OVERLAPPING STRING.
20	115			
21			END	
22		60500B CM	STORAGE USED	267 STATEMENTS
23		PARALLEL	CPU ASSEMBLY	41 SYMBOLS
24				0.211 SECONDS
25				1 REFERENCES
26				
27			SYMBOLIC REFERENCE TABLE.	
28				
29	B1=1	0		
30	MNS=	40	PROGRAM*	1/15 E
31				
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IDENT	CPU.MOS
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IDENT
END

PROGRAM*	LOCAL	0	32
LITERALS*	LOCAL	32	1

MOS= 5+

MNS=

F4720C	434
F4720C	435

F4720C	438
F4720C	439
F4720C	440
F4720C	257
F4720C	442
F4720C	444

END

60500B CM	STORAGE USED	105	STATEMENTS	12	SYMBOLS
PARALLEL	CPU ASSEMBLY	0.111	SECONDS	1	REFERENCES

MNS=	0	EXTERNAL*	
MOS=	5	PROGRAM*	1/26 E

ADDRESS LENGTH BINARY CONTROL CARDS.

0 64 IDENT CPU.MVE
64 END

ENTRY POINTS.

MVE= 26+

IDENT CPU.MVE
ENTRY MVE=

CPUREL 57
CPUREL 58

SYSKOM B1
COMMENT MOVE BLOCK OF DATA.
COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CPUREL 59
CPUREL 61
CPUREL 62

0
64 MVE

CTEXT COMCMVE - MOVE BLOCK OF DATA.
END

COMCMVE 2
CPUREL 64

60500B CM STORAGE USED 160 STATEMENTS 41 SYMBOLS
PARALLEL CPU ASSEMBLY 0.133 SECONDS 1 REFERENCES

SYMBOLIC REFERENCE TABLE.

B1=1 0
MVE= 26 PROGRAM* 1/15 E

IDENT	CPU.RDC
-------	---------

22

IDENT
END

CPU . RDC

ENTRY POINTS.

RDC= 1+

EXTERNAL SYMBOLS.

RDX= LCB=

IDENT	CPU.RDC
-------	---------

ENTRY RDC=

COMMENT READ CODED LINE, *C* FORMAT.

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

```
CTEXT  COMCRDC - READ CODED LINE, -C- FORMAT.
```

END

CPUREL	65
--------	----

CPUREL 66

CPUREL	68
--------	----

CPUREL	69
--------	----

COMCRDC

CPUREL 71

60500B CM STORAGE USED
PARALLEL CPU ASSEMBLY

```

    66 STATEMENTS
0.071 SECONDS

```

14 SYMBOLS
1 REFERENCES

SYMBOLIC REFERENCE TABLE.

LCB= 0 EXTERNAL*

RDC=	1	PROGRAM*	1/20 E
------	---	----------	--------

RDX= 0 EXTERNAL*

IDENT	CPU.RDH
-------	---------

43

IDENT
END

CPU . RDH

RDH= 0+

RDX= LCB=

IDENT	CPU.RDH
-------	---------

ENTRY RDH=

COMMENT READ CODED LINE, *H* FORMAT.

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CTEXT COMCRDH - READ CODED LINE, -H- FORMAT.

END

CPUREL	72
--------	----

CPUREL 73

CPUREL	75
--------	----

CPUREL	76
--------	----

COMCRDH 2

CPUREL	78
--------	----

60500B CM STORAGE USED
PARALLEL CPU ASSEMBLY

```

    99 STATEMENTS
0.121 SECONDS

```

19 SYMBOLS
1 REFERENCES

SYMBOLIC REFERENCE TABLE.

LCB= 0 EXTERNAL*

RDH= 0 PROGRAM* 1/20 E

RDX= 0 EXTERNAL*

IDENT	CPU.RD0
-------	---------

24

IDENT
END

IDENT	CPU.RD0
-------	---------

ENTRY POINTS.

$$RDO = \frac{1}{1 + \frac{1}{RDO}}$$

EXTERNAL SYMBOLS.

CI0= RCL=

IDENT	CPU.RD0
-------	---------

ENTRY RDO=

COMMENT READ ONE WORD.

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

```
CTEXT  COMCRDO - READ ONE WORD.
```

END

CPUREL 79

CPU REL	80
---------	----

CPUREL	82
--------	----

CPUREL	83
--------	----

COMCRDO

CPUREL 85

60500B CM STORAGE USED
PARALLEL CPU ASSEMBLY

```
74 STATEMENTS
0.073 SECONDS
```

12 SYMBOLS
1 REFERENCES

SYMBOLIC REFERENCE TABLE.

CI0= 0 EXTERNAL*

RCL=	0	EXTERNAL*
------	---	-----------

RDO= 1 PROGRAM* 1/20 E

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	52	IDENT CPU.RDS	
1	52		END	
4			ENTRY POINTS.	
6			RDS= 12+	
9			EXTERNAL SYMBOLS.	
11			RDX= LCB=	
16			IDENT CPU.RDS	CPUREL 86
17			ENTRY RDS=	CPUREL 87
18			COMMENT READ CODED LINE TO STRING BUFFER.	CPUREL 89
19			COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.	CPUREL 90
20	0	RDS	CTEXT COMCRDS - READ CODED LINE TO STRING BUFFER.	COMCRDS 2
21	52		END	CPUREL 92
23	60600B CM	STORAGE USED	120 STATEMENTS	22 SYMBOLS
24	PARALLEL CPU ASSEMBLY		0.115 SECONDS	1 REFERENCES
28	SYMBOLIC REFERENCE TABLE.			
30	LCB=	0	EXTERNAL*	
31	RDS=	12	PROGRAM*	1/20 E
32	RDX=	0	EXTERNAL*	

1412THE

ADDRESSLENGTHBINARY CONTROL CARDS.

0144IDENT CPU.RDW
144END

ENTRY POINTS.

RDW=5+RDX=105+LCB=120+

EXTERNAL SYMBOLS.

RCL=CIO=

IDENT	CPU.RDW	CPUREL	93
ENTRY	RDW=	CPUREL	94
ENTRY	RDX=	CPUREL	95
ENTRY	LCB=	CPUREL	96
SYS	COM	CPUREL	97
COMMENT	READ WORDS TO WORKING BUFFER.	CPUREL	99
COMMENT	COPYRIGHT CONTROL DATA CORPORATION. 1978.	CPUREL	100
CTEXT	COMCRDW - READ WORDS TO WORKING BUFFER.	COMCRDW	2
END		CPUREL	102

60600B CM STORAGE USED308 STATEMENTS55 SYMBOLS
PARALLEL CPU ASSEMBLY0.214 SECONDS3 REFERENCES

SYMBOLIC REFERENCE TABLE.

CIO=	0	EXTERNAL*	
LCB=	120	PROGRAM*	1/22 E
RCL=	0	EXTERNAL*	
RDW=	5	PROGRAM*	1/20 E
RDX=	105	PROGRAM*	1/21 E

IDENT	CPU.RSR
-------	---------

IDENT	CPU.RSR
END	

RSR= 0+

CPUREL	103
CPUREL	104

```
SYSCOM
COMMENT RESTORE REGISTERS.
COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.
```

CPUREL	105
CPUREL	107
CPUREL	108

RSR

```
CTEXT  COMCRSR - RESTORE REGISTERS.
```

COMCRSR	2
---------	---

END

CPUREL	111
--------	-----

60500B CM	STORAGE USED	118 STATEMENTS	24 SYMBOLS
PARALLEL CPU	ASSEMBLY	0.121 SECONDS	1 REFERENCES

RSR= 0 PROGRAM* 1/15 E

IDENT	CPU.SFN
-------	---------

$$\frac{0}{7}$$

7

IDENT
END

CPU.SFN

ENTRY POINTS.

SFN= 0+

```
IDENT    CPU.SFN
ENTRY    SFN=
```

CPUREL 112

CPUREL 113

COMMENT SPACE FILL NAME, RIGHT JUSTIFIED ZEROES.

CPUREL	115
--------	-----

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CPUREL 116

0	SFN	CTEXT	COMCSFN - SPACE FILL NAME, RIGHT JUSTIFIED ZEROES.
---	-----	-------	--

COMCSFN

2

END

CPUREL 119

60500B CM STORAGE USED

38 STATEMENTS

6 SYMBOLS

PARALLEL CPU ASSEMBLY

0.044 SECONDS

1 REFERENCES

SYMBOLIC REFERENCE TABLE.

SFN= 0 PROGRAM* 1/15 E

0	207	IDENT	CPU.SRT
07		END	

SRT= 0+

CPUREL	127
--------	-----

SRT= 0 PROGRAM* 1/15 E

IDENT	CPU.SST
-------	---------

12

IDENT
END

CPU.SST

ENTRY POINTS.

SST= 7+

IDENT	CPU.SST
ENTRY	SST=

CPUREL 128

CPUREL 129

COMMENT SHELL SORT TABLE.

CPUREL	131
--------	-----

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.

CPUREL 132

0	SST
12	

```
CTEXT  COMCSST - SHELL SORT TABLE.
END
```

COMCSST	2
CPUREL	135

60500B CM	STORAGE USED	48 STATEMENTS	9 SYMBOLS
PARALLEL CPU	ASSEMBLY	0.055 SECONDS	1 REFERENCES

SYMBOLIC REFERENCE TABLE.

SST= 7 PROGRAM* 1/15 E

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	12	IDENT	CPU.STF
1	12		END	
4			ENTRY POINTS.	
6			STF=	0+
9			EXTERNAL SYMBOLS.	
11			CIO=	
16			IDENT	CPU.STF
17			ENTRY	STF=
18			COMMENT SET TERMINAL FILE.	
19			COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.	
20	0	STF	CTEXT	COMCSTF - SET TERMINAL FILE.
21	12		END	
21			CPUREL	136
22			CPUREL	137
23			CPUREL	139
24			CPUREL	140
25			COMCSTF	2
26			CPUREL	143
23		60500B CM	STORAGE USED	62 STATEMENTS
24		PARALLEL CPU ASSEMBLY	0.059 SECONDS	8 SYMBOLS
24			1 REFERENCES	
28			SYMBOLIC REFERENCE TABLE.	
30	CIO=	0	EXTERNAL*	
31	STF=	0	PROGRAM*	1/20 E

1412THE

IDENT	CPU.SVR
END	

IDENT	CPU.SVR
ENTRY	SVR=

```
COMMENT SAVE REGISTERS.  
COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.  
CTEXT COMCSVR - SAVE ALL REGISTERS.  
END
```

SVR= 0 PROGRAM* 1/15 E

1

ADDRESSLENGTHBINARY CONTROL CARDS.

040IDENT CPU.SYS
40END

ENTRY POINTS.

SYS=2+WNB=21+
RCL=15+MSG=31+

IDENT CPU.SYS CPUREL 152
ENTRY SYS= CPUREL 153
ENTRY RCL= CPUREL 154
ENTRY WNB= CPUREL 155
ENTRY MSG= CPUREL 156
0 SYSCOM CPUREL 157
COMMENT PROCESS SYSTEM REQUEST. CPUREL 159
0 SYS COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978. CPUREL 160
40 CTEXT COMCSYS - PROCESS SYSTEM REQUEST. COMCSYS 2
END CPUREL 162

60500B CM STORAGE USED 163 STATEMENTS 36 SYMBOLS
PARALLEL CPU ASSEMBLY 0.068 SECONDS 4 REFERENCES

SYMBOLIC REFERENCE TABLE.

MSG=31 PROGRAM* 1/19 E
RCL=15 PROGRAM* 1/17 E
SYS=2 PROGRAM* 1/16 E
WNB=21 PROGRAM* 1/18 E

1/15 E

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	17	IDENT	CPU.WOD
1	17		END	
2				
3				
4			ENTRY POINTS.	
5				
6			WOD=	0+
7				
8				
9				
10				
11			IDENT	CPU.WOD
12			ENTRY	WOD=
13			COMMENT CONVERT WORD TO OCTAL DISPLAY CODE.	
14			COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.	
15	0	WOD	CTEXT	COMCWOD - CONVERT WORD TO OCTAL DISPLAY CODE.
16	17		END	
17				
18		60500B CM	STORAGE USED	62 STATEMENTS
19		PARALLEL CPU ASSEMBLY		6 SYMBOLS
20			0.060 SECONDS	1 REFERENCES
21				
22				
23			SYMBOLIC REFERENCE TABLE.	
24				
25	WOD=	0	PROGRAM*	1/15 E
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				

ADDRESS		LENGTH	BINARY CONTROL CARDS.	
	0	14	IDENT	CPU.WTC
1	14		END	
4			ENTRY POINTS.	
6			WTC=	1+
9			EXTERNAL SYMBOLS.	
11			WTX=	DCB=
16			IDENT	CPU.WTC
17			ENTRY	WTC=
18			COMMENT WRITE CODED LINE, *C* FORMAT.	
19			COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978.	
20	0	WTC	CTEXT	COMCWTC - WRITE CODED LINE, -C- FORMAT.
21	14		END	
23		60500B CM	STORAGE USED	47 STATEMENTS
24		PARALLEL	CPU ASSEMBLY	10 SYMBOLS
25				0.026 SECONDS
26				1 REFERENCES
28			SYMBOLIC REFERENCE TABLE.	
30	DCB=	0	EXTERNAL*	
31	WTC=	1	PROGRAM*	1/20 E
32	WTX=	0	EXTERNAL*	
58				
59				
60				

0	34	IDENT	CPU.WTH
34		END	

WTH= 1+

WTX= DCB=

CPUREL	186
CPUREL	187
CPUREL	189
CPUREL	190
COMCWTH	2
CPUREL	192

END

18 SYMBOLS
1 REFERENCES

DCB=	0	EXTERNAL*
WTH=	1	PROGRAM*
WTX=	0	EXTERNAL*

1/20 E

0	17	IDENT	CPU.WTO
17		END	

$$WTO = \frac{1 + \dots}{1 + \dots}$$

CI0= WNB=

END

CPUREL 199

11 SYMBOLS
1 REFERENCES

WTO= 1 PROGRAM* 1/20 E

0	54	IDENT	CPU.WTS
54		END	

WTS= 1+

WTX= DCB=

CPUREL 201

CPUREL 203

CPUREL	204
--------	-----

COMCWTS

CPUREL 206

20 SYMBOLS
1 REFERENCES

DCB=	0	EXTERNAL*
WTS=	1	PROGRAM*
WTX=	0	EXTERNAL*

1/20 E

0	115	IDENT	CPU.WTW
15		END	

CIO=	0	EXTERNAL*	
DCB=	106	PROGRAM*	1/22 E
RCL=	0	EXTERNAL*	
WTW=	5	PROGRAM*	1/20 E
WTX=	73	PROGRAM*	1/21 E

0	34	IDENT	CPU.XJR
34		END	

XJR= 0+

SYS=

CPUREL	217
CPUREL	218
CPUREL	220
CPUREL	221
COMCXJR	2
CPUREL	224

0 XJR
34

SYMBOLIC REFERENCE TABLE.

SYS=	0	EXTERNAL*	
XJR=	0	PROGRAM*	1/20 E

IDENT	CPU.ZTB
END	

$$\frac{0}{7}$$

7

IDENT
END

CPU.ZTB

ZTB= 0+

IDENT	CPU.ZTB
ENTRY	ZTB=

CPUREL	225
CPUREL	226
CPUREL	228
CPUREL	229
COMCZTB	2
CPUREL	232

$$\frac{0}{7}$$

ZTB

END

60500B CM	STORAGE USED
PARALLEL	CPU ASSEMBLY

39 STATEMENTS
0.041 SECONDS

6 SYMBOLS
1 REFERENCES

SYMBOLIC REFERENCE TABLE.

ZTB= 0 PROGRAM* 1/15 E

ADDRESSLENGTHBINARY CONTROL CARDS.

02161IDENT CALLCPU
2161END

BLOCKSTYPEADDRESSLENGTH
PROGRAM* LOCAL02160
LITERALS* LOCAL21601

IDENT CALLCPU CALLCPU 2
SYSCOM B1 CALLCPU 3
LIST F,X CALLCPU 4
COMMENT CALL CPU COMMON DECKS. CALLCPU 6
COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1978. CALLCPU 7

*** CALLCPU - CALL CPU COMMON DECKS. CALLCPU 9
* CALLCPU 10
* THIS PROGRAM EXISTS TO PROVIDE AN EASY MEANS OF LISTING CALLCPU 11
* THE STANDARD CPU COMMON DECKS. IT IS NOT INTENDED TO BE CALLCPU 12
* EXECUTED. CALLCPU 13

*** THE COMMON DECKS LISTED HERE CONSTITUTE A STANDARD SET OF CALLCPU 15
* COMPASS SUBROUTINES FOR USE BY ALL CYBER 170 PRODUCTS. CALLCPU 16
* ALL SUBROUTINES RUN ON BOTH NOS AND NOS/BE AND PRODUCE THE CALLCPU 17
* SAME CODE ON BOTH SYSTEMS. THEY MAY BE ASSEMBLED USING THE CALLCPU 18
* COMMON SYSTEMS TEXT *CPUTEXT*. CALLCPU 19

*** SOME GENERAL RULES APPLY TO THE USE OF ALL OF THESE COMMON F4720A 31
* DECKS. ANY SUCH GENERAL RULES ARE STATED HERE IN A F4720A 32
* CENTRALIZED PLACE AND ARE AS FOLLOWS -- F4720A 33
* F4720A 34
* 1) ANY I/O BUFFERS, STRING BUFFERS, EXCHANGE PACKAGE SAVE F4720A 35
* AREAS, ETC. TO BE USED BY ANY OF THESE COMMON DECKS SHOULD F4720A 36
* NOT BE LOCATED WITHIN THE LAST 10B WORDS OF THE FIELD LENGTH. F4720A 37
* SOME FETCH LOOPS, MOVE LOOPS, ETC. ARE WRITTEN FOR OPTIMAL F4720A 38
* PERFORMANCE AND MAY MODE OUT IF THE ABOVE RESTRICTION IS NOT F4720A 39
* ADHERED TO. THIS IS NOT CONSIDERED A BUG BUT A USER ERROR. F4720A 40
* F4720A 41
* 2) REGISTERS USED BY EACH COMMON DECK ARE DOCUMENTED AS SUCH. F4720A 42
* REGISTERS WHICH ARE NOT USED BY THE COMMON DECKS ARE F4720A 43
* UNCHANGED AND MAY BE CONSIDERED PRESERVED. THESE REGISTER F4720A 44
* CONVENTIONS MAY NOT BE CHANGED AND ARE CONSIDERED TO BE SET F4720A 45
* IN CONCRETE FOREVER. F4720A 46

*					F4720A	47
*					F4720A	48
*					F4720A	49
*					F4720A	50
*					F4720A	51

*					F4720A	53
*					F4720A	54
*					F4720A	55
*					F4720A	56
*					F4720A	57

*					F4720A	59
*					F4720A	60
*					F4720A	61

*					CALLCPU	21
					CALLCPU	22
0	MEML	EQU	0		CALLCPU	23
0	TOV	EQU	0		CALLCPU	24

1412THE

2

1

*	OF (ASV) IN BITS 17-0.	COMCARG	40
*	IF ASV .LT. 0, ARGUMENT MUST NOT BE EQUIVALENCED.	COMCARG	41
*	IF STATUS = 4000B, A ZERO *0* PARAMETER IS RETAINED AS A	COMCARG	42
*	DISPLAY ZERO, OTHERWISE, A VALUE OF ZERO (FULL WORD) IS	COMCARG	43
*	STORED AT (ADDR).	COMCARG	44
*	IF ASV = ADDR, ONLY ONE ENTRY OF THAT ARGUMENT	COMCARG	45
*	WILL BE ALLOWED AND OP WILL BE SET TO -0.	COMCARG	46
*		COMCARG	47
*	EXIT (X1) .NE. 0 IF ARGUMENT ERROR DETECTED.	COMCARG	48
*	ERRORS	COMCARG	49
*	1. OPTION NOT FOUND IN TABLE.	COMCARG	50
*	2. SINGLE ARGUMENT EQUIVALENCED.	COMCARG	51
*	3. ILLEGAL RE-ENTRY OF ARGUMENT.	COMCARG	52
*		COMCARG	53
*	USES X - 0, 1, 2, 3, 4, 6, 7.	COMCARG	54
*	B - 2, 3, 4.	COMCARG	55
*	A - 2, 3, 4, 7.	COMCARG	56
*		COMCARG	57
*	CALLS NONE.	COMCARG	58
		COMCARG	59
		COMCARG	60
0	0400400000 + ARG SUBR ENTRY/EXIT	COMCARG	61
1	43052 MX0 42	COMCARG	62
	76100 SX1 B0	COMCARG	63
	0440000000 + ZR B4,ARGX IF NO ARGUMENTS, RETURN	COMCARG	64
2	76110 SX1 B1 PRESET ERROR	COMCARG	65
		COMCARG	66
*	SEARCH FOR MATCH IN ARGUMENT TABLE.	COMCARG	67
		COMCARG	68
3	0304000000 + ARG1 ZR X4,ARGX IF BLANK ARGUMENT, RETURN	COMCARG	69
	56250 SA2 B5 FIRST OPTION	COMCARG	70
	43314 MX3 12	COMCARG	71
4	37624 ARG2 IX6 X2-X4 COMPARE ARGUMENT AND OPTION	COMCARG	72
	11736 BX7 X3*X6	COMCARG	73
	0307000007 + ZR X7,ARG3 IF MATCH FOUND	COMCARG	74
5	54221 SA2 A2+B1 NEXT OPTION	COMCARG	75
	0312000004 + NZ X2,ARG2 LOOP TO END OF TABLE	COMCARG	76
6	0400000000 + EQ ARGX RETURN	COMCARG	77
		COMCARG	78
*	CHECK FOR EQUIVALENCE ALLOWED.	COMCARG	79
		COMCARG	80
7	7274777723 ARG3 SX7 X4-1R= EQUIVALENCE SEPARATOR	COMCARG	81
	63220 SB2 X2 SET VALUE ADDRESS	COMCARG	82
	20236 LX2 30 GET ASSUMED VALUE	COMCARG	83
10	63320 SB3 X2	COMCARG	84
	0630000014 + PL B3,ARG4 IF EQUIVALENCE ALLOWED	COMCARG	85
	57303 SA3 -B3 ASSUMED VALUE	COMCARG	86
11	15630 BX6 -X0*X3 ASSUMED STATUS	COMCARG	87
	67303 SB3 -B3	COMCARG	88
	0307000000 + ZR X7,ARGX IF ARGUMENT EQUIVALENCED...RETURN	CPS0287	9
12	7274777775 SX7 X4-2 NOS/BE EQUIVALENCE SEPARATOR	CPS0287	10
	0317000022 + NZ X7,ARG5 IF ARGUMENT NOT EQUIVALENCED	COMCARG	89
13	0400000000 + EQ ARGX RETURN	COMCARG	90
		COMCARG	91
*	PROCESS EQUIVALENCE.	COMCARG	92
		COMCARG	93
14	56330 ARG4 SA3 B3 ASSUMED VALUE	COMCARG	94

131

2

1

31 0317000027 +
20466
22624

NZ X7,CDD1
LX4 -6
LX6 X4,B2

LOOP TO ZERO QUOTIENT
LEFT JUSTIFY ASSEMBLY
RIGHT JUSTIFY ASSEMBLY

COMCCDD 41
COMCCDD 42
COMCCDD 43

32 0400400032 +
33 5120000036 +
54321
27101

CDD SUBR
SA2 CDDA
SA3 A2+B1
PX1 X1

ENTRY/EXIT
=.1P48+1
=10.P

COMCCDD 44
COMCCDD 45
COMCCDD 46
COMCCDD 47
COMCCDD 48

34 66200
54431

SB2 B0
SA4 A3+B1

CLEAR JUSTIFY COUNT

COMCCDD 49

35 6140000006

SB3 1R0-1R
SB4 6

=1H
(B3) = CONVERSION CONSTANT
(B4) = SHIFT INCREMENT

COMCCDD 50
COMCCDD 51
COMCCDD 52

0400000027 +

EQ CDD1

COMCCDD 53

36 17170631463146314632

CDDA CON 0.1P48+1

COMCCDD 54

37 20000000000000000012

CON 10.P

COMCCDD 55

40 55555555555555555555

CON 1H

COMCCDD 56
COMCCDD 57

D_D

QUAL\$

BASE *
IF -DEF,QUAL\$
QUAL *

COMCCDD 59

32 +

CDD

EQU /COMCCDD/CDD

COMCCDD 60

32 +

CDD=

EQU /COMCCDD/CDD

COMCCDD 61

QUAL\$

ENDIF

COMCCDD 62

CDD

ENDX

F4720D 6

COMCCDD 63

COMCCDD 64

2

1

10644

BX6

X4

CPSA243 26

COMCCFD 40

COMCCFD 41

42 0400400042 +

CFD

SUBR

ENTRY/EXIT

43 5120000062 +

SA2

CFDA

=.1P48+1

COMCCFD 42

5130000064 +

SA3

CFDB

=10.0P

COMCCFD 43

44 54421

SA4

A2+B1

=7346544777B

CPSA243 27

43636

MX6

-30

CPSA243 28

6150000006

SB5

6

COMCCFD 45

45 15616

BX6

-X6*X1

DISCARD UPPER BITS

CPSA243 29

7170001750

SX7

1000

COMCCFD 47

37446

IX4

X4-X6

CPSA243 30

46 0334000041 +

MI

X4,CFD3

IF INPUT .GT. 999999.999

CPSA243 31

6140777755

SB4

1R0-1R

(B4) = CONVERSION

COMCCFD 49

47 54431

SA4

A3+B1

(X4) = BACKGROUND

COMCCFD 50

27106

PX1

X6

COMCCFD 51

37767

IX7

X6-X7

COMCCFD 52

67205

SB2

-B5

COMCCFD 53

50 0327000051 +

PL

X7,CFD1

IF INTEGER PRESENT

COMCCFD 54

66400

SB4

B0

CPSA243 32

54441

SA4

A4+B1

CPSA243 33

51 42621

CFD1

DX6

X2*X1

EXTRACT REMAINDER

COMCCFD 57

40121

FX1

X2*X1

COMCCFD 58

26701

UX7

X1

CHECK QUOTIENT

COMCCFD 59

20466

LX4

-6

SHIFT ASSEMBLY

COMCCFD 60

52 66225

SB2

B2+B5

ADVANCE SHIFT COUNT

COMCCFD 61

40636

FX6

X3*X6

EXTRACT DIGIT

COMCCFD 62

73664

SX6

X6+B4

CONVERT DIGIT

COMCCFD 63

36464

IX4

X6+X4

COMCCFD 64

53 0317000051 +

NZ

X7,CFD1

LOOP TO ZERO QUOTIENT

COMCCFD 65

7130000057

SX3

1R.

INSERT DECIMAL POINT

COMCCFD 66

54 43252

MX2

-18

FRACTION MASK

COMCCFD 67

22624

LX6

X4,B2

RIGHT JUSTIFY ASSEMBLY

COMCCFD 68

6122000014

SB2

B2+12

CALCULATE SHIFT TO LEFT JUSTIFY

COMCCFD 69

55 20322

LX3

18

COMCCFD 70

15162

BX1

-X2*X6

EXTRACT FRACTION

COMCCFD 71

6130000036

SB3

6*5

COMCCFD 72

56 36713

IX7

X1+X3

ADD DECIMAL POINT

COMCCFD 73

11426

BX4

X2*X6

EXTRACT INTEGER

COMCCFD 74

20406

LX4

6

COMCCFD 75

36647

IX6

X4+X7

ADD INTEGER INTO RESULT

COMCCFD 76

57 0723000060 +

LT

B2,B3,CFD2

LEFT JUSTIFY RESULT

COMCCFD 77

6132000000

SB3

B2+

COMCCFD 78

60 6133777703

CFD2

SB3

B3-60

COMCCFD 79

23436

AX4

X6,B3

COMCCFD 80

61 0400000042 +

EQ

CFDX

RETURN

COMCCFD 81

62 17170631463146314632

CFDA

CON

0.1P48+1

COMCCFD 82

63 00000000007346544777

CON

7346544777B OVERFLOW BOUNDARY

COMCCFD 83

64 20000000000000000012

CFDB

CON

10.0P

CPSA243 34

65 55555555555555555500

CON

9L

COMCCFD 84

66 55555555553333333300

CON

9L

0000

COMCCFD 85

67 47474747474747474747

CFDC

DATA

10R*****

COMCCFD 86

CPSA243 35

CALLCPU - CALL CPU COMMON DECKS.
COMCCFD - CONVERT CONSTANT TO F10.3 FORMAT.

COMPASS 3.7-871.
CFD

24/05/28. 19.15.01.
COMCCFD

PAGE 10

D_D

QUAL\$

BASE
IF
QUAL

*
-DEF,QUAL\$
*

COMCCFD
COMCCFD
COMCCFD

90
91
92

1 42 + CFD
2 42 + CFD=
3 QUAL\$
4 CFD
5
6
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EQU /COMCCFD/CFD
EQU /COMCCFD/CFD
ENDIF
ENDX

COMCCFD 93
F4720D 7
COMCCFD 94
COMCCFD 95

1412THE

2

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*	IF *ERP1\$* IS DEFINED -	COMCCIO	37
*	(X2) = FET ADDRESS.	COMCCIO	38
*	(X7) = 0 IF NO ERROR CODE IN FET. FUNCTION ISSUED.	COMCCIO	39
*	NORMAL EXIT.	COMCCIO	40
*	(X7) = ERROR CODE FROM FET. FUNCTION NOT ISSUED.	COMCCIO	41
*	NORMAL EXIT.	COMCCIO	42
*		COMCCIO	43
*	USES X - 1, 2, 6, 7.	COMCCIO	44
*	B - NONE.	COMCCIO	45
*	A - 1, 6, 7.	COMCCIO	46
*		COMCCIO	47
*	MACROS RECALL, SYSTEM.	CPS0303	4
		COMCCIO	49
		COMCCIO	50
	ERP\$ IF DEF,ERP\$	COMCCIO	51
	CIO1 BX7 X1 SET ERROR STATUS	COMCCIO	52
	SX2 X2 UNPACK FET ADDRESS	COMCCIO	53
	EQ ERP\$ EXIT TO ERROR PROCESSOR	COMCCIO	54
	ERP\$ ELSE	COMCCIO	55
	ERP\$ IF DEF,ERP1\$	COMCCIO	56
	CIO1 BX7 X1 SET ERROR STATUS	COMCCIO	57
	SX2 X2 UNPACK FET ADDRESS	COMCCIO	58
	EQ CIO= RETURN	CPSA104	12
	ERP\$ ENDIF	COMCCIO	60
		COMCCIO	61
70 0100001560 +	CIO2 RECALL X2 WAIT COMPLETION OF LAST REQUEST	COMCCIO	62
71 43652	CIO3 MX6 42 FILE NAME MASK	COMCCIO	63
	ERP\$ IF -DEF,ERP\$	COMCCIO	64
	ERP\$ IF -DEF,ERP1\$	COMCCIO	65
7110000002	SX1 2 FILE MODE MASK	COMCCIO	66
	ERP\$ ELSE	COMCCIO	67
	SX1 36002B ERROR CODE AND FILE MODE MASK	COMCCIO	68
	ERP\$ ENDIF	COMCCIO	69
12661	BX6 X6+X1	COMCCIO	70
72 53120	SA1 X2 SET FILE NAME, MODE AND ERROR CODE	COMCCIO	71
11161	BX1 X6+X1	COMCCIO	72
7160031117	SX6 3RCIO SET *CIO* REQUEST	COMCCIO	73
73 0322000075 +	PL X2,CIO4 IF NOT ASTERISK OPTION	CPS0307	11
12717	BX7 X1+X7 MERGE FUNCTION CODE WITH FILE NAME	CPS0307	12
73220	SX2 X2 CLEAR BIT 2**59	CPS0307	13
74 54710	SA7 A1 STORE FET STATUS	CPS0307	14
13777	BX7 X7-X7 CLEAR ERROR STATUS	CPS0307	15
0400000100 +	EQ CIO= RETURN	CPS0307	16
		CPS0307	17
75 0327000076 +	CIO4 PL X7,CIO5 IF NO AUTO RECALL WITH REQUEST	CPS0307	18
14777	BX7 -X7	COMCCIO	75
27606	PX6 X6 SET AUTO RECALL	COMCCIO	76
76 12717	CIO5 BX7 X1+X7 MERGE FUNCTION CODE WITH FILE NAME	CPS0307	19
20652	LX6 42	COMCCIO	78
	ERP\$ IF -DEF,ERP\$	COMCCIO	79
	ERP\$ IF -DEF,ERP1\$	COMCCIO	80
53720	SA7 X2 STORE FET STATUS	COMCCIO	81
12662	BX6 X6+X2 MERGE *CIO* REQUEST AND FET ADDRESS	COMCCIO	82
	ERP\$ ELSE	COMCCIO	83
	SX1 X1 UNPACK ERROR CODE	COMCCIO	84
	BX6 X6+X2 MERGE *CIO* REQUEST AND FET ADDRESS	COMCCIO	85
	AX1 10	COMCCIO	86

			ERP\$	NZ SA7 ENDIF	X1,CIO1 X2	IF ERROR ON LAST OPERATION STORE FET STATUS	COMCCIO COMCCIO COMCCIO	87 88 89	
1	77	73220		SX2	X2	UNPACK FET ADDRESS	COMCCIO	90	1
2		13777		BX7	X7-X7	CLEAR ERROR STATUS	COMCCIO	91	2
3		0100001541 +		SYSTEM		MAKE REQUEST TO *CIO*	COMCCIO	92	3
4							COMCCIO	93	4
5	100	0400400100 +	CIO=	SUBR		ENTRY/EXIT	COMCCIO	94	5
6	101	53120		SA1	X2	CHECK FET STATUS	COMCCIO	95	6
7		20173		LX1	59-0		COMCCIO	96	7
8		0331000071 +		NG	X1,CIO3	IF FET NOT BUSY	COMCCIO	97	8
9	102	0311000070 +		NZ	X1,CIO2	IF NOT BLANK FET STATUS	COMCCIO	98	9
10			QUAL\$	IF	DEF,B1=1		COMCCIO	99	10
11		53121		SA1	X2+B1	SET FIRST = IN = OUT	COMCCIO	100	11
12		73610		SX6	X1		COMCCIO	101	12
13	103	54611		SA6	A1+B1		COMCCIO	102	13
14		54661		SA6	A6+B1		COMCCIO	103	14
15			QUAL\$	ELSE			COMCCIO	104	15
16				SA1	X2+1	SET FIRST = IN = OUT	COMCCIO	105	16
17				SX6	X1+		CPS0307	20	17
18				SA6	X2+2		COMCCIO	107	18
19				SA6	X2+3		COMCCIO	108	19
20			QUAL\$	ENDIF			COMCCIO	109	20
21		7222000000		SX2	X2+	SET FET ADDRESS	CPS0307	21	21
22	104	0400000100 +		EQ	CIO=	RETURN	CPSA104	13	22
23									23
24									24
25									25
26									26
27		D_D		BASE	*		COMCCIO	112	27
28		D_D		CODE	*		COMCCIO	113	28
29			QUAL\$	IF	-DEF,QUAL\$		COMCCIO	114	29
30				QUAL	*		COMCCIO	115	30
31		100 +	CIO=	EQU	/COMCCIO/CIO=		COMCCIO	116	31
32			QUAL\$	ENDIF			COMCCIO	117	32
33			CIO	ENDX			COMCCIO	118	33
34									34
35									35
36									36
37									37
38									38
39									39
40									40
41									41
42									42
43									43
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60									60

1412THE

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	66223		SB2	B2+B3		COMCCOD	41
	73374		SX3	X7+B4	CONVERT DIGIT	COMCCOD	42
111	21103		AX1	3	SHIFT OFF DIGIT	COMCCOD	43
	36443		IX4	X4+X3	ADD DIGIT TO ASSEMBLY	COMCCOD	44
	0311000110	+	NZ	X1,COD1	LOOP TO ZERO DIGIT	COMCCOD	45
112	20466		LX4	-6	LEFT JUSTIFY ASSEMBLY	COMCCOD	46
	22624		LX6	X4,B2	RIGHT JUSTIFY ASSEMBLY	COMCCOD	47
	0400000105	+	EQ	CODX	RETURN	COMCCOD	48
						COMCCOD	49
113	55555555555555555555	CODA	CON	1H		COMCCOD	50

	D_D		BASE	*		COMCCOD	52
		QUAL\$	IF	-DEF,QUAL\$		COMCCOD	53
			QUAL	*		COMCCOD	54
	105	+	COD	/COMCCOD/COD		COMCCOD	55
	105	+	COD=	/COMCCOD/COD	F4720D	8	
		QUAL\$	ENDIF		COMCCOD	56	
		COD	ENDX		COMCCOD	57	

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D_D

QUAL\$

BASE
IF
QUAL
EQU
ENDIF
ENDX

*
-DEF,QUAL\$
*

/COMCCPM/CPM=

COMCCPM
COMCCPM
COMCCPM
COMCCPM
COMCCPM
COMCCPM

51
52
53
54
55
56

1 115 + CPM=

2 QUAL\$

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123	0313000134 +		NZ	X3,CPT2	IF NO PREFIX TABLE	COMCCPT	41
	66411		SB4	B1+B1		COMCCPT	42
	63311		SB3	X1+B1	SET LENGTH OF TABLE	COMCCPT	43
124	5130000135 +		SA3	CPTA		COMCCPT	44
	0643000134 +		LE	B3,B4,CPT2	IF TOO SHORT TO COPY	COMCCPT	45
125	5041000003		SA4	A1+3		COMCCPT	46
	11134		BX1	X3*X4		COMCCPT	47
	54231		SA2	A3+B1		COMCCPT	48
126	54414		SA4	A1+B4		COMCCPT	49
	13612		BX6	X1-X2		COMCCPT	50
	54321		SA3	A2+B1		COMCCPT	51
	43160		MX1	-12		COMCCPT	52
127	0316000131 +		NZ	X6,CPT1	IF OLD TABLE FORMAT	COMCCPT	53
	6140000010		SB4	10B	INDEX TO COMMENTS FIELD	CPSA104	14
130	0643000134 +		LE	B3,B4,CPT2	IF TOO SHORT TO COPY	CPSA104	15
	54414		SA4	A1+B4		CPSA104	16
131	13243	CPT1	BX2	X4-X3		COMCCPT	55
	22604		LX6	X4		COMCCPT	56
	0302000134 +		ZR	X2,CPT2	IF *COPYRIGHT*	COMCCPT	57
132	15441		BX4	-X1*X4		COMCCPT	58
	54661		SA6	A6+B1		COMCCPT	59
	0304000121 +		ZR	X4,CPTX	IF END OF DATA	COMCCPT	60
133	66441		SB4	B4+B1		COMCCPT	61
	54414		SA4	A1+B4	READ NEXT ENTRY	COMCCPT	62
	0543000131 +		NE	B4,B3,CPT1		COMCCPT	63
134	13666	CPT2	BX6	X6-X6	CLEAR END OF BUFFER	COMCCPT	64
	54661		SA6	A6+B1		COMCCPT	65
	0400000121 +		EQ	CPTX	RETURN	COMCCPT	66
135	00007700007700007777	CPTA	VFD	18/77B,18/77B,24/7777B		COMCCPT	68
136	00005700005700005755		VFD	12/0,6/1H.,12/0,6/1H.,12/0,12/2H.		COMCCPT	69
137	03172031221107102455		DATA	10HCOPYRIGHT		COMCCPT	70

D_D		BASE	*		COMCCPT	72
D_D		CODE	*		COMCCPT	73
	QUAL\$	IF	-DEF,QUAL\$		COMCCPT	74
		QUAL	*		COMCCPT	75
121 +	CPT	EQU	/COMCCPT/CPT		COMCCPT	76
121 +	CPT=	EQU	/COMCCPT/CPT		F4720D	9
	QUAL\$	ENDIF			COMCCPT	77
	CPT	ENDX			COMCCPT	78

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* (X4) .NE. 0 IF ERROR IN ASSEMBLY.
*
* USES X - 0, 1, 2, 3, 4, 5, 6, 7.
* B - 2, 3, 4, 5.
* A - NONE.
* CALLS NONE.

COMCDXB 40
COMCDXB 41
COMCDXB 42
COMCDXB 43
COMCDXB 44
COMCDXB 45
COMCDXB 46
COMCDXB 47
COMCDXB 48
COMCDXB 49
COMCDXB 50
COMCDXB 51
COMCDXB 52
COMCDXB 53
COMCDXB 54
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COMCDXB 65
COMCDXB 66
COMCDXB 67
COMCDXB 68
COMCDXB 69
COMCDXB 70
COMCDXB 71
COMCDXB 72
COMCDXB 73
COMCDXB 74
COMCDXB 75
COMCDXB 76
COMCDXB 77
COMCDXB 78
COMCDXB 79
COMCDXB 80
CPS0279 8
COMCDXB 82
CPS0279 9
CPS0279 10
CPS0279 11
COMCDXB 86
COMCDXB 87
COMCDXB 88
COMCDXB 89
COMCDXB 90
COMCDXB 91
COMCDXB 92
COMCDXB 93
COMCDXB 94
COMCDXB 95
COMCDXB 96

140 22227 DXB1 LX2 X7,B2 DECIMAL * 10
36727 IX7 X2+X7
20603 LX6 3 OCTAL * 8
15213 BX2 -X3*X1 8/9 PRESENCE
141 20701 LX7 1
12661 BX6 X6+X1 OCTAL + NEW DIGIT
36771 IX7 X7+X1 DECIMAL + NEW DIGIT
63525 SB5 B5+X2 NOTE 8/9
142 20506 DXB2 LX5 6 NEXT CHARACTER
15150 BX1 -X0*X5
63410 SB4 X1 CHECK CHARACTER
22244 LX2 X4,B4
143 73113 SX1 X1+B3 CONVERT CHARACTER
11505 BX5 X0*X5 CLEAR CHARACTER
0332000140 + NG X2,DXB1 LOOP IF DIGIT
* CHECK FOR POST RADIX SPECIFICATION.
DXB1\$ IF -DEF,DXB1\$
144 66370 SB3 B7 OCTAL/DECIMAL FLAG
0440000146 + ZR B4,DXB3 IF END OF ASSEMBLY
67342 SB3 B4-B2
145 0430000146 + ZR B3,DXB3 IF EXPLICIT *B*
0532000150 + NE B3,B2,DXBX IF OTHER BUT NOT *D* (ERROR), RETURN
146 0315000150 + DXB3 NZ X5,DXBX IF MORE CHARACTERS (ERROR), RETURN
7145000000 SX4 B5+ CLEAR ERROR FLAG UNLESS 8 OR 9 PRESENT
147 0430000150 + ZR B3,DXBX IF BASE = OCTAL, RETURN
10677 BX6 X7 SET DECIMAL
76400 SX4 B0 CLEAR ERROR FLAG
DXB1\$ ELSE
SB3 B5+B7 SET BASE (ASSUMED OR 8/9)
ZR B4,DXB3 IF END OF ASSEMBLY
SB3 B4-B2
NZ X5,DXBX IF NOT LAST CHARACTER, RETURN
EQ B3,B2,DXB3 IF *D*
NZ B3,DXBX IF NOT *B*
NZ B5,DXBX IF 8/9 PRESENT.
SB3 B0 SET OCTAL
DXB3 MX4 0 CLEAR ERROR
ZR B3,DXBX IF BASE = OCTAL, RETURN
BX6 X7 SET DECIMAL
DXB1\$ ENDIF
150 0400400150 + DXB SUBR ENTRY/EXIT
151 7140007774 SX4 7774B MASK FOR (0123456789)
43066 MX0 -6 (X0) = CHARACTER MASK
76600 SX6 B0 CLEAR OCTAL
152 66211 SB2 B1+B1 (B2) = 2

13777
6130777744
153 6150000006
22255
15320
154 0303000146 +
73233
20425
155 0332000150 +
6150000000
156 7130000007
0400000142 +

BX7 X7-X7
SB3 -1R0
SB5 6
LX2 X5,B5
BX3 -X0*X2
ZR X3,DXB3 IF ZERO WORD
SX2 X3+B3
LX4 21
NG X2,DXBX IF FIRST CHARACTER ALPHABETIC, RETURN
SB5 B0+
SX3 7 CLEAR 8/9 PRESENT
EQ DXB2 MASK FOR 8/9
ENTER CONVERSION LOOP

COMCDXB 97
COMCDXB 98
COMCDXB 99
COMCDXB 100
COMCDXB 101
COMCDXB 102
COMCDXB 103
COMCDXB 104
COMCDXB 105
COMCDXB 106
COMCDXB 107
COMCDXB 108

D_D
QUAL\$
150 + DXB
150 + DXB=
QUAL\$
DXB
BASE *
IF -DEF,QUAL\$
QUAL *
EQU /COMCDXB/DXB
EQU /COMCDXB/DXB
ENDIF
ENDX

COMCDXB 110
COMCDXB 111
COMCDXB 112
COMCDXB 113
F4720D 10
COMCDXB 114
COMCDXB 115

6

1

*
* CALLS NONE.

F4720C 44
F4720C 45
F4720C 46
F4720C 47
F4720C 48
F4720C 49
F4720C 50
F4720C 51
F4720C 52
F4720C 53
F4720C 54
F4720C 55

* ONE TIME INITIALIZATION CODE BASED ON THE PRESENCE
* OF *CMU*.

F233CMU 8
F233CMU 9
F233CMU 10
F233CMU 11
F233CMU 12
F233CMU 13
F233CMU 14
F233CMU 15
F233CMU 16
F233CMU 17
F233CMU 18
F233CMU 19
F233CMU 20
F233CMU 21
F233CMU 22
F233CMU 23
F233CMU 24

157 6150000074
5110000271 +

MNS32

SB5 60 BITS PER WORD
SA1 MNSD 1S48/6 + 1

160 5110000065
5150000270 +

SA1 RA.CMU
SA5 MNSC

161 21173

11613

15551

36756

AX1 59 SIGN EXTEND CMU FLAG
BX6 X1*X3
BX5 -X1*X5

162 5170000220 +

IX7 X5+X6
SA7 MNSB

SET CORRECT INITIALIZATION CODE

0100000162 +

RJ *

163 0400000220 +

EQ MNS02 RESTART

* MNS - MOVE BIT STRING WITH NO OVERLAP.

*

*

*

SITUATION: / X1 / X2 / X3 / X5 / X6 / X7 /
/ABCDEF/ /XXXXXX/ X4 =(XXX...)

164 0742000170 +

66435

22741

MNS40

GT B2,B4,MNS50 IF 1*ST BIT SOURCE .GT. 1*ST BIT DEST.
SB4 B3+B5 CORRECT SHIFT COUNT
LX7 X1,B4 / / / / / /DEFABC/

165 15676

12646

0330000214 +

BX6 -X6*X7 / / / / / /...ABC/ /
BX6 X4+X6 / / / / / /XXXABC/ /
MI X0,MNS120 IF BOTH FINISH IN ONE WORD

166 76110

22241

66335

37412

SX1 B1
LX2 X1,B4
SB3 B3+B5 CORRECT SHIFT COUNT

167 11347

0400000174 +

IX4 X1-X2 MASK
BX3 X4*X7
EQ MNS60 CONTINUE

* FIRST BIT SOURCE .GT. FIRST BIT DESTINATION.

*

*

*

SITUATION FOR / X1 / X2 / X3 / X5 / X6 / X7 /
THIS CASE IS: /YYYYAB/ /XXXXXX/ X4 =(XXX...)

F4720C 56
F4720C 57
F4720C 58
F4720C 59
F4720C 60
F4720C 61
F4720C 62
F4720C 63
F4720C 64
F4720C 65
F4720C 66
F4720C 67
F4720C 68
F4720C 69
F4720C 70
F4720C 71
F4720C 72
F4720C 73
F4720C 74
F4720C 75
F4720C 76
F4720C 77
F4720C 78
F4720C 79

170	22731	MNS50	LX7	X1,B3	/	/	/	/	/	/YYYABY/	F4720C	80							
	15676		BX6	-X6*X7	/	/	/	/	/	...ABY/	F4720C	81							
	76110		SX1	B1							F4720C	82							
	22231		LX2	X1,B3							F4720C	83							
171	12646		BX6	X4+X6	/	/	/	/	/XXXABY/	/	F4720C	84							
	37412		IX4	X1-X2	MASK						F4720C	85							
	54111		SA1	A1+B1	/CDEFGH/	/	/	/	/	/	F4720C	86							
	11246		BX2	X4*X6	/	/XXXAB./	/	/	/	/	F4720C	87							
172	22731		LX7	X1,B3	/	/	/	/	/	DEFGHC/	F4720C	88							
	15174		BX1	-X4*X7	/.....C/	/	/	/	/	/	F4720C	89							
	12621		BX6	X2+X1	/	/	/	/	/XXXABC/	/	F4720C	90							
173	0330000212 +		MI	X0,MNS110	IF ALL FITS IN ONE WORD						F4720C	91							
	11347		BX3	X4*X7	/	/	/DEFGH./	/	/	/	F4720C	92							
											F4720C	93							
		*		DESTINATION FIELD EXTENDS OVER A WORD BOUNDARY.							F4720C	94							
		*		NOTE: COMMENTS CONTINUE FROM *MNS40* CODE.							F4720C	95							
		*									F4720C	96							
		*		SITUATION:	/	X1	/	X2	/	X3	/	X5	/	X6	/	X7	/	F4720C	97
		*			/		/	/DEF.../	/		/	XXXABC/	/	F4720C	98				
													F4720C	99					
174	76755	MNS60	SX7	B5+B5								F4720C	100						
	54630		SA6	A3	/	/	/	/	/*STOR*/	/	F4720C	101							
	37007		IX0	X0-X7	/	/	/DEF.../	/	/	/	F4720C	102							
	54111		SA1	A1+B1	/GHIJKL/	/	/	/	/	/	F4720C	103							
175	0330000206 +		MI	X0,MNS90	IF 2 WORD FIT						F4720C	104							
											F4720C	105							
		*		SITUATION:	/	X1	/	X2	/	X3	/	X5	/	X6	/	X7	/	F4720C	106
		*			/GHIJKL/	/	/DEF.../	/	/	/	/	F4720C	107						
											F4720C	108							
	54211		SA2	A1+B1	/	/MNOPQR/	/	/	/	/	F4720C	109							
	22531		LX5	X1,B3	/	/	/	/JKLGHI/	/	/	F4720C	110							
176	54121		SA1	A2+B1	/STUVWX/	/	/	/	/	/	F4720C	111							
	37007		IX0	X0-X7							F4720C	112							
	15754		BX7	-X4*X5	/	/	/	/	/	...GHI/	F4720C	113							
	37557		IX5	X5-X7	/	/	/	/JKL.../	/	/	F4720C	114							
177	12737		BX7	X3+X7	/	/	/	/	/	DEFGHI/	F4720C	115							
	22232		LX2	X2,B3	/	/PQRMNO/	/	/	/	/	F4720C	116							
	0330000204 +		MI	X0,MNS80	IF 3 WORD FIT						F4720C	117							
											F4720C	118							
		*		SITUATION:	/	X1	/	X2	/	X3	/	X5	/	X6	/	X7	/	F4720C	119
		*			/STUVWX/PQRMNO/DEF.../JKL.../	/	/	/	/	/	DEFGHI/	F4720C	120						
											F4720C	121							
200	54761	MNS70	SA7	A6+B1	/	/	/	/	/	/*STOR*/	F4720C	122							
	15624		BX6	-X4*X2	/	/	/	/	/...MNO/	/	F4720C	123							
	22131		LX1	X1,B3	/VWXSTU/	/	/	/	/	/	F4720C	124							
	76755		SX7	B5+B5							F4720C	125							
201	37326		IX3	X2-X6	/	/	/PQR.../	/	/	/	F4720C	126							
	54211		SA2	A1+B1	/	/YZ0123/	/	/	/	/	F4720C	127							
	12656		BX6	X5+X6	/	/	/	/	/JKLMNO/	/	F4720C	128							
	37007		IX0	X0-X7							F4720C	129							
202	54671		SA6	A7+B1	/	/	/	/	/*STOR*/	/	F4720C	130							
	15714		BX7	-X4*X1	/	/	/	/	/	...STU/	F4720C	131							
	37517		IX5	X1-X7	/	/	/	/VWX.../	/	/	F4720C	132							
	54121		SA1	A2+B1	/456789/	/	/	/	/	/	F4720C	133							
203	22232		LX2	X2,B3	/	/123WX0/	/	/	/	/	F4720C	134							
	12737		BX7	X3+X7	/	/	/	/	/	PQRSTU/	F4720C	135							
	0320000200 +		PL	X0,MNS70	IF MORE TO GO						F4720C	136							

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217	0400400217 +	MNS	SUBR	ENTRY/EXIT..	F233CMU	27
					F233CMU	28
220	5130000157 +	MNS02	SA3	MNSA	INITIAL *WITH CMU* CODE	F233CMU 29
	0100000157 +		RJ	MNS32	PERFORM ONE TIME INITIALIZATION	F233CMU 30
		*		THE ABOVE INSTRUCTIONS WILL BE REPLACED BY:	F233CMU	31
		*			F233CMU	32
		*		WITH CMU:-	F233CMU	33
		*	SB5	60	BITS PER WORD	F233CMU 34
		*	SA1	MNSC	1S48/6 + 1	F233CMU 35
		*				F233CMU 36
		*	NO CMU:-	SB5	60	F233CMU 37
		*	EQ	MNS06	IGNORE CMU CODE	F233CMU 38
					F233CMU	39
221	7130000264		SX3	3*60	F233CMU	40
	53540		SA5	X4	F233CMU	41
	76720		SX7	B2	SF = FIRST SOURCE BIT	F233CMU 42
222	37530		IX5	X3-X0		F233CMU 43
	40301		FX3	X0*X1	L6 = LENGTH / 6	F233CMU 44
	0325000253 +		PL	X5,MNS06	IF QUICKER NOT TO USE CMU	F233CMU 45
223	76640		SX6	B4	DF = DESTINATION FIRST BIT	F233CMU 46
	40571		FX5	X7*X1	S6 = SF / 6 = SOURCE FIRST CHARACTER	F233CMU 47
	63330		SB3	X3		F233CMU 48
	63650		SB6	X5		F233CMU 49
224	66333		SB3	B3+B3	L2 = L6 * 2	F233CMU 50
	66666		SB6	B6+B6	S2 = S6 * 2	F233CMU 51
	40161		FX1	X6*X1	D6 = DF / 6 = DESTINATION FIRST CHARACTER	F233CMU 52
	22705		LX7	X5		F233CMU 53
225	10633		BX6	X3		F233CMU 54
	20702		LX7	2	S4 = S6 * 4	F233CMU 55
	20602		LX6	2	L4 = L6 * 4	F233CMU 56
	63676		SB6	B6+X7	SX = S2 + S4	F233CMU 57
226	63510		SB5	X1		F233CMU 58
	73663		SX6	B3+X6	LX = L2 + L4	F233CMU 59
	66555		SB5	B5+B5	D2 = D6 * 2	F233CMU 60
	37706		IX7	X0-X6	ML = LENGTH - LX = MOD(LENGTH,6)	F233CMU 61
227	66355		SB3	B5+B5	D4 = D2 + D2	F233CMU 62
	77626		SX6	B2-B6	MS = SF - SX = MOD(SF,6)	F233CMU 63
	66535		SB5	B3+B5	DX = D4 + D2	F233CMU 64
	12776		BX7	X7+X6	REMAINDER = ML .OR. MS	F233CMU 65
230	77645		SX6	B4-B5	MD = DF - DX = MOD(DF,6)	F233CMU 66
	6150000074		SB5	60	BITS PER WORD	F233CMU 67
	12767		BX7	X6+X7	REMAINDER = REMAINDER .OR. MD	F233CMU 68
231	46000		NO			F233CMU 69
	0317000253 +		NZ	X7,MNS06	IF NOT CHARACTER ORIENTED	F233CMU 70
						F233CMU 71
	53220		SA2	X2		F233CMU 72
		*			SET UP CMU INSTRUCTION AND EXECUTE IT.	F233CMU 73
						F233CMU 74
232	7120017777	MNS04	SX2	8191	MAX CMU CHARACTERS TRANSFERABLE	F233CMU 75
	74720		SX7	A2	SA = SOURCE ADDRESS	F233CMU 76
	37032		IX0	X3-X2		F233CMU 77
233	20736		LX7	30	POSITION SOURCE ADDRESS	F233CMU 78
	21074		AX0	60		F233CMU 79
	74650		SX6	A5	DA = DESTINATION ADDRESS	F233CMU 80
	15420		BX4	-X0*X2		F233CMU 81
234	36767		IX7	X6+X7	SA + DA	F233CMU 82
						F233CMU 83

		11003		BX0	X0*X3		F233CMU	84	
		73610		SX6	X1	DF = D6	F233CMU	85	
		36404		IX4	X0+X4	CHARS TO TRANSMIT = MIN(8191,L6)	F233CMU	86	
1	235	20622		LX6	18	POSITION DF	F233CMU	87	1
2		43070		MX0	-4		F233CMU	88	2
3		12767		BX7	X6+X7	SA + DF + DA	F233CMU	89	3
4			15240	BX2	-X0*X4	LO BITS L6	F233CMU	90	4
5	236	22605		LX6	X5	SF = S6	F233CMU	91	5
6		11004		BX0	X0+X4	HI BITS L6	F233CMU	92	6
7		20626		LX6	22	POSITION SF	F233CMU	93	7
8			20232	LX2	26	POSITION LO L6	F233CMU	94	8
9	237	36767		IX7	X6+X7	SA + SF + DF + DA	F233CMU	95	9
10		20054		LX0	48-4	POSITION HI L6	F233CMU	96	10
11		12727		BX7	X2+X7	SA + LO L6 + SF + DF + DA	F233CMU	97	11
12			37234	IX2	X3-X4		F233CMU	98	12
13	240	12607		BX6	X0+X7	HI L6 + SA + LO L6 + SF + DF + DA	F233CMU	99	13
14		63520		SB5	X2	REMAINING CHARACTERS	F233CMU	100	14
15			5160000273 +	SA6	MNSF		F233CMU	101	15
16							F233CMU	102	16
17	241	4640000273 +		IM	MNSF	INDIRECT CMU MOVE	F233CMU	103	17
18							F233CMU	104	18
19			*			SET UP EXIT CONDITION IN CHARACTERS.	F233CMU	105	19
20							F233CMU	106	20
21	242	36114		IX1	X1+X4	D6 + TRANSMITTED CHARACTERS	F233CMU	107	21
22			5130000272 +	SA3	MNSE	IS48E-1 + 1	F233CMU	108	22
23			36554	IX5	X5+X4	S6 + TRANSMITTED CHARACTERS	F233CMU	109	23
24	243	40613		FX6	X1*X3	D10 = D6 / 10	F233CMU	110	24
25		40753		FX7	X5*X3	S10 = S6 / 10	F233CMU	111	25
26			22016	LX0	B1,X6	D10 * 2	F233CMU	112	26
27			22217	LX2	B1,X7	S10 * 2	F233CMU	113	27
28	244	10400		BX4	X0		F233CMU	114	28
29			10322	BX3	X2		F233CMU	115	29
30			20402	LX4	2	D10 * 8	F233CMU	116	30
31			63660	SB6	X6		F233CMU	117	31
32	245	20302		LX3	2	S10 * 8	F233CMU	118	32
33			63270	SB2	X7		F233CMU	119	33
34			36404	IX4	X0+X4	D10 * 10	F233CMU	120	34
35			10755	BX7	X5		F233CMU	121	35
36	246	36323		IX3	X2+X3	S10 * 10	F233CMU	122	36
37		54222		SA2	A2+B2	NEW FWA SOURCE	F233CMU	123	37
38			54556	SA5	A5+B6	NEW FWA DESTINATION	F233CMU	124	38
39			37114	IX1	X1-X4	NEW FIRST CHARACTER DESTINATION	F233CMU	125	39
40	247	37573		IX5	X7-X3	NEW FIRST CHARACTER SOURCE	F233CMU	126	40
41			76350	SX3	B5	CHARACTERS LEFT TO TRANSMIT	F233CMU	127	41
42							F233CMU	128	42
43			0705000232 +	GT	B5,B0,MNS04	IF MORE TO TRANSMIT	F233CMU	129	43
44							F233CMU	130	44
45			*			EXIT PROCESSING, CONVERT CHARACTERS TO BITS	F233CMU	131	45
46			*			AND RESET ADDRESS REGISTERS.	F233CMU	132	46
47							F233CMU	133	47
48	250	22611		LX6	B1,X1	D6 * 2	F233CMU	134	48
49			36755	IX7	X5+X5	S6 * 2	F233CMU	135	49
50			20102	LX1	2	D6 * 4	F233CMU	136	50
51			20502	LX5	2	S6 * 4	F233CMU	137	51
52	251	36661		IX6	X6+X1	D6 * 6	F233CMU	138	52
53			74220	SX2	A2		F233CMU	139	53
54			63460	SB4	X6		F233CMU	140	54
55									55
56									56
57									57
58									58
59									59
60									60

252	74450	36775	IX7	X7+X5	S6 * 6	F233CMU	141
			SX4	A5		F233CMU	142
	63270		SB2	X7		F233CMU	143
						F233CMU	144
		0400000217 +	EQ	MNS	EXIT..	F233CMU	145
						F233CMU	146
		*			DETERMINE IF A BIT ALIGNED MOVE IS POSSIBLE (DESTINATION	F4720C	192
		*			STRING WILL OCCUPY SAME WORD RELATIVE POSITION AS SOURCE	F4720C	193
		*			STRING).	F4720C	194
		*				F4720C	195
		*		SITUATION:	/ X1 / X2 / X3 / X5 / X6 / X7 /	F4720C	196
		*			/ / / / / / /	F4720C	197
						F4720C	198
253	43501	MNS06	MX5	1		F233CMU	147
	53340		SA3	X4	/ / /XXXXXX/ / /	F4720C	202
	53120		SA1	X2	/ABCDEF/ / / /	F4720C	203
	77745		SX7	B4-B5		F4720C	204
254	23645		AX6	X5,B4		F4720C	205
	67324		SB3	B2-B4	SHIFT COUNT	F4720C	206
	15465		BX4	-X5*X6		F4720C	207
	22614		LX6	X4,B1	MASK FOR FIRST DESTINATION WORD	F4720C	208
255	36070		IX0	X7+X0		F4720C	209
	11463		BX4	X6*X3	/ / X4 =(XXX...) / /	F4720C	210
	0524000164 +		NE	B2,B4,MNS40	IF NOT A BIT ALIGNED MOVE	F4720C	211
						F4720C	212
		*			PROCESS BIT ALIGNED MOVE. NOTE THAT FOR OUR COMMENTING	F4720C	213
		*			EXAMPLE A BIT ALIGNED MOVE WOULD IMPLY A ZERO BIT MASK,	F4720C	214
		*			HENCE:	F4720C	215
		*				F4720C	216
		*		SITUATION:	/ X1 / X2 / X3 / X5 / X6 / X7 /	F4720C	217
		*			/ABCDEF/ X4 =(.....) /...../	F4720C	218
						F4720C	219
256	15716		BX7	-X6*X1	/ / / / /ABCDEF/	F4720C	220
	12674		BX6	X7+X4	/ / / / /ABCDEF/	F4720C	221
	0330000214 +		MI	X0,MNS120	IF ALL FITS IN ONE WORD	F4720C	222
257	54111		SA1	A1+B1	/GHIJKL/ / /	F4720C	223
	54630		SA6	A3	/ / / / *STOR*/	F4720C	224
	76455		SX4	B5+B5		F4720C	225
	54311		SA3	A1+B1	/ / /MNOPQR/ /	F4720C	226
260	37004		IX0	X0-X4		F4720C	227
	10711		BX7	X1	/ / / / /GHIJKL/	F4720C	228
	0330000264 +		MI	X0,MNS20	IF ALL FITS IN TWO WORDS	F4720C	229
261	54761	MNS10	SA7	A6+B1	/ / / / / *STOR*/	F4720C	230
	10633		BX6	X3	/ / / / MNOPQR/	F4720C	231
	37004		IX0	X0-X4		F4720C	232
	54131		SA1	A3+B1	/STUVWX/ / / /	F4720C	233
262	5033000002		SA3	A3+2	/ / /Z01234/ /	F4720C	234
	10711		BX7	X1	/ / / / /STUVWX/	F4720C	235
	54671		SA6	A7+B1	/ / / / *STOR*/	F4720C	236
263	0320000261 +		PL	X0,MNS10	IF NEXT WORD IS A 60 BIT MOVE	F4720C	237
264	7200000074	MNS20	SX0	X0+60		F4720C	238
	74210		SX2	A1		F4720C	239
	10677		BX6	X7	/ / / / /STUVWX/	F4720C	240
265	0330000267 +		MI	X0,MNS30	IF LAST WORD FETCHED NOT LAST TO MOVE	F4720C	241
	5066000001		SA6	A6+1	/ / / / *STOR*/	F4720C	242
266	7200777703		SX0	X0-60		F4720C	243
	74230		SX2	A3		F4720C	244

267	54361	10633	MNS30	BX6	X3	/	/	/	/	/Z01234/	/	F4720C	245
				SA3	A6+B1	FETCH	LAST	DESTINATION	WORD			F4720C	246
		0400000214 +		EQ	MNS120	GO TO	HANDLE	THE	MASKING			F4720C	247

*	STORAGE.	F233CMU	149
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	157 +	MNSA	EQU	MNS32		F233CMU	151
	220 +	MNSB	EQU	MNS02		F233CMU	152
270	6150000074	MNSC	SB5	60		F233CMU	153
	0400000253 +		EQ	MNS06	IGNORE CMU CODE	F233CMU	154
271	000012525252525253	MNSD	CON	12525252525253B	1S48/6 + 1	F233CMU	155
272	00000631463146314632	MNSE	CON	1S48E-1+1	ONE TENTH + 1	F233CMU	156
273	1	MNSF	BSS	1	CMU *IM* INDIRECT WORD	F233CMU	157

D_D		BASE	*	F4720C	249
	QUAL\$	IF	-DEF,QUAL\$	F4720C	250
		QUAL	*	F4720C	251
217 +	MNS	EQU	/COMCMNS/MNS	F4720C	252
217 +	MNS=	EQU	MNS	F4720C	253
	QUAL\$	ENDIF		F4720C	254
	MNS	ENDX		F4720C	255

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			*		B1, B2, B3, B4, B5, B6.							F4720C	296							
			*		A1, A2, A3, A5, A6, A7.							F4720C	297							
			*									F4720C	298							
1			*	CALLS	MNS=.							F4720C	299							
2												F4720C	300							
3			*	THE COMMENTING SCHEME INVOLVED HEREIN COULD ALSO USE								F4720C	301							
4			*	SOME EXPLANATION. IT IS BASED ON A SIX BIT WORD, EACH BIT								F4720C	302							
5			*	IDENTIFIED BY A LETTER IN THE 64 CHARACTER CHARACTER SET.								F4720C	303							
6			*	THE OVERALL ASSUMPTION IS THAT THE SOURCE STARTS AT BIT 0,								F4720C	304							
7			*	(LEFT MOST), AND THE DESTINATION COMMENCES AT BIT 3 (THE								F4720C	305							
8			*	MIDDLE). THIS ASSUMPTION IS MODIFIED FOR THE BIT ALIGNED								F4720C	306							
9			*	MOVE (MOS10 ET SEQ.), AND FOR THE FIRST BIT SOURCE GREATER								F4720C	307							
10			*	THAN FIRST BIT DESTINATION CASE (MOS50 ET SEQ.). THE								F4720C	308							
11			*	COMMENTS EXPLAIN THE DIFFERENCE FOR THESE CASES.								F4720C	309							
12												F4720C	310							
13			*	PROCESS OVERLAP MOVE.								F4720C	311							
14												F4720C	312							
15	274	12757	MOS50	BX7	X5+X7	/	/	/	/	/	/	DEFGHI/	F4720C	313						
16		7266000001		SX6	X6+1								F4720C	314						
17		55771		SA7	A7-B1	/	/	/	/	/	/	*STOR*/	F4720C	315						
18													F4720C	316						
19			*	SITUATION:		/	X1	/	X2	/	X3	/	X5	/	X6	/	X7	/	F4720C	317
20			*	WITH PRIOR JUMP:		/	PQRMNO/			/	GHIJKL/		/		/		/	F4720C	318	
21			*	WITHOUT JUMP:		/	JKLGHI/			/	ABCDEF/		/		/		/	F4720C	319	
22																		F4720C	320	
23	275	11501	MOS60	BX5	X0*X1	/		/		/	...GHI/		/		/		/	F4720C	321	
24		22133		LX1	X3,B3	/	DEFABC/		/		/		/		/		/	F4720C	322	
25		55331		SA3	A3-B1	/		/		/	<>@\^;/		/		/		/	F4720C	323	
26		15710		BX7	-X0*X1	/		/		/		/		/		/	DEF...	F4720C	324	
27	276	0336000274 +		MI	X6,MOS50	IF	NOT	ON	LAST	WORD								F4720C	325	
28																		F4720C	326	
29			*	SITUATION AFTER		/	X1	/	X2	/	X3	/	X5	/	X6	/	X7	/	F4720C	327
30			*	ONE LOOP:		/	\^;<>@/			/	"_!&'?/...ABC/		/	\^;...				F4720C	328	
31																		F4720C	329	
32		5017777776		SA1	A7-1	/	XXXXXX/		/		/		/		/		/	F4720C	330	
33	277	43073		MX0	59													F4720C	331	
34		12757		BX7	X5+X7	/		/		/		/		/		/	\^;ABC/	F4720C	332	
35		23550		AX5	X0,B5													F4720C	333	
36		37650		IX6	X5-X0	MASK	FOR	LAST	WORD									F4720C	334	
37	300	15376		BX3	-X6*X7	/		/		/	...ABC/		/		/		/	F4720C	335	
38		11561		BX5	X6*X1	/		/		/	XXX...		/		/		/	F4720C	336	
39		12753		BX7	X5+X3	/		/		/		/		/		/	XXXABC/	F4720C	337	
40		54710		SA7	A1	/		/		/		/		/		/	*STOR*/	F4720C	338	
41																		F4720C	339	
42			*	DETERMINE IF WE CAN PERFORM A NON OVERLAP MOVE.														F4720C	340	
43																		F4720C	341	
44	301	0400400301 +	MOS	SUBR	ENTRY/EXIT..													F4720C	342	
45	302	37624		IX6	X2-X4	WOV	=	SOURCE	ADDRESS	-	DESTINATION	ADDRESS						F4720C	343	
46		0326000324 +		PL	X6,MOS40	IF	NO	ADDRESS	OVERLAP									F4720C	344	
47		20602		LX6	2	W04	=	WOV	*	4								F4720C	345	
48	303	77142		SX1	B4-B2	BOV	=	DESTINATION	BIT	-	SOURCE	BIT						F4720C	346	
49		36316		IX3	X1+X6	TMP	=	W04	+	BOV								F4720C	347	
50		20604		LX6	4	W64	=	W04	*	16	=	WOV	*	64				F4720C	348	
51		37536		IX5	X3-X6	NBA	=	W64	-	TMP	=	W64	-	W04	+	BOV		F4720C	349	
52	304	37650		IX6	X5-X0													F4720C	350	
53		0326000324 +		PL	X6,MOS40	IF	NBA	(NUM.	BITS	APART)	.LT.	BITS	TO	MOVE				F4720C	351	
54	305	5110002160 +		SA1	=00000104210422000074B	D60	=	1.0/60	.OR.	60								F4720C	352	

		40710		FX7	X1*X0	WTM = BITS TO MOVE / 60.	F4720C	353
		63310		SB3	X1		F4720C	354
	306	10644		BX6	X4		F4720C	355
1		0307000324 +		ZR	X7,MOS40	IF BITS TO MOVE .LT. 60 (WTM = 0)	F4720C	356
2							F4720C	357
3			*			THIS IS A GENUINE OVERLAP MOVE.	F4720C	358
4							F4720C	359
5			36447	IX4	X4+X7	TENTATIVE END OF DESTINATION FIELD	F4720C	360
6	307	36227		IX2	X2+X7	TENTATIVE END OF SOURCE FIELD	F4720C	361
7		20702		LX7	2	WT4 = WTM * 4	F4720C	362
8		36307		IX3	X0+X7	TMP = WT4 + BTM (BITS TO MOVE)	F4720C	363
9		20704		LX7	4	W64 = WT4 * 16 = WTM * 64	F4720C	364
10	310	37537		IX5	X3-X7	REM = TMP - W64 (MOD(BTM, 60))	F4720C	365
11		67543		SB5	B4-B3	FOR FINAL PUT TOGETHER	F4720C	366
12		63252		SB2	X5+B2	TENTATIVE SOURCE BIT	F4720C	367
13		63454		SB4	X5+B4	TENTATIVE DESTINATION BIT	F4720C	368
14	311	6110000001		SB1	1		F4720C	369
15		0723000313 +		LT	B2,B3,MOS10	IF SOURCE BIT WITHIN SAME WORD	F4720C	370
16	312	67223		SB2	B2-B3	CORRECT SOURCE BIT	F4720C	371
17		73221		SX2	X2+B1	POSITION AT NEXT SOURCE WORD	F4720C	372
18	313	0743000314 +	MOS10	LT	B4,B3,MOS20	IF DESTINATION BIT WITHIN SAME WORD	F4720C	373
19		67443		SB4	B4-B3	CORRECT DESTINATION BIT	F4720C	374
20		73441		SX4	X4+B1	POSITION AT NEXT DESTINATION WORD	F4720C	375
21							F4720C	376
22			*			STARTING POINT IS NOW DETERMINED FOR A BACKWARDS MOVE.	F4720C	377
23			*				F4720C	378
24			*			SITUATION: / X1 / X2 / X3 / X5 / X6 / X7 /	F4720C	379
25			*			/ / / / / / /	F4720C	380
26							F4720C	381
27	314	53320	MOS20	SA3	X2	/ / /MNOPQR/ / /	F4720C	382
28		43001		MX0	1	FORM MASK	F4720C	383
29		53540		SA5	X4	/ / / /XXXXXX/ /	F4720C	384
30		23140		AX1	X0,B4		F4720C	385
31	315	67324		SB3	B2-B4	SHIFT	F4720C	386
32		15710		BX7	-X0*X1		F4720C	387
33		22133		LX1	X3,B3	/PQRMNO/ / / /	F4720C	388
34		36777		IX7	X7+X7	MASK	F4720C	389
35	316	15557		BX5	-X7*X5	/ / /...XXX/ /	F4720C	390
36		37664		IX6	X6-X4		F4720C	391
37		22330		LX3	X0,B3		F4720C	392
38		11771		BX7	X7*X1	/ / / / /PQR.../	F4720C	393
39	317	37030		IX0	X3-X0		F4720C	394
40		12775		BX7	X7+X5	/ / / / /PQRXXX/	F4720C	395
41		55331		SA3	A3-B1	/ / /GHIJKL/ / /	F4720C	396
42		22010		LX0	X0,B1	- MASK (60 - SHIFT) FOR LOOP	F4720C	397
43	320	0624000323 +		LE	B4,B2,MOS30	IF DESTINATION BIT .LE. SOURCE BIT	F4720C	398
44		6133000074		SB3	B3+60	WE NEED AN EXTRA SOURCE WORD	F4720C	399
45	321	14000		BX0	-X0	REVERSE THE MASK	F4720C	400
46		22133		LX1	X3,B3	/JHKGHI/ / / /	F4720C	401
47		5033777776		SA3	A3-1	/ / /ABCDEF/ / /	F4720C	402
48	322	11707		BX7	X0*X7	/ / / /...XXX/	F4720C	403
49		15510		BX5	-X0*X1	/ / /JKL.../ /	F4720C	404
50		46000		N0			F4720C	405
51		12757		BX7	X5+X7	/ / / / /JKLXXX/	F4720C	406
52	323	54750	MOS30	SA7	A5	/ / / / /*STOR*/	F4720C	407
53		73661		SX6	X6+B1		F4720C	408
54		0400000275 +		EQ	MOS60	CONTINUE	F4720C	409

* HERE WE HAVE A NON-OVERLAPPING MOVE.

F4720C 410
F4720C 411
F4720C 412
F4720C 413
F4720C 414
F4720C 415
F4720C 416

1	324	5110000301 +	MOS40	SA1	MOS	TRANSFER CALLERS RETURN ADDRESS	F4720C	413	1
2		10611		BX6	X1		F4720C	414	2
3	325	5160000217 +		SA6	=XMNS=		F4720C	415	3
4		0400000220 +		EQ	=XMNS=+1	MOVE BIT STRING WITH NO OVERLAP	F4720C	416	4
5									5
6									6
7									7
8									8
9									9
10		D_D		BASE	*		F4720C	418	10
11			QUAL\$	IF	-DEF,QUAL\$		F4720C	419	11
12				QUAL	*		F4720C	420	12
13		301 +	MOS	EQU	/COMCMOS/MOS		F4720C	421	13
14		301 +	MOS=	EQU	/COMCMOS/MOS		F4720D	11	14
15			QUAL\$	ENDIF			F4720C	422	15
16			MOS	ENDX			F4720C	423	16
17									17
18									18
19									19
20									20
21									21
22									22
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47									47
48									48
49									49
50									50
51									51
52									52
53									53
54									54
55									55
56									56
57									57
58									58
59									59
60									60

1

*** ALLOC - ALLOCATE TABLE SPACE.

COMCMTM 34

*

COMCMTM 35

*

COMCMTM 36

* ALLOC TABLE,WORDS

COMCMTM 37

* ENTRY *TABLE* = TABLE NUMBER.

COMCMTM 38

* *WORDS* = WORD COUNT OF TABLE.

COMCMTM 39

*

COMCMTM 40

* USES A - 0.

COMCMTM 41

* X - 1.

COMCMTM 42

*

COMCMTM 43

* CALLS ATS.

COMCMTM 44

COMCMTM 45

ALLOC MACRO A,B

COMCMTM 46

R= X1,B

COMCMTM 47

R= A0,A

COMCMTM 48

RJ ATS

COMCMTM 50

ENDM

COMCMTM 51

*** SEARCH - SEARCH MANAGED TABLE.

COMCMTM 53

*

COMCMTM 54

*

COMCMTM 55

* SEARCH TNAM,ENTRY,MASK

COMCMTM 56

* ENTRY *TNAM* = TABLE NAME.

COMCMTM 57

* *ENTRY* = ENTRY TO SEARCH FOR.

COMCMTM 58

* *MASK* = SEARCH MASK IN (X0).

COMCMTM 59

* IF *MASK* IS NOT PRESENT, MASK IS ALL BITS.

COMCMTM 60

* USES A - 0.

COMCMTM 61

* B - 7.

COMCMTM 62

* X - 6.

COMCMTM 63

*

COMCMTM 64

* CALLS EQS OR MES.

COMCMTM 65

COMCMTM 66

SEARCH MACRO TNAM,ENTRY,MASK

COMCMTM 67

R= A0,TNAM

COMCMTM 68

R= B7,C.TNAM

COMCMTM 69

IFC NE,\$X6\$ENTRY\$,1

COMCMTM 70

BX6 ENTRY

COMCMTM 71

IFC EQ,\$MASK\$\$

COMCMTM 72

RJ EQS

COMCMTM 73

ELSE 1

COMCMTM 74

RJ MES

COMCMTM 75

ENDM

COMCMTM 76

COMCMTM 77

TEND
NTAB

EQU
SET
ORG

NTAB
NTAB+1
FTAB+TEND

DUMMY TABLE

COMCMTM 133
COMCMTM 134
COMCMTM 135

F.TEND
LTAB

CON
BSS
ORG

MEML+TEND
0
LTAB+TEND

DUMMY TABLE
TABLE LENGTHS

COMCMTM 136
COMCMTM 137
COMCMTM 138

L.TEND
TABLES

CON
RMT

0

COMCMTM 139
COMCMTM 140

MTM

ENDX

COMCMTM 142

2

1

*						COMCMTP	38
*						COMCMTP	39
*						COMCMTP	40
*						COMCMTP	41
*						COMCMTP	42
*						COMCMTP	43
*						COMCMTP	44
*						COMCMTP	45
*						COMCMTP	46
*						COMCMTP	47
*						COMCMTP	48
*						COMCMTP	49
*						COMCMTP	50
*						COMCMTP	51
*						COMCMTP	52
*						COMCMTP	53
*						COMCMTP	54
*						COMCMTP	55
*						COMCMTP	56
*						COMCMTP	57
*						COMCMTP	58
*						COMCMTP	59
*						COMCMTP	60
*						COMCMTP	61
*						COMCMTP	62
*						COMCMTP	63
*						COMCMTP	64
***						COMCMTP	66
*						COMCMTP	67
*						COMCMTP	68
*						COMCMTP	69
*						COMCMTP	70
*						COMCMTP	71
*						COMCMTP	72
*						COMCMTP	73
*						COMCMTP	74
*						COMCMTP	75
*						COMCMTP	76
*						COMCMTP	77
*						COMCMTP	78
*						COMCMTP	79
*						COMCMTP	80
*						COMCMTP	81
*						COMCMTP	82
334	10611	ADW1	BX6	X1	PLACE ENTRY IN TABLE	COMCMTP	83
	36723		IX7	X2+X3		COMCMTP	84
	53670		SA6	X7		COMCMTP	85
	73331		SX3	X3+B1		COMCMTP	86
335	0400400335 +	ADW	SUBR		ENTRY/EXIT	COMCMTP	89
336	5020000332 +		SA2	FTAB+A0	SET TABLE DIFFERENTIAL	COMCMTP	90
	54421		SA4	A2+B1		COMCMTP	91

337	5030000333 +	37742	IX7	X4-X2		COMCMTP	92
	73631		SA3	LTAB+A0	CURRENT LENGTH	COMCMTP	93
			SX6	X3+B1	ADD NEW ENTRY	COMCMTP	94
340	54630	37767	IX7	X6-X7		COMCMTP	95
	0337000334 +		SA6	A3	UPDATE LENGTH	COMCMTP	96
	10611		NG	X7,ADW1	IF ROOM FOR ENTRY + 1 WORD	COMCMTP	97
341	22703		BX6	X1	SAVE ENTRY	COMCMTP	98
	5160000345 +		LX7	X3	RESTORE LENGTH	COMCMTP	99
	54730		SA6	ADWA		COMCMTP	100
342	76110		SA7	A3		COMCMTP	101
343	5110000345 +		ALLOC	A0,1	ALLOCATE 1 WORD	COMCMTP	102
	7233777776		SA1	ADWA	RESTORE ENTRY	COMCMTP	103
344	0400000334 +		SX3	X3-1	SET ORIGINAL LENGTH	COMCMTP	104
			EQ	ADW1	PROCESS ENTRY	COMCMTP	105
345	00000000000000000000	ADWA	CON	0		COMCMTP	106
						COMCMTP	107
		***	AMU	-	ACCUMULATE MEMORY USED.	COMCMTP	109
		*				COMCMTP	110
		*	ENTRY	NONE.		COMCMTP	111
		*				COMCMTP	112
		*	EXIT	MU = MAX(MU,CURRENT ASSIGNED LENGTH)		COMCMTP	113
		*				COMCMTP	114
		*	USES	X - 1, 2, 3, 6.		COMCMTP	115
		*		B - 2.		COMCMTP	116
		*		A - 1, 2, 6.		COMCMTP	117
		*				COMCMTP	118
		*	CALLS	NONE.		COMCMTP	119
						COMCMTP	120
						COMCMTP	121
346	36662	AMU1	IX6	X6+X2	ACCUMULATE LENGTH	COMCMTP	122
	67221		SB2	B2-B1		COMCMTP	123
	54221		SA2	A2+B1	NEXT TABLE	COMCMTP	124
347	0521000346 +		NE	B2,B1,AMU1	LOOP FOR ALL TABLES	COMCMTP	125
	5110000326 +		SA1	MU	SET MAX LENGTH	COMCMTP	126
350	37361		IX3	X6-X1		COMCMTP	127
	0333000351 +		NG	X3,AMUX	RETURN	COMCMTP	128
	54610		SA6	A1		COMCMTP	129
						COMCMTP	130
351	0400400351 +	AMU	SUBR		ENTRY/EXIT	COMCMTP	131
352	5110000330 +		SA1	TN	(B2) = NUMBER OF TABLES	COMCMTP	132
	43600		MX6	0	CLEAR ACCUMULATION	COMCMTP	133
	63210		SB2	X1		COMCMTP	134
353	5120000333 +		SA2	LTAB	FIRST TABLE	COMCMTP	135
	0400000346 +		EQ	AMU1		COMCMTP	136

***	ATS - ALLOCATE TABLE SPACE.	COMCMTP	138				
*		COMCMTP	139				
*	ENTRY (A0) = TABLE INDEX.	COMCMTP	140				
*	(X1) = CHANGE (+ OR -) TO TABLE SIZE.	COMCMTP	141				
*		COMCMTP	142				
*	EXIT (X1) = CHANGE.	COMCMTP	143				
*	(X2) = FWA OF TABLE.	COMCMTP	144				
*	(X3) = NEW LENGTH OF TABLE.	COMCMTP	145				
*	(X7) .LT. 0 IF TABLES MOVED.	COMCMTP	146				
*		COMCMTP	147				
*	IF TABLES NOT MOVED -	COMCMTP	148				
*	USES X - 2, 3, 4, 6, 7.	COMCMTP	149				
*	B - NONE.	COMCMTP	150				
*	A - 2, 3, 4, 6.	COMCMTP	151				
*		COMCMTP	152				
*	IF TABLES MOVED -	COMCMTP	153				
*	USES X - 0, 1, 2, 3, 4, 5, 6, 7.	COMCMTP	154				
*	B - 2, 3, 4, 5, 6, 7.	COMCMTP	155				
*	A - 1, 2, 3, 4, 6, 7.	COMCMTP	156				
*		COMCMTP	157				
*	RESTORES X - 0, 1, 5.	COMCMTP	158				
*	B - 2, 3, 4, 5, 6, 7. (EXCEPT -0)	COMCMTP	159				
*		COMCMTP	160				
*	CALLS AMU, MVE=, TOV.	COMCMTP	161				
*		COMCMTP	162				
*	ENTRY CONDITIONS FOR USER ROUTINE *TOV*.	COMCMTP	163				
*		COMCMTP	164				
*	(B1) = 1.	COMCMTP	165				
*	(B5) = COMPLEMENT OF NUMBER OF WORDS REQUIRED.	COMCMTP	166				
*	(B6) = RETURN ADDRESS TO CONTINUE PROCESSING, I.E.,	COMCMTP	167				
*	EXIT FROM *TOV* VIA * JP B6 * INSTRUCTION.	COMCMTP	168				
*		COMCMTP	169				
*	THE LOCATION *TOV* MUST CONTAIN EXECUTABLE CODE. *TOV*	COMCMTP	170				
*	IS ENTERED VIA A *JP*, NOT VIA *RJ*.	COMCMTP	171				
*		COMCMTP	172				
*	EXIT CONDITIONS FOR *TOV*.	COMCMTP	173				
*		COMCMTP	174				
*	ONLY B1 MUST BE PRESERVED.	COMCMTP	175				
*		COMCMTP	176				
*	A POINTER WORD MUST BE INCREMENTED BY THE NUMBER OF	COMCMTP	177				
*	WORDS NEWLY AVAILABLE. IF *NT* HAS NOT BEEN ALTERED	COMCMTP	178				
*	DURING EXECUTION, THE ADDRESS OF THE POINTER WORD IS	COMCMTP	179				
*	*F.TEND*.	COMCMTP	180				
*	IF *NT* HAS CHANGED, THE ADDRESS OF THE POINTER WORD	COMCMTP	181				
*	= FTAB-1 PLUS THE CONTENTS OF *NT*.	COMCMTP	182				
		COMCMTP	183				
		COMCMTP	184				
354	0400400354 +	ATS	SUBR	ENTRY/EXIT	COMCMTP	185	
355	5020000332 +		SA2	FTAB+A0	CURRENT FWA	COMCMTP	186
	5030000333 +		SA3	LTAB+A0	CURRENT LENGTH	COMCMTP	187
356	54421		SA4	A2+B1	NEXT TABLE FWA	COMCMTP	188
	36613		IX6	X1+X3	NEW LENGTH	COMCMTP	189
	37742		IX7	X4-X2	ROOM BETWEEN TABLES	COMCMTP	190
	54630		SA6	A3	SET NEW LENGTH	COMCMTP	191
357	37767		IX7	X6-X7		COMCMTP	192
	10366		BX3	X6		COMCMTP	193
	0337000354 +		NG	X7,ATSX	IF ROOM FOR CHANGE + 1 WORD, RETURN	COMCMTP	194

360 37761

IX7

X6-X1

SET PREVIOUS LENGTH

COMCMTP 195

COMCMTP 196

COMCMTP 197

* INITIALIZE FOR TABLE MOVE.

COMCMTP 198

COMCMTP 199

COMCMTP 200

361 5160000450 +

10711

22605

SA6

ATSB

COMCMTP 201

BX7

X1

SAVE (X1)

COMCMTP 202

LX6

X5

SAVE (X5)

COMCMTP 203

362 54761

54671

76720

76630

SA7

A6+B1

COMCMTP 204

SA6

A7+B1

COMCMTP 205

SX7

B2

SAVE B REGISTERS

COMCMTP 206

SX6

B3

COMCMTP 207

363 54761

54671

76740

76650

SA7

A6+B1

COMCMTP 208

SA6

A7+B1

COMCMTP 209

SX7

B4

COMCMTP 210

SX6

B5

COMCMTP 211

364 54761

54671

76760

76670

SA7

A6+B1

COMCMTP 212

SA6

A7+B1

COMCMTP 213

SX7

B6

COMCMTP 214

SX6

B7

COMCMTP 215

365 5076000001

5067000001

SA7

A6+1

COMCMTP 216

SA6

A7+1

COMCMTP 217

COMCMTP 218

* COMPUTE REMAINING TABLE SPACE.

COMCMTP 219

COMCMTP 220

366 5120000330 +

63220

36412

ATS1

SA2

TN

(B2) = NUMBER OF TABLES

COMCMTP 221

SB2

X2

COMCMTP 222

IX4

X1+X2

LENGTH = NUMBER OF TABLES + INCREASE

COMCMTP 223

367 6132777776

67331

5133000333 +

36443

ATS2

SB3

B2-1

COMCMTP 224

SB3

B3-B1

LENGTH = LENGTH + TABLE LENGTH

COMCMTP 225

SA3

LTAB+B3

COMCMTP 226

IX4

X4+X3

COMCMTP 227

371 0530000370 +

5120000327 +

5132000331 +

37632

63440

NZ

B3,ATS2

LOOP FOR ALL TABLES

COMCMTP 228

SA2

LM

SET AVAILABLE LENGTH

COMCMTP 229

372 5132000331 +

37632

63440

SA3

FTAB-1+B2

COMCMTP 230

IX6

X3-X2

COMCMTP 231

SB4

X4

(B4) = TOTAL ASSIGNED LENGTH

COMCMTP 232

373 37764

63570

QUAL\$

IX7

X6-X4

COMCMTP 233

SB5

X7

(B5) = REMAINING SPACE

COMCMTP 234

IF

DEF,TOVT

COMCMTP 235

SA1

TOVT

COMCMTP 236

IX7

X7-X1

ALLOW FOR THRESHOLD

COMCMTP 237

ENDIF

COMCMTP 238

374 5130000332 +

43736

37423

QUAL\$

MI

X7,ATS9

IF BELOW THRESHOLD

COMCMTP 239

SA3

FTAB

SET MOVE OFFSET FOR FIRST TABLE

COMCMTP 240

MX7

30

COMCMTP 241

IX4

X2-X3

COMCMTP 242

375 20436

11474

12734

54730

LX4

30

COMCMTP 243

BX4

X7*X4

COMCMTP 244

BX7

X3+X4

COMCMTP 245

376 5110000451 +

5020000333 +

SA7

A3

INCREMENT SIZE OF REQUESTED TABLE

COMCMTP 246

SA1

ATSB+1

COMCMTP 247

SA2

LTAB+A0

COMCMTP 248

377 36621

54620

IX6

X2+X1

COMCMTP 249

SA6

A2

COMCMTP 250

COMCMTP 251

* ALLOCATE SPACE BETWEEN TABLES: $(LA/2N) + ((TL*LA)/2) + 1$.
* DETERMINE NEW FWA AND TEMPORARILY SET DIRECTED DISTANCE
* (OFFSET) IN TOP HALF OF FWA WORD.

COMCMTP	252
COMCMTP	253
COMCMTP	254
COMCMTP	255
COMCMTP	256
COMCMTP	257
COMCMTP	258
COMCMTP	259
COMCMTP	260
COMCMTP	261
COMCMTP	262
COMCMTP	263
COMCMTP	264
CPSA133	5
COMCMTP	266
COMCMTP	267
COMCMTP	268
COMCMTP	269
CPSA133	6
COMCMTP	271
COMCMTP	272
COMCMTP	273
COMCMTP	274
COMCMTP	275
COMCMTP	276
COMCMTP	277
COMCMTP	278
COMCMTP	279
COMCMTP	280
COMCMTP	281
COMCMTP	282
COMCMTP	283
COMCMTP	284
COMCMTP	285
COMCMTP	286
COMCMTP	287
COMCMTP	288
COMCMTP	289
COMCMTP	290
COMCMTP	291
COMCMTP	292
COMCMTP	293
COMCMTP	294
COMCMTP	295
COMCMTP	296
COMCMTP	297
COMCMTP	298
COMCMTP	299
COMCMTP	300
COMCMTP	301
COMCMTP	302
COMCMTP	303
COMCMTP	304
COMCMTP	305
COMCMTP	306
COMCMTP	307
COMCMTP	308

1	5112000331 +	SA1	FTAB-1+B2	(X0) = LWA+1 LAST TABLE
2	400 67621	SB6	B2-B1	
3	10011	BX0	X1	
4	401 67661	SB6	B6-B1	I = I-1
5	5126000332 +	SA2	FTAB+B6	FWA(I)
6	76450	SX4	B5	LA (LENGTH AVAILABLE)
7	402 5116000333 +	SA1	LTAB+B6	TL (LENGTH OF TABLE)
8	77321	SX3	B2-B1	N (NUMBER OF TABLES)
9	23514	AX5	X4,B1	LA/2
10	403 27404	IX6	X4/X3	L1 = LA/N
11	405 0440000411 +	ZR	B4,ATS4	IF NO TABLES ASSIGNED, L = L1
12	76340	SX3	B4	AL (TOTAL ASSIGNED LENGTH)
13	42751	IX7	X5*X1	(LA/2)*TL
14	406 21601	AX6	1	L1 = LA/2N
15	27707	IX7	X7/X3	L2 = (TL*LA)/2
16	410 36667	IX6	X6+X7	L = L1+L2
17	411 73661	SX6	X6+B1	L = L+1
18	37406	IX4	X0-X6	FWA(I+1) - L
19	37741	IX7	X4-X1	FWA(I) = FWA(I+1) - L - TL - 1
20	37672	IX6	X7-X2	OFFSET TO NEW FWA
21	412 43336	MX3	30	
22	20636	LX6	30	ADD OFFSET TO FWA WORD
23	11636	BX6	X3*X6	
24	22007	LX0	X7	FWA(I+1) = FWA(I)
25	413 12662	BX6	X6+X2	
26	54620	SA6	A2	30/OFFSET, 30/OLD FWA
27	0561000401 +	NE	B6,B1,ATS3	LOOP
28	414 5110000451 +	SA1	ATSB+1	
29	5020000333 +	SA2	LTAB+A0	
30	415 37621	IX6	X2-X1	REMOVE INCREASE
31	54620	SA6	A2	
32				
33				
34		*		MOVE TABLES. FIRST START AT LAST TABLE AND MOVE ALL TABLES
35		*		WHICH MOVE UP; THEN START AT FIRST TABLE AND MOVE ALL WHICH
36		*		MOVE DOWN.
37				
38	67621	SB6	B2-B1	
39	416 67661	SB6	B6-B1	
40	5136000332 +	SA3	FTAB+B6	
41	73230	SX2	X3	CURRENT FWA
42	417 0333000422 +	MI	X3,ATS6	IF MOVING DOWN
43	21336	AX3	30	
44	36623	IX6	X2+X3	NEW FWA
45	420 0303000422 +	ZR	X3,ATS6	IF NOT MOVING
46	5116000333 +	SA1	LTAB+B6	LENGTH
47	421 10366	BX3	X6	
48	54630	SA6	A3	
49	0100000544 +	RJ	=XMVE=	MOVE TABLE
50	422 0561000416 +	NE	B6,B1,ATS5	IF MORE TABLES TO MOVE UP
51	67221	SB2	B2-B1	
52	66600	SB6	B0	
53	423 0662000430 +	GE	B6,B2,ATS8	IF NO MORE TO MOVE UP
54	5136000332 +	SA3	FTAB+B6	
55				
56				
57				
58				
59				
60				

424	66661		SB6	B6+B1		COMCMTP	309
	0323000423 +		PL	X3,ATS7	IF NOT MOVING DOWN	COMCMTP	310
	73230		SX2	X3	CURRENT FWA	COMCMTP	311
425	5116000332 +		SA1	LTAB+B6-1	LENGTH	CPSA104	17
	21336		AX3	30		COMCMTP	313
	36632		IX6	X3+X2	NEW FWA	COMCMTP	314
426	10366		BX3	X6		COMCMTP	315
	54630		SA6	A3		COMCMTP	316
	0100000544 +		RJ	=XMVE=	MOVE TABLE	COMCMTP	317
427	0400000423 +		EQ	ATS7		COMCMTP	318
						COMCMTP	319
		*		RESTORE REGISTERS.		COMCMTP	320
						COMCMTP	321
430	0100000351 +	ATS8	RJ	AMU	ACCUMULATE MEMORY USED	COMCMTP	322
431	5030000333 +		SA3	LTAB+A0	ADD INCREASE BACK TO SPECIFIED TABLE	COMCMTP	323
	5110000447 +		SA1	ATSA	COUNT MOVES	COMCMTP	324
432	73611		SX6	X1+B1		COMCMTP	325
	54610		SA6	A1		COMCMTP	326
	5120000450 +		SA2	ATSB	RESTORE (X0)	COMCMTP	327
433	54121		SA1	A2+B1	RESTORE (X1)	COMCMTP	328
	36613		IX6	X1+X3		COMCMTP	329
	54630		SA6	A3		COMCMTP	330
	10022		BX0	X2		COMCMTP	331
434	54311		SA3	A1+B1	RESTORE (X5)	COMCMTP	332
	54231		SA2	A3+B1	RESTORE B REGISTERS	COMCMTP	333
	10533		BX5	X3		COMCMTP	334
	63220		SB2	X2		COMCMTP	335
435	54321		SA3	A2+B1		COMCMTP	336
	63330		SB3	X3		COMCMTP	337
	54431		SA4	A3+B1		COMCMTP	338
	63440		SB4	X4		COMCMTP	339
436	54241		SA2	A4+B1		COMCMTP	340
	63520		SB5	X2		COMCMTP	341
	54321		SA3	A2+B1		COMCMTP	342
	63630		SB6	X3		COMCMTP	343
437	54431		SA4	A3+B1		COMCMTP	344
	63740		SB7	X4		COMCMTP	345
	5020000332 +		SA2	FTAB+A0	SET TABLE FWA	COMCMTP	346
440	5030000333 +		SA3	LTAB+A0	SET TABLE LENGTH	COMCMTP	347
	77701		SX7	-B1	FLAG TABLES MOVED	COMCMTP	348
441	0400000354 +		EQ	ATSX	RETURN	COMCMTP	349
						COMCMTP	350
		*		PROCESS TABLE OVERFLOW.		COMCMTP	351
						COMCMTP	352
442	5130000331 +	ATS9	SA3	T0		COMCMTP	353
	63230		SB2	X3		COMCMTP	354
	74600		SX6	A0	PRESERVE (A0) FROM USER DEPREDATIONS	COMCMTP	355
443	6160000445 +		SB6	ATS10	PASS RETURN ADDRESS TO USER	COMCMTP	356
	5160000461 +		SA6	ATSC		COMCMTP	357
444	0222000000		JP	B2		COMCMTP	358
						COMCMTP	359
		*		RETURN FROM USER ROUTINE *TOV*.		COMCMTP	360
						COMCMTP	361
445	5110000461 +	ATS10	SA1	ATSC	RESTORE (A0), (X1)	COMCMTP	362
	5201000000		SA0	X1+		COMCMTP	363
446	5110000451 +		SA1	ATSB+1		COMCMTP	364
	0400000366 +		EQ	ATS1	RE-COMPUTE WITH NEW MEMORY	COMCMTP	365

COMCMTP	366
COMCMTP	367
COMCMTP	368
COMCMTP	369

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*** MES - MASKED EQUALITY SEARCH TABLE.

*
* ENTRY (X6) = ENTRY FOR SEARCH.
* (X0) = MASK.
* (B7) = WORD COUNT/ENTRY.
* (A0) = TABLE NUMBER.

*
* EXIT (X2) = ENTRY FOUND.

*
* USES X - 1, 2, 3, 4, 7.
* B - NONE.
* A - 1, 2, 6.

*
* CALLS NONE.

470 11402

MES1

BX4

X0*X2

COMCMTP 404

54117

SA1

A1+B7

NEXT ENTRY

COMCMTP 405

13261

BX2

X6-X1

COMPARE ENTRIES

COMCMTP 406

471 0314000470 +

NZ

X4,MES1

LOOP TO MATCH

COMCMTP 407

75717

SX7

A1-B7

CHECK SEARCH

COMCMTP 408

13273

BX2

X7-X3

COMCMTP 409

472 0302000473 +

ZR

X2,MESX

IF NOT FOUND, RETURN

COMCMTP 410

5227000000

SA2

X7+

RETURN ENTRY

COMCMTP 411

473 0400400473 +

MES

SUBR

ENTRY/EXIT

COMCMTP 412

474 5010000332 +

SA1

FTAB+A0

SET TABLE PARAMETERS

COMCMTP 413

5020000333 +

SA2

LTAB+A0

COMCMTP 414

475 36312

IX3

X1+X2

SET SEARCH KEY IN LWA+1

COMCMTP 415

53630

SA6

X3

COMCMTP 416

53110

SA1

X1

FIRST ENTRY

COMCMTP 417

13261

BX2

X6-X1

COMCMTP 418

476 0400000470 +

EQ

MES1

COMCMTP 419

*** MTD - MOVE TABLES DOWN.

*
* ENTRY NONE.

*
* EXIT (B2) = NUMBER OF TABLES.

*
* USES X - 0, 1, 2, 3, 4, 7.
* B - 2, 3.
* A - 1, 2, 3, 7.

*
* CALLS MVE=.

477 0400400477 +

MTD

SUBR

ENTRY/EXIT

COMCMTP 420

500 5110000327 +

SA1

LM

LOW MEMORY LIMIT

COMCMTP 421

5120000330 +

SA2

TN

(B2) = NUMBER OF TABLES

COMCMTP 422

501 10011

BX0

X1

COMCMTP 423

63220

SB2

X2

COMCMTP 424

502 5123000331 +

MTD1

SA2

FTAB-1+B3

ORIGIN = PREVIOUS FWA

COMCMTP 425

COMCMTP 426

COMCMTP 427

COMCMTP 428

COMCMTP 429

COMCMTP 430

COMCMTP 431

COMCMTP 432

COMCMTP 433

COMCMTP 434

COMCMTP 435

COMCMTP 436

COMCMTP 437

COMCMTP 438

COMCMTP 439

COMCMTP 440

COMCMTP 441

COMCMTP 442

COMCMTP 443

COMCMTP 444

COMCMTP 445

COMCMTP 446

COMCMTP 447

COMCMTP 448

COMCMTP 449

COMCMTP 450

COMCMTP 451

COMCMTP 452

COMCMTP 453

COMCMTP 454

COMCMTP 455

COMCMTP 456

COMCMTP 457

1412THE

D_D

QUAL\$

BASE
IF
QUAL

*
-DEF,QUAL\$
*

COMCMTP 500
COMCMTP 501
COMCMTP 502
COMCMTP 503
COMCMTP 504
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COMCMVE	41
COMCMVE	42
COMCMVE	43

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535	0301000544 + 53227 54421	MVE16	ZR SA2 SA4	X1,MVE= X2+B7 A2+B1	IF MOVE COMPLETE, RETURN MOVE FIRST 2 WORDS	CPSA104 COMCMVE COMCMVE	18 98 99
536	10622 22704 53637 54761		BX6 LX7 SA6 SA7	X2 X4 X3+B7 A6+B1		COMCMVE COMCMVE COMCMVE COMCMVE	100 101 102 103
537	76311 37113		SX3 IX1	B1+B1 X1-X3		COMCMVE COMCMVE	104 105
540	54227 54447	0301000544 +	ZR SA2 SA4	X1,MVE= A2+B7 A4+B7	IF MOVE COMPLETE, RETURN NEXT 2 WORDS	CPSA104 COMCMVE COMCMVE	19 107 108
		*		MOVE LOOP.		COMCMVE COMCMVE COMCMVE	109 110 111
541	10622 54227 22704 54447	MVE17	BX6 SA2 LX7 SA4	X2 A2+B7 X4 A4+B7		COMCMVE COMCMVE COMCMVE COMCMVE	112 113 114 115
542	37113 46000 54667 54777		IX1 NO SA6 SA7	X1-X3 A6+B7 A7+B7		COMCMVE COMCMVE COMCMVE COMCMVE	116 117 118 119
543	0311000541 +		NZ	X1,MVE17		COMCMVE	120
544		MVEE MVELL	BSS EQU	0 MVEE-MVEC	END OF CMU BUFFER AREA NUMBER OF WORDS IN BUFFER	COMCMVE COMCMVE COMCMVE	121 122 123
544	0400400544 +	MVE= MVEA	SUBR BSS		ENTRY/EXIT	COMCMVE COMCMVE	124 125
545	5140000516 + 0100000516 +	MVE1	SA4 RJ IX4	MVEB MVE11 X2-X3	INITIALIZE FOR CMU	COMCMVE COMCMVE COMCMVE	126 127 128
		*	MX7	59	CHECK DIRECTION OF MOVE (NO CMU)	COMCMVE	129
		*	EQ	MVE13	(NO CMU)	COMCMVE	130
		*			(NO CMU)	COMCMVE	131
		*	IX4	X2-X3	CHECK DIRECTION OF MOVE (CMU)	COMCMVE	132
		*	BX7	X1	(CMU)	COMCMVE	133
		*	BX1	X0	SAVE X0 (CMU)	COMCMVE	134
		*	LX2	30	(CMU)	COMCMVE	135
		*				COMCMVE	136
		*			MOVE DATA WITH CMU.	COMCMVE	137
						COMCMVE	138
546	0307000544 + 7267776314		ZR SX6	X7,MVE= X7-819	IF NO DATA TO MOVE, RETURN	CPSA104 COMCMVE	20 141
547	10044 0334000550 + 14044		BX0 NG BX0	X4 X4,MVE2 -X4	IF MOVE DOWNWARD	COMCMVE COMCMVE COMCMVE	142 143 144
550	36007 11606 0326000553 +	MVE2	IX0 BX6 PL	X0+X7 X0*X6 X6,MVE3	IF BLOCK TOO LONG FOR 1 MOVE OR BLOCKS LAP	COMCMVE COMCMVE COMCMVE	145 146 147
551	10077 12223 13777 43470		BX0 BX2 BX7	X7 X2+X3 X7-X7	SET UP FOR 1 MOVE SET TO FORCE EXIT	COMCMVE COMCMVE COMCMVE	148 149 150
552	6170000573 + 0400000575 +		MX4 SB7 EQ	-4 MVE9 MVE10		COMCMVE COMCMVE COMCMVE	151 152 153

553	7160000517 + 0334000564 +	MVE3	SX6 NG	MVEC X4,MVE6	SET INTERMEDIATE BUFFER ADDRESS IF MOVE DOWNWARD	COMCMVE 154 COMCMVE 155 COMCMVE 156
* MOVE UPWARD.						COMCMVE 157 COMCMVE 158 COMCMVE 159
554	12226 20636 12336		BX2 LX6 BX3	X2+X6 30 X3+X6		COMCMVE 160 COMCMVE 161 COMCMVE 162
555	10077 7277777752 43470	MVE4	BX0 SX7 MX4	X7 X7-MVELL -4	DECREMENT WORD COUNT	COMCMVE 163 COMCMVE 164 COMCMVE 165
556	0337000557 + 7100000025		NG SX0	X7,MVE5 MVELL	IF LAST BLOCK TO MOVE	COMCMVE 166 COMCMVE 167
557	6170000560 + 0400000575 +	MVE5	SB7 EQ	*+1 MVE10	SET TO RETURN HERE	COMCMVE 168 COMCMVE 169
560	4640000516 +		IM	MVEB		COMCMVE 170
561	63770		SB7	X7		COMCMVE 171
	10011 0771000544 +		BX0 LT	X1 B7,B1,MVE=	RESTORE X0 IF MOVE COMPLETE, RETURN	COMCMVE 172 CPSA104 21
562	7140777752 37334 20436		SX4 IX3 LX4	-MVELL X3-X4 30	UPDATE ADDRESSES	COMCMVE 174 COMCMVE 175 COMCMVE 176
563	37224 0400000555 +		IX2 EQ	X2-X4 MVE4		COMCMVE 177 COMCMVE 178
* MOVE DOWNWARD.						COMCMVE 179 COMCMVE 180
564	20636 12676 36336 20636	MVE6	LX6 BX6 IX3 LX6	30 X7+X6 X3+X6 30	SET LAST WORD ADDRESSES OF DATA AREAS	COMCMVE 181 COMCMVE 182 COMCMVE 183 COMCMVE 184
565	36226		IX2	X2+X6		COMCMVE 185
566	7160000025 73070 37776	MVE7	SX6 SX0 IX7	MVELL X7 X7-X6		COMCMVE 186 COMCMVE 187 COMCMVE 188 COMCMVE 189
567	43470 0337000570 + 10066		MX4 NG BX0	-4 X7,MVE8 X6	IF LAST BLOCK TO MOVE	COMCMVE 190 COMCMVE 191 COMCMVE 192
570	10600 37330 20636	MVE8	BX6 IX3 LX6	X0 X3-X0 30	ADJUST DESTINATION AND SOURCE ADDRESSES	COMCMVE 193 COMCMVE 194 COMCMVE 195
	37226		IX2	X2-X6		COMCMVE 196
571	6170000572 + 0400000575 +		SB7 EQ	*+1 MVE10	SET TO RETURN HERE	COMCMVE 197 COMCMVE 198
572	4640000516 +		IM	MVEB	MOVE DATA TO DESTINATION BUFFER	COMCMVE 199
573	63770	MVE9	SB7 BX0	X7 X1		COMCMVE 200 COMCMVE 201
	10011 0771000544 +		LT	B7,B1,MVE=	RESTORE X0 IF MOVE COMPLETE, RETURN	CPSA104 22
574	0400000566 +		EQ	MVE7	LOOP	COMCMVE 203 COMCMVE 204
* SETUP MOVE WORD. * (X0) = NUMBER OF WORDS TO MOVE. * (X4) = 56 BIT MASK.						COMCMVE 205 COMCMVE 206 COMCMVE 207
575	22610 20003	MVE10	LX6 LX0	X0,B1 3	10 * WORD COUNT = CHARACTER COUNT	COMCMVE 208 COMCMVE 209 COMCMVE 210

			36606		IX6	X0+X6		COMCMVE	211	
			15064		BX0	-X4*X6	EXTRACT LOWER PORTION	COMCMVE	212	
	576	11446			BX4	X4*X6	EXTRACT UPPER PORTION	COMCMVE	213	
1			20032		LX0	26		COMCMVE	214	1
2			20454		LX4	48-4		COMCMVE	215	2
3			12040		BX0	X4+X0		COMCMVE	216	3
4	577	12620			BX6	X2+X0		COMCMVE	217	4
5			5160000516 +		SA6	MVEB	STORE FIRST DESCRIPTOR WORD	COMCMVE	218	5
6			12630		BX6	X3+X0		COMCMVE	219	6
7	600	4640000516 +			IM	MVEB	MOVE DATA TO INTERMEDIATE BUFFER	COMCMVE	220	7
8	601	54660			SA6	A6	STORE SECOND DESCRIPTOR WORD	COMCMVE	221	8
9			0277000000		JP	B7		COMCMVE	222	9
10										10
11										11
12										12
13										13
14			D_D		BASE	*		COMCMVE	224	14
15				QUAL\$	IF	-DEF,QUAL\$		COMCMVE	225	15
16					QUAL	*		COMCMVE	226	16
17			544 +	MVE=	EQU	/COMCMVE/MVE=		COMCMVE	227	17
18				QUAL\$	ENDIF			COMCMVE	228	18
19				MVE	ENDX			COMCMVE	229	19
20										20
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14121HE

COMCRDC	41
COMCRDC	42
COMCRDC	43
COMCRDC	44
COMCRDC	45
COMCRDC	46

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620	63430		RDC6	SB4	X3	(OUT+1) = FIRST	COMCRDC	96
	10611			BX6	X1		COMCRDC	97
		0400000613 +		EQ	RDC4	LOOP	COMCRDC	98
621	57161		RDC7	SA1	B6-B1	READ LAST WORD IN WORKING BUFFER	COMCRDC	99
	11641			BX6	X4*X1	CLEAR LAST BYTE	COMCRDC	100
		10411		BX4	X1	RETURN LAST WORD BEFORE EOL CLEARED	COMCRDC	101
		54610		SA6	A1		COMCRDC	102
622	0400001066 +			EQ	=XRDX=	EXIT	COMCRDC	103
							COMCRDC	104

		D_D		BASE	*		COMCRDC	106
			QUAL\$	IF	-DEF,QUAL\$		COMCRDC	107
				QUAL	*		COMCRDC	108
		603 +	RDC=	EQU	/COMCRDC/RDC=		COMCRDC	109
			QUAL\$	ENDIF			COMCRDC	110
			RDC	ENDX			COMCRDC	111

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						COMCRDH	41
						COMCRDH	42
						COMCRDH	43
623	0400400623 +	RDH=	SUBR		ENTRY/EXIT	COMCRDH	44
624	5140000655 +		SA4	RDH6	SET RETURN ADDRESS	COMCRDH	45
			IF	-DEF,B1=1,1		COMCRDH	46
			SB1	1		COMCRDH	47
			SA1	X2+4	(B5) = LIMIT	COMCRDH	48
625	53321		SA3	X2+B1	(X3) = FIRST	COMCRDH	49
	66767		SB7	B6+B7	(B7) = LWA+1 WORKING BUFFER	COMCRDH	50
			SB5	X1		COMCRDH	51
			SX6	B6		CPSA148	52
626	5160000664 +		SA6	RDHC	SAVE FWA WORKING BUFFER	CPSA148	53
	13444		BX4	X4-X4	(X4) = FLAG FOR 11 CHAR LINE TERMINATOR	COMCRDH	54
		*			INITIALIZE REGISTERS FOR TRANSFER.	COMCRDH	55
						COMCRDH	56
627	54131	RDH1	SA1	A3+B1	(B3) = IN	COMCRDH	57
	54211		SA2	A1+B1	(B4) = OUT	COMCRDH	58
			MX7	-12	(X7) = BYTE MASK	COMCRDH	59
			SB3	X1		COMCRDH	60
630	6242000000		SB4	X2+		COMCRDH	61
		*			TRANSFER DATA FROM CIRCULAR BUFFER TO WORKING BUFFER.	COMCRDH	62
						COMCRDH	63
631	0443001101 +	RDH2	EQ	B4,B3,=XLCB=	LOAD CIRCULAR BUFFER IF OUT = IN	COMCRDH	64
	56140		SA1	B4	READ WORD	COMCRDH	65
			SB4	B4+B1	(OUT+1)	COMCRDH	66
632	15217		BX2	-X7*X1	CHECK LAST BYTE	COMCRDH	67
	0445000637 +		EQ	B4,B5,RDH4	IF (OUT+1) = LIMIT	COMCRDH	68
	10611		BX6	X1		COMCRDH	69
633	0302000640 +	RDH3	ZR	X2,RDH5	IF END OF LINE	COMCRDH	70
	0467000631 +		EQ	B6,B7,RDH2	IF WORKING BUFFER FILLED	COMCRDH	71
634	56660		SA6	B6	STORE WORD	COMCRDH	72
	66661		SB6	B6+B1	ADVANCE WORKING BUFFER	COMCRDH	73
	0567000631 +		NE	B6,B7,RDH2	IF WORKING BUFFER NOT FULL	COMCRDH	74
635	0314000631 +		NZ	X4,RDH2	IF END OF WORKING BUFFER HIT PREVIOUSLY	COMCRDH	75
		*			SAVE LAST WORD THAT WOULD HAVE FIT INTO THE WORKING BUFFER	COMCRDH	76
		*			IN X4 AND BACK UP B6 TO ALLOW A PEEK AT THE NEXT WORD.	COMCRDH	77
		*			THIS MUST BE DONE IN CASE THE LAST WORD TO FIT IN THE	COMCRDH	78
		*			WORKING BUFFER HAS CHARACTER 10 = 00B AND THE NEXT WORD	COMCRDH	79
		*			MIGHT BE ALL ZERO CONSTITUTING AN 11 CHARACTER LINE	COMCRDH	80
		*			TERMINATOR. IF IT IS AN 11 CHARACTER LINE TERMINATOR THEN	COMCRDH	81
		*			THE 00B CHARACTER MUST BE CHANGED TO A BLANK.	COMCRDH	82
						COMCRDH	83
			BX4	X6	SAVE LAST WORD TO FIT IN BUFFER	COMCRDH	84
			SB6	B6-B1	ALLOW PEEK AT NEXT WORD	COMCRDH	85
636	0400000631 +		EQ	RDH2		COMCRDH	86
						COMCRDH	87
637	63430	RDH4	SB4	X3	(OUT+1) = FIRST	COMCRDH	88
	10611		BX6	X1		COMCRDH	89
	0400000633 +		EQ	RDH3		COMCRDH	90
		*			SPACE FILL LAST WORD.	COMCRDH	91
						COMCRDH	92
640	0467000661 +	RDH5	EQ	B6,B7,RDH8	IF WORKING BUFFER FILLED	COMCRDH	93
	0304000642 +		ZR	X4,RDH5.1	IF BUFFER NEVER FILLED	COMCRDH	94
						COMCRDH	95

641	66661		SB6	B6+B1		COMCRDH	96
	0316001066 +		NZ	X6,=XRDH=	IF NO NEED TO CONSIDER FILLING A 00B CHAR	COMCRDH	97
642	0316000647 +	RDH5.1	NZ	X6,RDH5.2	IF NOT FULL ZERO WORD	COMCRDH	98
	5110000664 +		SA1	RDHC		CPSA148	7
643	63210		SB2	X1		CPSA148	8
	0426000647 +		EQ	B2,B6,RDH5.2	IF NO PREVIOUS WORD IN LINE	CPSA148	9
	57161		SA1	B6-B1	CHECK LAST CHARACTER OF PREVIOUS WORD	COMCRDH	99
644	43766		MX7	-6		COMCRDH	100
	15717		BX7	-X7*X1		COMCRDH	101
	0317001066 +		NZ	X7,=XRDH=	IF NOT TRAILING ZERO CHARACTER	COMCRDH	102
645	7170000055		SX7	1R	INSERT BLANK CHARACTER	COMCRDH	103
	12671		BX6	X7+X1		COMCRDH	104
	54610		SA6	A1		COMCRDH	105
646	0400001066 +		EQ	=XRDH=	EXIT	COMCRDH	106
						COMCRDH	107
647	5110000662 +	RDH5.2	SA1	RDHA	=404040404040404040B	COMCRDH	108
	76710		SX7	B1		COMCRDH	109
	37767		IX7	X6-X7		COMCRDH	110
650	6120000067		SB2	60-5		COMCRDH	111
	16467		BX4	-X7+X6		COMCRDH	112
	11714		BX7	X1*X4		COMCRDH	113
651	22427		LX4	X7,B2		COMCRDH	114
	54111		SA1	A1+B1	=1H	COMCRDH	115
	37274		IX2	X7-X4		COMCRDH	116
	12772		BX7	X7+X2		COMCRDH	117
652	15417		BX4	-X7*X1		COMCRDH	118
	36664		IX6	X6+X4		COMCRDH	119
	56660		SA6	B6		COMCRDH	120
	66661		SB6	B6+B1		COMCRDH	121
653	0400001066 +		EQ	=XRDH=	EXIT	COMCRDH	122
						COMCRDH	123
		*		SPACE FILL REMAINDER OF WORKING BUFFER.		COMCRDH	124
						COMCRDH	125
654	0400000627 +	+	EQ	RDH1		COMCRDH	126
						COMCRDH	127
655	0467000623 +	RDH6	EQ	B6,B7,RDH=	IF WORKING BUFFER FULL, RETURN	CPSA104	24
	5140000663 +		SA4	RDHB	=1H	COMCRDH	129
656	10644		BX6	X4		COMCRDH	130
657	56660	RDH7	SA6	B6		COMCRDH	131
	66661		SB6	B6+B1		COMCRDH	132
	0567000657 +		NE	B6,B7,RDH7		COMCRDH	133
660	0400000623 +		EQ	RDH=	RETURN	CPSA104	25
						COMCRDH	135
661	10644	RDH8	BX6	X4		COMCRDH	136
	57661		SA6	B6-B1	STORE SAVED LAST WORD INTO BUFFER	COMCRDH	137
	0400001066 +		EQ	=XRDH=	EXIT	COMCRDH	138
						COMCRDH	139
662	40404040404040404040	RDHA	CON	404040404040404040B		COMCRDH	140
663	55555555555555555555	RDHB	DATA	1H		COMCRDH	141
664	00000000000000000000	RDHC	CON	0	SAVE FWA WORKING BUFFER	CPSA148	10

D_D

QUAL\$

BASE
IF
QUAL
EQU
ENDIF
ENDX

*
-DEF,QUAL\$
*/COMCRDH/RDH=

COMCRDH 143
COMCRDH 144
COMCRDH 145
COMCRDH 146
COMCRDH 147
COMCRDH 148

623 +

RDH=
QUAL\$
RDH

/COMCRDH/RDH=

2

1

666	0400400666 +	RDO=	SUBR			COMCRDO	39
667		RD02	BSS	0	ENTRY/EXIT	COMCRDO	40
						COMCRDO	41
			IF	-DEF,B1=1,1		COMCRDO	42
			SB1	1		COMCRDO	43
667	54311		SA3	A1+B1	READ OUT	COMCRDO	44
	37731		IX7	X3-X1	OUT - IN	COMCRDO	45
	7021777775		SX2	A1-2		COMCRDO	46
670	53430		SA4	X3	READ WORD	COMCRDO	47
	0337000665 +		NG	X7,RD01	IF NO WRAP AROUND	COMCRDO	48
	54131		SA1	A3+B1	READ LIMIT	COMCRDO	49
671	73610		SX6	X1		COMCRDO	50
	0307000674 +		ZR	X7,RD03	IF BUFFER EMPTY	COMCRDO	51
	73731		SX7	X3+B1	ADVANCE OUT	COMCRDO	52
672	37176		IX1	X7-X6		COMCRDO	53
	0311000665 +		NZ	X1,RD01	IF OUT .NE. LIMIT	COMCRDO	54
	53121		SA1	X2+B1	READ FIRST	COMCRDO	55
673	7231777776		SX3	X1-1		COMCRDO	56
	0400000665 +		EQ	RD01	RETURN	COMCRDO	57
						COMCRDO	58
	*			LOAD CIRCULAR BUFFER.		COMCRDO	59
						COMCRDO	60
674	53120	RD03	SA1	X2	CHECK BUFFER STATUS	COMCRDO	61
	20173		LX1	59-0		COMCRDO	62
	0331000677 +		NG	X1,RD05	IF BUFFER NOT BUSY	COMCRDO	63
675	0100001554 +		RECALL			COMCRDO	64
676	5212000002	RD04	SA1	X2+2	READ IN	COMCRDO	65
	0400000667 +		EQ	RD02	CONTINUE READ	COMCRDO	66
						COMCRDO	67
677	55431	RD05	SA4	A3-B1	READ IN	COMCRDO	68
	37743		IX7	X4-X3		COMCRDO	69
	0317000676 +		NZ	X7,RD04	IF BUFFER NOT EMPTY	COMCRDO	70
700	20170		LX1	-4		COMCRDO	71
	0331000704 +		NG	X1,RD06	IF EOR SET	COMCRDO	72
	20104		LX1	4	ISSUE PREVIOUS READ FUNCTION	COMCRDO	73
701	7160360374		SX6	740770B/2		COMCRDO	74
	11761		BX7	X6*X1		COMCRDO	75
	20701		LX7	1		COMCRDO	76
702	0100000100 +		RJ	=XCIO=		COMCRDO	77
703	0400000676 +		EQ	RD04	CONTINUE READ	COMCRDO	78
						COMCRDO	79
704	22311	RD06	LX3	X1,B1		COMCRDO	80
	54111		SA1	A1+B1	SET IN = OUT = FIRST	COMCRDO	81
	73710		SX7	X1		COMCRDO	82
	54711		SA7	A1+B1		COMCRDO	83
705	54771		SA7	A7+B1		COMCRDO	84
	76110		SX1	B1	RESPONSE = 1	COMCRDO	85
	0323000666 +		PL	X3,RD0=	IF NOT EOF, RETURN	CPSA104	26
706	20366		LX3	3-9		COMCRDO	87
	77101		SX1	-B1	RESPONSE = -1	COMCRDO	88
	0323000666 +		PL	X3,RD0=	IF NOT EOI, RETURN	CPSA104	27
707	7110777775		SX1	-2	RESPONSE = -2	COMCRDO	90
	0400000666 +		EQ	RD0=	RETURN	CPSA104	28

D_D

QUAL\$

BASE

IF

QUAL

ENDIF

ENDX

*

-DEF,QUAL\$

*

/COMCRDO/RDO=

COMCRDO

COMCRDO

COMCRDO

COMCRDO

COMCRDO

93

94

95

96

97

98

666 +

RDO=

QUAL\$

RDO

2

1

	*	TRANSFER WAS COMPLETED.				COMCRDS	41	
	*	(B6) = ADDRESS PLUS ONE OF LAST CHARACTER FROM CODED				COMCRDS	42	
	*	LINE IN WORKING BUFFER.				COMCRDS	43	
	*	(X2) = ADDRESS OF FET FOR FILE.				COMCRDS	44	
	*	(X7) = LEVEL NUMBER ON EOR.				COMCRDS	45	
	*	(B1) = 1.				COMCRDS	46	
	*					COMCRDS	47	
	*	USES	X - 1, 2, 3, 4, 6, 7.		COMCRDS	48		
	*		B - 1, 2, 3, 4, 5, 6, 7.		COMCRDS	49		
	*		A - 1, 2, 3, 4, 6, 7.		COMCRDS	50		
	*				COMCRDS	51		
	*	CALLS	LCB=, RDX=.		COMCRDS	52		
					COMCRDS	53		
					COMCRDS	54		
710	0400000727 +	+	EQ	RDS1	ENTRY FROM LCB= ON A CONTINUATION READ	COMCRDS	55	
		*	SPACE FILL REMAINDER OF BUFFER.				COMCRDS	56
						COMCRDS	57	
						COMCRDS	58	
711	0467000722 +	RDS12	EQ	B6,B7,RDS=	IF WORKING BUFFER FULL, RETURN	CPSA104	29	
	63570		SB5	X7	(B5) = LEVEL NUMBER	COMCRDS	60	
712	7160000055		SX6	1R	* *	COMCRDS	61	
	77476		SX4	B7-B6	(X4) = COUNT OF WORDS REMAINING IN BUFFER	COMCRDS	62	
	67401		SB4	-B1	(B4) = -1	COMCRDS	63	
713	56660		SA6	B6	INITIALIZE (A6)	COMCRDS	64	
	63240		SB2	X4		COMCRDS	65	
	0421000722 +		EQ	B2,B1,RDS=	IF ONLY 1 WORD REMAINING, RETURN	CPSA104	30	
714	10766		BX7	X6	(X7) = * *	COMCRDS	67	
	20473		LX4	-1	WORD COUNT/2	COMCRDS	68	
	0334000716 +		MI	X4,RDS13	IF WORD COUNT IS ODD	COMCRDS	69	
715	54661		SA6	A6+B1	STORE NEXT WORD	COMCRDS	70	
	73444		SX4	X4+B4	DECREMENT LOOP COUNT	COMCRDS	71	
	0304000720 +		ZR	X4,RDS14	IF WORD COUNT = 2	COMCRDS	72	
716	73444	RDS13	SX4	X4+B4	DECREMENT LOOP COUNT	COMCRDS	73	
	5076000001		SA7	A6+1		COMCRDS	74	
	54671		SA6	A7+B1		COMCRDS	75	
717	0314000716 +		NZ	X4,RDS13	LOOP TO END OF BUFFER	COMCRDS	76	
720	76750	RDS14	SX7	B5	RESTORE LEVEL NUMBER	COMCRDS	77	
	0400000722 +		EQ	RDS=	RETURN	CPSA104	31	
						COMCRDS	79	
721	0400000727 +	+	EQ	RDS1	ENTRY FROM LCB= ON A CONTINUATION READ	COMCRDS	80	
						COMCRDS	81	
722	0400400722 +	RDS=	SUBR		ENTRY/EXIT	COMCRDS	82	
723	5140000711 +		SA4	RDS12	SET RETURN ADDRESS	COMCRDS	83	
						COMCRDS	84	
			IF	-DEF,B1=1,1		COMCRDS	85	
			SB1	1		COMCRDS	86	
						COMCRDS	87	
	5212000004		SA1	X2+4	(B5) = LIMIT	COMCRDS	88	
724	0670000726 +		PL	B7,RDS0	IF BUFFER TO BE SPACE FILLED	COMCRDS	89	
	5140000722 +		SA4	RDS=	SKIP SPACE FILLING THE BUFFER	CPSA104	32	
725	67707		SB7	-B7		COMCRDS	91	
726	53321	RDS0	SA3	X2+B1	(X3) = FIRST, (A3) = ADDRESS OF FIRST	COMCRDS	92	
	66767		SB7	B6+B7	(B7) = LWA+1	COMCRDS	93	
	76460		SX4	B6	(X4) = FWA WORKING STORAGE	COMCRDS	94	
	63510		SB5	X1		COMCRDS	95	
						COMCRDS	96	
	*	INITIALIZE REGISTERS FOR TRANSFER.				COMCRDS	97	

727	54131	RDS1	SA1	A3+B1	IN	COMCRDS 98
	54211		SA2	A1+B1	(B4) = OUT	COMCRDS 99
	63420		SB4	X2		COMCRDS 100
	37612		IX6	X1-X2	IN - OUT	COMCRDS 101
730	76150		SX1	B5	LIMIT	COMCRDS 102
	0326000731 +		PL	X6,RDS2	IF IN .GE. OUT	COMCRDS 103
	37612		IX6	X1-X2	LIMIT - OUT	COMCRDS 104
731	0306001101 +	RDS2	ZR	X6,=XLCB=	IF NO FREE BUFFER SPACE	COMCRDS 105
	43266		MX2	-6	(X2) = CHARACTER MASK	COMCRDS 106
	63360		SB3	X6	(B3) = FREE BUFFER SPACE	COMCRDS 107
						COMCRDS 108
						COMCRDS 109
						COMCRDS 110
732	0545000733 +	RDS3	NE	B4,B5,RDS4	IF OUT .NE. LIMIT	COMCRDS 111
	54130		SA1	A3		COMCRDS 112
	63410		SB4	X1	OUT = FIRST	COMCRDS 113
733	76640	RDS4	SX6	B4	RESET OUT	COMCRDS 114
	54620		SA6	A2		COMCRDS 115
	0430000727 +		ZR	B3,RDS1	IF FREE BUFFER SPACE EXHAUSTED	COMCRDS 116
						COMCRDS 117
		*			READ WORD FROM BUFFER.	COMCRDS 118
						COMCRDS 119
734	56140		SA1	B4		COMCRDS 120
	66441		SB4	B4+B1		COMCRDS 121
	0476000754 +		EQ	B7,B6,RDS10	IF MAXIMUM CHARACTERS PROCESSED	COMCRDS 122
735	6120000000		SB2	B0+	INITIALIZE CHARACTER COUNT	COMCRDS 123
	0331000737 +		NG	X1,RDS5	IF POSSIBLY 10 SEMI-COLONS	COMCRDS 124
736	0301000750 +		ZR	X1,RDS8	IF ZERO WORD SKIP UNPACKING	COMCRDS 125
						COMCRDS 126
		*			UNPACK WORD TO WORKING BUFFER.	COMCRDS 127
						COMCRDS 128
737	20106	RDS5	LX1	6		COMCRDS 129
	66221		SB2	B2+B1	BUMP CHARACTER COUNT	COMCRDS 130
	15612		BX6	-X2*X1	PICK UP CHARACTER	COMCRDS 131
	11121		BX1	X2*X1	ERASE CHARACTER	COMCRDS 132
740	56660	RDS6	SA6	B6		COMCRDS 133
	66661		SB6	B6+B1		COMCRDS 134
	0467000754 +		EQ	B6,B7,RDS10	IF MAXIMUM CHARACTERS PROCESSED	COMCRDS 135
741	0311000737 +		NZ	X1,RDS5	IF MORE CHARACTERS THIS WORD	COMCRDS 136
	7162777766		SX6	B2-9		COMCRDS 137
742	66200		SB2	B0	RESET CHARACTER COUNT	COMCRDS 138
	67331		SB3	B3-B1	DECREMENT FREE BUFFER SPACE	COMCRDS 139
	0336000754 +		NG	X6,RDS10	IF END OF LINE	COMCRDS 140
743	0430000746 +		ZR	B3,RDS7	IF FREE BUFFER SPACE EXHAUSTED	COMCRDS 141
	56140		SA1	B4	GET NEXT WORD TO BE UNPACKED	COMCRDS 142
	66441		SB4	B4+B1		COMCRDS 143
744	0331000745 +		NG	X1,RDS6.1	IF POSSIBLY 10 SEMI-COLONS	COMCRDS 144
	0301000754 +		ZR	X1,RDS10	IF ZERO WORD, END OF LINE	COMCRDS 145
745	0316000737 +	RDS6.1	NZ	X6,RDS5	IF WORD COMPLETELY PROCESSED	COMCRDS 146
	0400000740 +		EQ	RDS6	PROCESS LAST CHARACTER	COMCRDS 147
						COMCRDS 148
746	0316000732 +	RDS7	NZ	X6,RDS3	IF LAST CHARACTER PROCESSED	COMCRDS 149
	56660		SA6	B6	PROCESS LAST CHARACTER	COMCRDS 150
	66661		SB6	B6+B1		COMCRDS 151
747	0400000732 +		EQ	RDS3		COMCRDS 152
						COMCRDS 153
750	63240	RDS8	SB2	X4		COMCRDS 154

751	0562000752 + 7160000055 66621		NE SX6 SB6	B6,B2,RDS9 1R B2+B1	IF AT LEAST 1 CHARACTER IN WORKING BUFFER ASSURE 1 BLANK IN STRING BUFFER	COMCRDS COMCRDS COMCRDS	155 156 157
752	56620 57161 0311000754 +	RDS9	SA6 SA1 NZ	B2 B6-B1 X1,RDS10		COMCRDS COMCRDS COMCRDS	158 159 160
753	6166777776		SB6	B6-1	ERASE CHARACTER	COMCRDS	161
		*		SEARCH FOR END OF LINE.		COMCRDS	162 163
754	5114777776 43760 15717	RDS10	SA1 MX7	B4-1 -12	READ LAST WORD PROCESSED	COMCRDS COMCRDS COMCRDS	164 165 166
755	6133777776 0317000732 +		BX7 SB3 NZ	-X7*X1 B3-1 X7,RDS3	CHECK FOR END OF LINE DECREMENT FREE BUFFER SPACE IF END OF LINE NOT FOUND	COMCRDS COMCRDS COMCRDS	167 168 169
756	0545000757 + 6243000000		NE SB4	B4,B5,RDS11 X3+	IF OUT .NE. LIMIT OUT = FIRST	COMCRDS COMCRDS	170 171
757	54131 63240	RDS11	SA1 SB2	A3+B1 X4	RESET IN FWA WORKING BUFFER	COMCRDS COMCRDS	172 173
760	6231000000 0662001066 +		SB3 GE	X1+ B6,B2,=XRDY=	(B3) = IN	COMCRDS COMCRDS	174 175
761	6162000000 0400001066 +		SB6 EQ	B2+ =XRDY=	EXIT	COMCRDS COMCRDS	176 177

D_D		BASE	*		COMCRDS	179
QUAL\$		IF	-DEF,QUAL\$		COMCRDS	180
		QUAL	*		COMCRDS	181
722 +	RDS=	EQU	/COMCRDS/RDS=		COMCRDS	182
	QUAL\$	ENDIF			COMCRDS	183
	RDS	ENDX			COMCRDS	184

1412THE

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*	(B6) = ADDRESS PLUS ONE OF LAST WORD TRANSFERRED TO	COMCRDW	33
*	WORKING BUFFER.	COMCRDW	34
*	(B7) = WORD COUNT REMAINING TO BE TRANSFERRED.	COMCRDW	35
*	(X2) = ADDRESS OF FET FOR FILE.	COMCRDW	36
*	(X7) = ERROR STATUS IF (X1) = -3.	COMCRDW	37
*	(X7) = LEVEL NUMBER ON EOR.	COMCRDW	38
*	(B1) = 1.	COMCRDW	39
*		COMCRDW	40
*	USES X - 1, 2, 3, 4, 6, 7.	COMCRDW	41
*	B - 1, 2, 3, 4, 5, 6, 7.	COMCRDW	42
*	A - 1, 2, 3, 4, 6, 7.	COMCRDW	43
*		COMCRDW	44
*	CALLS CIO=.	COMCRDW	45
		COMCRDW	46
		COMCRDW	47
*	PROCESS 1 WORD OR BUFFER EMPTY.	COMCRDW	48
		COMCRDW	49
762 0430001033 +	RDW18 ZR B3,RDW11 IF NO DATA	COMCRDW	50
10711	BX7 X1 STORE 1 WORD	COMCRDW	51
56760	SA7 B6	COMCRDW	52
763 76643	RDW19 SX6 B4+B3 ADVANCE OUT	COMCRDW	53
66443	SB4 B4+B3	COMCRDW	54
66663	SB6 B6+B3	COMCRDW	55
67773	SB7 B7-B3	COMCRDW	56
764 0545000765 +	NE B4,B5,RDW20 IF OUT .NE. LIMIT	COMCRDW	57
53121	SA1 X2+B1 READ FIRST	COMCRDW	58
73610	SX6 X1 OUT = FIRST	COMCRDW	59
765 54630	RDW20 SA6 A3 UPDATE OUT	COMCRDW	60
766	RDW21 BSS 0	CPSA187	5
766 13111	BX1 X1-X1 RESPONSE = 0	COMCRDW	61
0570000771 +	NZ B7,RDW1 IF NOT END OF TRANSFER	COMCRDW	62
		COMCRDW	63
767 0400400767 +	RDW= SUBR ENTRY/EXIT	COMCRDW	64
770 0470000766 +	ZR B7,RDW21 IF ZERO WORD COUNT, SET COMPLETE AND EXIT.	CPSA187	6
771 5232000003	RDW1 SA3 X2+3 (B4) = OUT	COMCRDW	65
5212000002	SA1 X2+2 (B3) = IN	COMCRDW	66
	IF -DEF,B1=1,1	COMCRDW	67
	SB1 1	COMCRDW	68
772 54431	SA4 A3+B1 (B5) = LIMIT	COMCRDW	69
63430	SB4 X3	COMCRDW	70
63310	SB3 X1	COMCRDW	71
53130	SA1 X3 READ FIRST WORD	COMCRDW	72
773 63540	SB5 X4	COMCRDW	73
0634000774 +	GE B3,B4,RDW2 IF NO END AROUND	COMCRDW	74
66350	SB3 B5	COMCRDW	75
774 67334	RDW2 SB3 B3-B4 FREE DATA LENGTH	COMCRDW	76
0673000775 +	LE B3,B7,RDW3 IF NOT ENOUGH ROOM	COMCRDW	77
66370	SB3 B7	COMCRDW	78
775	RDWA BSS 0	COMCRDW	79
775 5130001060 +	RDW3 SA3 RDWB PRESET CMU CODE	COMCRDW	80
0100001060 +	RJ RDW16 PRESET CMU CODE	COMCRDW	81
*	LE B3,B1,RDW18 IF 1 WORD OR LESS OF DATA (NO CMU)	COMCRDW	82
*	BX7 X1 (NO CMU)	COMCRDW	83
*	SA1 A1+B1 (NO CMU)	COMCRDW	84
*		COMCRDW	85
*	LE B3,B1,RDW18 IF 1 WORD OR LESS OF DATA (CMU)	COMCRDW	86
*	EQ RDW14 (CMU)	COMCRDW	87

COMCRDW	88
COMCRDW	89
COMCRDW	90

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						COMCRDW	145
* READ EXIT.						COMCRDW	146
						COMCRDW	147
1		76250	SX2	B5	RESET FET ADDRESS	COMCRDW	148
2	1013	5135000003	SA3	B5+3	OUT	COMCRDW	149
3		54131	SA1	A3+B1	(B5) = LIMIT	COMCRDW	150
4		63510	SB5	X1		COMCRDW	151
5	1014	53420	SA4	X2	CHECK BUFFER STATUS	COMCRDW	152
6		66663	SB6	B6+B3		COMCRDW	153
7		67773	SB7	B7-B3		COMCRDW	154
8		63433	SB4	X3+B3	ADVANCE OUT	COMCRDW	155
9	1015	73633	SX6	X3+B3		COMCRDW	156
10		20473	LX4	59-0		COMCRDW	157
11		5212000001	SA1	X2+1	READ FIRST	COMCRDW	158
12	1016	0545001017 +	NE	B4,B5,RDW9	IF OUT .NE. LIMIT	COMCRDW	159
13		7261000000	SX6	X1+	OUT = FIRST	COMCRDW	160
14			IF	DEF,RDX\$		CPSA242	27
15			EQ	RDW20	CLEAN UP AND RETURN	CPSA242	28
16			ELSE			CPSA242	29
17	* TRY TO BUFFER AHEAD.						COMCRDW 161
18						COMCRDW	162
19						COMCRDW	163
20	1017	0324000765 +	RDW9	PL	X4,RDW20	IF BUFFER BUSY	COMCRDW 164
21		20470	LX4	59-4-59-0		COMCRDW	165
22	1020	0334000765 +	NG	X4,RDW20	IF EOR/EOF SET	COMCRDW	166
23		5242000002	SA4	X2+2	READ IN	COMCRDW	167
24	1021	63210	SB2	X1	(LIMIT - FIRST)	COMCRDW	168
25		77152	SX1	B5-B2		COMCRDW	169
26		37746	IX7	X4-X6	(IN-OUT)	COMCRDW	170
27		22317	LX3	X7,B1	2*(IN-OUT)	COMCRDW	171
28	1022	21774	AX7	60	SIGN OF (IN-OUT)	COMCRDW	172
29		13471	BX4	X7-X1	INVERT BUFFER IF OUT .GE. IN	COMCRDW	173
30		37743	IX7	X4-X3	BUFFER SIZE - 2*(IN-OUT)	COMCRDW	174
31		21111	AX1	9		COMCRDW	175
32	1023	0337000765 +	NG	X7,RDW20	IF BUFFER THRESHOLD NOT REACHED	COMCRDW	176
33		0301000765 +	ZR	X1,RDW20	IF BUFFER NOT BIG ENOUGH TO READ AHEAD	COMCRDW	177
34	1024	5063000000	SA6	A3+	UPDATE OUT	COMCRDW	178
35			ENDIF			CPSA242	30
36	1025	54110	RDW10	SA1	A1	REREAD FIRST	COMCRDW 179
37		21166	AX1	54		COMCRDW	180
38		7170360374	SX7	740770B/2		COMCRDW	181
39	1026	6221000016	SB2	X1+77B-61B	CHECK FOR NOS/BE TERMINAL	COMCRDW	182
40		53120	SA1	X2		COMCRDW	183
41		22417	LX4	X7,B1		COMCRDW	184
42	1027	0420000765 +	ZR	B2,RDW20	IF A TERMINAL SUPPRESS READ AHEAD	COMCRDW	185
43		22417	LX4	X7,B1		COMCRDW	186
44		11741	BX7	X4*X1		COMCRDW	187
45	1030	0100000100 +	RJ	=XCIO=		COMCRDW	188
46	1031	43172	MX1	-2	RESPONSE = -3	COMCRDW	189
47		0317000767 +	NZ	X7,RDW=	IF ERROR ON LAST *CIO* REQUEST, RETURN	CPSA104	33
48		13111	BX1	X1-X1	RESPONSE = 0	COMCRDW	191
49	1032	0570000771 +	NZ	B7,RDW1	IF NOT DONE	COMCRDW	192
50		0400000767 +	EQ	RDW=	RETURN	CPSA104	34
51						COMCRDW	194
52	* LOAD CIRCULAR BUFFER.					COMCRDW	195
53						COMCRDW	196
54	1033	53120	RDW11	SA1	X2	CHECK BUFFER STATUS	COMCRDW 197
55							
56							
57							
58							
59							
60							

1412THE

	5232000002		SA3	X2+2	READ IN	COMCRDW	198
	20173		LX1	59-0		COMCRDW	199
1	1034	0321001044 +	PL	X1,RDW13	IF BUFFER BUSY	COMCRDW	200
2		63330	SB3	X3		COMCRDW	201
3		20170	LX1	59-4-59+0		COMCRDW	202
4	1035	0534000771 +	NE	B3,B4,RDW1	IF BUFFER NOT EMPTY	COMCRDW	203
5		0321001025 +	PL	X1,RDW10	IF NOT EOR SET	COMCRDW	204
6	1036	53321	SA3	X2+B1	SET IN = OUT = FIRST	COMCRDW	205
7		43770	MX7	-4		COMCRDW	206
8		22611	LX6	X1,B1		COMCRDW	207
9		20163	LX1	60+0-14-59+4		COMCRDW	208
10	1037	15717	BX7	-X7*X1	(X7) = LEVEL NUMBER	COMCRDW	209
11		76160	SX1	B6		COMCRDW	210
12		0326001042 +	PL	X6,RDW12	IF NOT EOF	COMCRDW	211
13	1040	20666	LX6	59-9-59+3		COMCRDW	212
14		43173	MX1	-1		COMCRDW	213
15		0326001042 +	PL	X6,RDW12	IF NOT EOI	COMCRDW	214
16	1041	7110777775	SX1	-2		COMCRDW	215
17	1042	7263000000	SX6	X3+		COMCRDW	216
18		54631	SA6	A3+B1	STORE IN	COMCRDW	217
19		54661	SA6	A6+B1	STORE OUT	COMCRDW	218
20	1043	0400000767 +	EQ	RDW=	RETURN	CPSA104	35
21						COMCRDW	220
22		*		RECALL WAITING FOR I/O.		COMCRDW	221
23						COMCRDW	222
24	1044	0100001554 +	RDW13	RECALL		COMCRDW	223
25	1045	0400000771 +	EQ	RDW1		COMCRDW	224
26						COMCRDW	225
27		*		MOVE DATA WITH CMU.		COMCRDW	226
28						COMCRDW	227
29	1046	7143776314	SX4	B3-819		COMCRDW	228
30		0324001057 +	PL	X4,RDW15	IF MOVE TOO BIG FOR CMU	COMCRDW	229
31	1047	76430	SX4	B3	10 * WORDS = CHARACTERS	COMCRDW	230
32		22614	LX6	X4,B1		COMCRDW	231
33		10100	BX1	X0	SAVE X0	COMCRDW	232
34		20403	LX4	3		COMCRDW	233
35	1050	36646	IX6	X4+X6		COMCRDW	234
36		76760	SX7	B6	SET DESTINATION ADDRESS	COMCRDW	235
37		20336	LX3	30		COMCRDW	236
38		43470	MX4	-4		COMCRDW	237
39	1051	12773	BX7	X7+X3		COMCRDW	238
40		11346	BX3	X4*X6	EXTRACT UPPER PORTION OF CHARACTER COUNT	COMCRDW	239
41		20354	LX3	48-4		COMCRDW	240
42		15464	BX4	-X4*X6		COMCRDW	241
43	1052	12737	BX7	X3+X7		COMCRDW	242
44		20432	LX4	26		COMCRDW	243
45		12747	BX7	X4+X7		COMCRDW	244
46		21363	AX3	51		COMCRDW	245
47	1053	5170001060 +	SA7	RDWB	STORE DESCRIPTOR WORD	COMCRDW	246
48	1054	4640001060 +	IM	RDWB	MOVE DATA	COMCRDW	247
49	1055	10011	BX0	X1	RESTORE X0	COMCRDW	248
50		0303000763 +	ZR	X3,RDW19	IF NO READ EXIT CHECK	COMCRDW	249
51		76340	SX3	B4	SET OUT	COMCRDW	250
52	1056	0400001014 +	EQ	RDW8		COMCRDW	251
53						COMCRDW	252
54	1057	10711	BX7	X1		COMCRDW	253
55		54111	SA1	A1+B1		COMCRDW	254
56							
57							
58							
59							
60							

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0400000776 +

EQ RDW4

COMCRDW 255

COMCRDW 256

COMCRDW 257

* PRESET FOR CMU.

* RDWB IS READ UP AND THEN RETURN JUMPED TO IN ORDER TO VOID

COMCRDW 258

* THE INSTRUCTION STACK.

COMCRDW 259

COMCRDW 260

1060 0613000762 + RDWB LE B3,B1,RDW18 IF 1 WORD OR LESS (CMU)
0400001046 + EQ RDW14

COMCRDW 261

COMCRDW 262

COMCRDW 263

1060 + RDW16 EQU RDWB USED TO VOID STACK AT PRESET

COMCRDW 264

COMCRDW 265

* PRESET FOR CMU.

COMCRDW 266

1061 5140000065 SA4 RA.CMU CHECK IF CMU AVAILABLE

COMCRDW 267

COMCRDW 268

6130000775 +

SB3 RDWA

COMCRDW 269

1062 0334001063 + NG X4,RDW17 IF CMU

COMCRDW 270

5130001065 +

SA3 RDWC

COMCRDW 271

1063 10633 RDW17

BX6 X3

COMCRDW 272

56630

SA6 B3

COMCRDW 273

0100001063 +

RJ *

VOID INSTRUCTION STACK.

CPSA163 7

1064 0400000771 + EQ RDW1

COMCRDW 274

1065 0613000762 + RDWC LE B3,B1,RDW18 IF 1 WORD OR LESS (NO CMU)

COMCRDW 275

10711

BX7 X1

COMCRDW 276

COMCRDW 277

54111

SA1 A1+B1

COMCRDW 278

** RDX - READ EXIT.

COMCRDW 280

* EXIT FROM READ SUBROUTINE TO CALLER.

COMCRDW 281

* IF CIRCULAR BUFFER IS BUSY, OR EOR/EOF IS SENSED, NO ACTION
* IS TAKEN.

COMCRDW 282

COMCRDW 283

* OTHERWISE, THE WORD COUNT REMAINING IN THE BUFFER IS CHECKED
* AND PREVIOUS READ FUNCTION ISSUED IF NECESSARY.

COMCRDW 284

COMCRDW 285

COMCRDW 286

* ENTRY (A2) = ADDRESS OF OUT.

COMCRDW 287

* (A3) = ADDRESS OF FIRST.

COMCRDW 288

* (A4) = RETURN ADDRESS.

COMCRDW 289

* (X3) = FIRST.

COMCRDW 290

* (B3) = IN.

COMCRDW 291

* (B4) = OUT.

COMCRDW 292

* (B5) = LIMIT.

COMCRDW 293

* (B1) = 1.

COMCRDW 294

COMCRDW 295

* EXIT TO RETURN ADDRESS.

COMCRDW 296

* (X2) = FET ADDRESS.

COMCRDW 297

* (X1) = 0.

COMCRDW 298

* (B1) = 1.

COMCRDW 299

COMCRDW 300

* USES A - 1, 6.

COMCRDW 301

* B - 2.

COMCRDW 302

* X - 1, 2, 3, 6, 7.

COMCRDW 303

COMCRDW 304

* CALLS CIO=.

COMCRDW 305

COMCRDW 306

COMCRDW 307

1066	55131		RDX=	SA1	A3-B1	CHECK BUFFER STATUS	COMCRDW	308
	76640			SX6	B4	STORE OUT	COMCRDW	309
		20173		LX1	59-0		COMCRDW	310
		54620		SA6	A2		COMCRDW	311
1067	75231			SX2	A3-B1	RESET (X2)	COMCRDW	312
			RDX\$	IF	-DEF,RDX\$		CPSA242	31
		0321001100 +		PL	X1,RDX1	IF BUFFER BUSY	COMCRDW	313
		20170		LX1	59-4-59+0		COMCRDW	314
1070	0331001100 +			NG	X1,RDX1	IF EOR/EOF SET	COMCRDW	315
							COMCRDW	316
			*		IF BUFFER IS NOT BUSY, CHECK BUFFER SIZE.		COMCRDW	317
			*		ISSUE READ IF BUFFER THRESHOLD IS REACHED.		COMCRDW	318
							COMCRDW	319
		55121		SA1	A2-B1	REREAD IN	CPSA242	32
		63310		SB3	X1		CPSA242	33
1071	77634			SX6	B3-B4	(IN-OUT)	COMCRDW	320
	63230			SB2	X3	(LIMIT-FIRST)	COMCRDW	321
	21366			AX3	54		COMCRDW	322
1072	7273000016			SX7	X3+77B-61B	CHECK IF NOS/BE TERMINAL	COMCRDW	323
	22316			LX3	X6,B1	2*(IN-OUT)	COMCRDW	324
1073	0307001100 +			ZR	X7,RDX1	IF TERMINAL SUPPRESS READ AHEAD	COMCRDW	325
	77752			SX7	B5-B2		COMCRDW	326
	21674			AX6	60	SIGN OF (IN-OUT)	COMCRDW	327
1074	13667			BX6	X6-X7	INVERT BUFFER IF OUT .GE. IN	COMCRDW	328
	37663			IX6	X6-X3	BUFFER SIZE - 2 * (IN - OUT)	COMCRDW	329
	21711			AX7	9		CPSA242	34
1075	0336001100 +			NG	X6,RDX1	IF BUFFER THRESHOLD NOT REACHED	COMCRDW	330
	0307001100 +			ZR	X7,RDX1	IF BUFFER NOT BIG ENOUGH TO READ AHEAD	COMCRDW	332
1076	53120			SA1	X2	ISSUE PREVIOUS READ FUNCTION	CPSA242	35
	7160360374			SX6	740770B/2		COMCRDW	334
	20601			LX6	1		CPSA242	36
1077	11761			BX7	X6*X1		COMCRDW	335
	0100000100 +			RJ	=XCIO=		COMCRDW	337
1100	76100		RDX1	SX1	B0	RESPONSE = 0	COMCRDW	338
			RDX\$	ELSE			CPSA242	37
				SX1	B0+	RESPONSE = 0	CPSA242	38
			RDX\$	ENDIF			CPSA242	39
	64240			SB2	A4	SET RETURN ADDRESS	COMCRDW	339
	0222000000			JP	B2	RETURN	COMCRDW	340
			**		LCB - LOAD CIRCULAR BUFFER.		COMCRDW	342
			*		REQUEST READ IF BUFFER IS EMPTY, NOT BUSY AND NOT EOR/EOF.		COMCRDW	343
			*		IF BUFFER IS BUSY, RECALL AND RETURN.		COMCRDW	344
			*				COMCRDW	345
			*	ENTRY	(A2) = ADDRESS OF OUT.		COMCRDW	346
			*		(A3) = ADDRESS OF FIRST.		COMCRDW	347
			*		(A4) = RETURN ADDRESS.		COMCRDW	348
			*		(B4) = OUT.		COMCRDW	349
			*				COMCRDW	350
			*	EXIT	TO RETURN ADDRESS - 1 IF CONTINUATION READ.		COMCRDW	351
			*		TO RETURN ADDRESS IF EOR/EOF.		COMCRDW	352
			*		(X1) = LAST WORD ADDRESS OF WORKING BUFFER.		COMCRDW	353
			*		(X1) = -1 IF EOF.		COMCRDW	354
			*		(X1) = -2 IF EOI.		COMCRDW	355

COMCRDW	356
COMCRDW	357
COMCRDW	358

COMCRDW	356
COMCRDW	357
COMCRDW	358
COMCRDW	359
COMCRDW	360
COMCRDW	361
COMCRDW	362
COMCRDW	363
COMCRDW	364
CPS0303	7
CPS0303	8
COMCRDW	365
COMCRDW	366
COMCRDW	367
COMCRDW	368
COMCRDW	369
COMCRDW	370
COMCRDW	371
COMCRDW	372
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COMCRDW	399
COMCRDW	400
COMCRDW	401
COMCRDW	402
COMCRDW	403
COMCRDW	404
COMCRDW	405
COMCRDW	406
CPSA107	4
COMCRDW	409
COMCRDW	410
CPSA107	5

		0233000000	JP	B3	RETURN	COMCRDW	411
						COMCRDW	412
	1120	54661	LCB6	SA6	A6+B1	STORE OUT	COMCRDW 413
1		75231	READ	A3-B1	RESTART READ	COMCRDW	414
2	1122	65341	SB3	A4-B1	CONTINUE READ	COMCRDW	415
3		0233000000	JP	B3		COMCRDW	416
4						COMCRDW	417
5	1123	20266	LCB7	LX2	59-9-59+3	CPSA107	6
6		0322001117 +	PL	X2,LCB5	IF NOT EOI	CPSA107	7
7		20101	LX1	1	RESPONSE= -2	COMCRDW	420
8	1124	64340	SB3	A4	SET RETURN ADDRESS	COMCRDW	421
9		75231	SX2	A3-B1	RESET (X2)	CPSA107	8
10		0233000000	JP	B3	RETURN	COMCRDW	422
11							
12							
13							
14							
15		D_D	BASE	*		COMCRDW	424
16		QUAL\$	IF	-DEF,QUAL\$		COMCRDW	425
17			QUAL	*		COMCRDW	426
18		767 +	EQU	/COMCRDW/RDW=		COMCRDW	427
19		1066 +	EQU	/COMCRDW/RDX=		COMCRDW	428
20		1101 +	EQU	/COMCRDW/LCB=		COMCRDW	429
21			ENDIF			COMCRDW	430
22			ENDX			COMCRDW	431
23							
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1125	0400401125 +	RSR	SUBR	ENTRY/EXIT	COMCRSR	37
			IF	-DEF,B1=1,1	COMCRSR	38
			SB1	1	COMCRSR	39
		*		SET UP FINAL -B- REGISTERS RESTORE AT (RSR4) ET SEQ.	COMCRSR	40
					COMCRSR	41
					COMCRSR	42
1126	6271000000		SB7	X1+ (B7) = FWA OF REGISTER SAVE AREA	COMCRSR	43
	43452		MX4	-18	COMCRSR	44
1127	5117000007		SA1	B7+SAVEB+7 (X1) = SAVED (B7)	COMCRSR	45
	10544		BX5	X4	COMCRSR	46
	20436		LX4	30	COMCRSR	47
1130	6140000004		SB4	4	COMCRSR	48
	11045		BX0	X4*X5 (X0) = 77770000007777000000B	COMCRSR	49
		*		SET UP RESTORE B REGISTER INSTRUCTIONS.	COMCRSR	50
					COMCRSR	51
1131	55211	RSR2	SA2	A1-B1 (X2) = SAVED (B.N-1)	COMCRSR	52
	5134001156 +		SA3	RSR4+B4-1	COMCRSR	53
	15115		BX1	-X5*X1	COMCRSR	54
1132	67441		SB4	B4-B1	COMCRSR	55
	15225		BX2	-X5*X2	COMCRSR	56
	20136		LX1	30	COMCRSR	57
	11303		BX3	X0*X3	COMCRSR	58
1133	36612		IX6	X1+X2	COMCRSR	59
	12763		BX7	X6+X3 (X7) = 30/SB.N B6+K, 30/SB.N-1 B6+K	COMCRSR	60
	54730		SA7	A3	COMCRSR	61
	55121		SA1	A2-B1 (X1) = SAVED (B.N)	COMCRSR	62
1134	0540001131 +		NZ	B4,RSR2 IF STILL MORE B REGISTERS TO GO	COMCRSR	63
		*		THE MOST LIKELY CANDIDATE FOR THE DANGER DISCUSSED IN THE	COMCRSR	64
		*		NEXT PARAGRAPH IS THE SYSTEM COMMUNICATION CELL (RA.MTR).	COMCRSR	65
		*		ACCORDINGLY, WE WAIT FOR IT TO CLEAR BEFORE PROCEEDING.	COMCRSR	66
					COMCRSR	67
					COMCRSR	68
					COMCRSR	69
	5127000016		SA2	B7+SAVEA+6 (X2) = SAVED (A6)	COMCRSR	70
1135	5110000001	RSR3	SA1	RA.MTR	COMCRSR	71
	0311001135 +		NZ	X1,RSR3 IF (RA.MTR) NOT CLEAR	COMCRSR	72
					COMCRSR	73
		*		A BIT OF CARE IS SPENT ON RESTORATION OF (A6) AND (A7).	COMCRSR	74
		*		WE WISH TO AVOID HAVING THE CONTENTS OF THE WORD THAT THE	COMCRSR	75
		*		STORE REGISTER IS POINTING TO GET CHANGED (I.E. BY A PP)	COMCRSR	76
		*		WHILE WE ARE RESTORING (A6) OR (A7). ABOUT THE ONLY THING	COMCRSR	77
		*		THAT CAN BE DONE TO MINIMIZE THIS POSSIBILITY IS TO GET THE	COMCRSR	78
		*		LOAD AND THE STORE AS CLOSE TOGETHER AS POSSIBLE. BY KEEPING	COMCRSR	79
		*		THEM IN THE SAME WORD, WE HAVE AT LEAST ENSURED THAT WE WILL	COMCRSR	80
		*		NOT BE EXCHANGED AFTER THE LOAD BUT BEFORE THE STORE.	COMCRSR	81
		*		BARRING DELAYS IN THE HOPPER, THIS SHOULD REDUCE THE DANGER	COMCRSR	82
		*		PERIOD TO A FEW MINOR CYCLES.	COMCRSR	83
					COMCRSR	84
1136	54321		SA3	A2+B1 (X3) = SAVED (A7)	COMCRSR	85
	0100001137 +		RJ	++1 VOID INSTRUCTION STACK	CPSA306	7
1137	00000000000000000000		CON	0	CPSA306	8
1140	5242777777	+	SA4	X2-0	COMCRSR	86
	10644		BX6	X4	COMCRSR	87
	55640		SA6	A4-B0 RESTORE (A6)	COMCRSR	88
1141	5253777777	+	SA5	X3-0	COMCRSR	89
	10755		BX7	X5	COMCRSR	90
	55750		SA7	A5-B0 RESTORE (A7)	COMCRSR	91

* RESTORE (X6), (X7).

COMCRSR	92
COMCRSR	93
COMCRSR	94
COMCRSR	95
COMCRSR	96
COMCRSR	97
COMCRSR	98
COMCRSR	99
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COMCRSR	141
COMCRSR	142
COMCRSR	143
COMCRSR	144
COMCRSR	145
COMCRSR	146
COMCRSR	147
COMCRSR	148

1142 5117000026
54411
10611SA1 B7+SAVEX+6
SA4 A1+B1
BX6 X1 RESTORE (X6)
LX7 X4 RESTORE (X7)
BX0 -X0-X0
SB6 X0-0 (B6) = -01143 22704
17000
6260777777

* RESTORE (A0), (X0).

1144 5147000010
5157000020
1145 53046
10055SA4 B7+SAVEA+0
SA5 B7+SAVEX+0
SA0 X4+B6
BX0 X5* RESTORE (A) - 1,2,3,4.
* (X) - 1,2,3,4.ECHO 4,N=(1,2,3,4)
SA4 A4+B1 (X4) = SAVED (A.N)
SA5 A5+B1 (X5) = SAVED (X.N)
SA.N X4+B6
BX.N X5* RESTORE (A5), (X5)-- THE ORIGINAL (X5) ARE BROKEN APART INTO
* (B1) THRU (B5) AS DISPLAYED BELOW. THIS ALLOWS US TO RESTORE
* (A5).
* DISASSEMBLY IS FROM LEFT TO RIGHT, TOP TO BOTTOM.
* REASSEMBLY IS FROM RIGHT TO LEFT, BOTTOM TO TOP.5 4 3 2 1 55
9 8 7 6 5 098.....
+++++++
(B1) ++++++++
(B2) ++++++++
(B3) ++++++++
(B4) ++++++++
(B5)

* ++

54551 SA5 A5+B1 (X5) = SAVED (X5)

ECHO 2,N=(1,2,3)
UX5,B.N X5
LX5 1126545
20535
63556UX5,B4 X5
LX5 11+18
SB5 X5+B61154 5157000015
53556 SA5 B7+SAVEA+5 (X5) = SAVED (A5)
SA5 X5+B6 RESTORE (A5)

* REASSEMBLE (X5).

76556

SX5 B5+B6
LX5 60-11-18
PX5 X5,B4
ECHO 2,N=(3,2,1)1155 20537
27545

LX5 -11
PX5 X5,B.N

COMCRSR 149
COMCRSR 150
COMCRSR 151

* RESTORE (B) - 0,1,2,3,4,5,6,7.

COMCRSR 152
COMCRSR 153
COMCRSR 154

1157

RSR4

BSS 0

ECHO 2,U=(1,3,5,7),L=(0,2,4,6)

COMCRSR 155

SB.U B6+*

COMCRSR 156

SB.L B6+*

COMCRSR 157

1163 0400001125 +

EQ

RSRX

RETURN

COMCRSR 158

D_D

BASE *

COMCRSR 160

QUAL\$

IF -DEF,QUAL\$

COMCRSR 161

QUAL *

COMCRSR 162

1125 +

RSR

EQU /COMCRSR/RSR

COMCRSR 163

1125 +

RSR=

EQU /COMCRSR/RSR

F4720D

12

QUAL\$

ENDIF

COMCRSR 164

RSR

ENDX

COMCRSR 165

2

1

1170 15337 12776 BX7 X7+X6 COMCSFN 41
BX3 -X7*X3 COMCSFN 42
IX6 X1+X3 COMCSFN 43
EQ SFNX RETURN COMCSFN 44
1171 40404040404040404040 SFNA DATA 40404040404040404040B COMCSFN 45
1172 55555555555555555555 DATA 10H COMCSFN 46
COMCSFN 47

D_D BASE * COMCSFN 49
QUAL\$ IF -DEF,QUAL\$ COMCSFN 50
QUAL * COMCSFN 51
1164 + SFN EQU /COMCSFN/SFN COMCSFN 52
1164 + SFN= EQU /COMCSFN/SFN F4720D 13
QUAL\$ ENDIF COMCSFN 53
SFN ENDX COMCSFN 54

2

1

* A - 1, 2, 3.
*
* CALLS NONE.

COMCSRT 38
COMCSRT 39
COMCSRT 40

*** RECORD TYPES ARE AS FOLLOWS --

F4720A 7
F4720A 8
F4720A 9
F4720A 10
F4720A 11
F4720A 12
CPS0345 7
F4720A 14
F4720A 15
F4720A 16
F4720A 17
F4720A 18
F4720A 19
F4720A 20
F4720A 21
F4720A 22
F4720A 23
F4720A 24
F4720A 25
F4720A 26
CPS0281 4
CPS0281 5
F4720A 29
CPSA204 6
CPSA284 10
CPSA295 5

* TYPE	NUMBER	FORMAT
* TEXT	0	TEXT RECORD.
* 6PP	1	6000-SERIES PERIPHERAL PROCESSOR OVERLAY.
* OVCAP	2	OVERLAY CAPSULE.
* REL	3	RELOCATABLE SUBPROGRAM.
* OVL	4	CENTRAL PROCESSOR OVERLAY.
* ULIB	5	NOS USER LIBRARY.
* OPL	6	MODIFY PROGRAM LIBRARY DECK.
* OPLC	7	MODIFY PROGRAM LIBRARY COMMON DECK.
* OPLD	8	MODIFY PROGRAM LIBRARY DIRECTORY.
* ABS	9	MULTIPLE ENTRY POINT OVERLAY.
* 7PP	10	7000-SERIES PERIPHERAL PROCESSOR OVERLAY.
* UPL	11	UPDATE SEQUENTIAL PROGRAM LIBRARY.
* UCF	12	UPDATE COMPRESSED COMPILE FILE.
* ACF	13	MODIFY COMPRESSED COMPILE FILE.
* CAP	14	FAST DYNAMIC LOAD CAPSULE.
* DATA	15	ARBITRARY DATA.
* PROC	16	PROCEDURE RECORD.
	17	(CDC RESERVED).
* SDR	18	SPECIAL DEADSTART RECORD.
* UPLR	19	UPDATE RANDOM PROGRAM LIBRARY.
* UPLRC	20	UPDATE RANDOM PROGRAM LIBRARY COMMON DECK.
* 8PP	21	CYBER 180 PERIPHERAL PROCESSOR OVERLAY.

**** TYPES - ONE OF THE FOLLOWING RECORD TYPES IS RETURNED.

COMCSRT 42
COMCSRT 43
COMCSRT 44
COMCSRT 45
COMCSRT 46
COMCSRT 47
COMCSRT 48
COMCSRT 49
CPS0345 8
COMCSRT 51
COMCSRT 52
COMCSRT 53
COMCSRT 54
COMCSRT 55
COMCSRT 56
COMCSRT 57
COMCSRT 58
COMCSRT 59
COMCSRT 60
COMCSRT 61

0	0.TEXT	EQU	0	TEXT RECORD
1	0.6PP	EQU	1	6000-SERIES PERIPHERAL PROCESSOR OVERLAY
2	0.OVCAP	EQU	2	OVERLAY CAPSULE.
3	0.REL	EQU	3	RELOCATABLE SUBPROGRAM
4	0.OVL	EQU	4	CENTRAL PROCESSOR OVERLAY
5	0.ULIB	EQU	5	USER LIBRARY
6	0.OPL	EQU	6	MODIFY PROGRAM LIBRARY DECK
7	0.OPLC	EQU	7	MODIFY PROGRAM LIBRARY COMMON DECK
10	0.OPLD	EQU	8	MODIFY PROGRAM LIBRARY DIRECTORY
11	0.ABS	EQU	9	MULTIPLE ENTRY POINT OVERLAY
12	0.7PP	EQU	10	7000-SERIES PERIPHERAL PROCESSOR OVERLAY
13	0.UPL	EQU	11	UPDATE SEQUENTIAL PROGRAM LIBRARY
14	0.UCF	EQU	12	UPDATE COMPRESSED COMPILE FILE
15	0.ACF	EQU	13	MODIFY COMPRESSED COMPILE FILE

			16	0.CAP	EQU	14	FAST DYNAMIC LOAD CAPSULE	COMCSRT	62
			17	0.DATA	EQU	15	ARBITRARY DATA	COMCSRT	63
			20	0.PROC	EQU	16	PROCEDURE RECORD	CPS0281	6
1				*		17	(CDC RESERVED)	CPS0281	7
2			22	0.SDR	EQU	18	SPECIAL DEADSTART RECORD	COMCSRT	66
3			23	0.UPLR	EQU	19	UPDATE RANDOM PROGRAM LIBRARY.	CPSA204	7
4			24	0.UPLRC	EQU	20	UPDATE RANDOM PROGRAM LIBRARY COMMON DECK.	CPSA284	11
5			25	0.8PP	EQU	21	CYBER 180 PERIPHERAL PROCESSOR OVERLAY.	CPSA295	6
6				*****				COMCSRT	67
7								COMCSRT	68
8			25	L.SRT	EQU	0.8PP	MAX TYPE NUMBER	CPSA295	7
9								COMCSRT	70
10								COMCSRT	71
11	1173	0400401173 +		SRT	SUBR		ENTRY/EXIT	COMCSRT	72
12	1174	13777			BX7	X7-X7		COMCSRT	73
13		37621			IX6	X2-X1		COMCSRT	74
14		0306001173 +			ZR	X6,SRTX	IF ZERO LENGTH RECORD, RETURN	COMCSRT	75
15	1175	14411			BX4	-X1	LWA+1 OF RECORD	CPS0323	14
16		53120			SA1	X2	CHECK FIRST WORD	COMCSRT	76
17		43052			MX0	42		CPSA284	13
18		10611			BX6	X1	(X6) = PROGRAM NAME	COMCSRT	77
19	1176	11201			BX2	X0*X1	(X2) = RECORD NAME	CPSA284	14
20		43060			MX0	48		COMCSRT	78
21		20114			LX1	12		COMCSRT	80
22		15310			BX3	-X0*X1		COMCSRT	81
23	1177	6223770077			SB2	X3-7700B		COMCSRT	82
24		0520001362 +			NZ	B2,SRT16	IF NO 7700 TABLE	COMCSRT	83
25								COMCSRT	84
26				**			7700-TABLE IS PRESENT. IF IT HAS A WORD COUNT OF ZERO, THIS	COMCSRT	85
27				*			IS AN UPDATE COMPRESSED COMPILE FILE.	COMCSRT	86
28								COMCSRT	87
29	1200	54211			SA2	A1+B1	(X2) = NAME IN 7700 TABLE	COMCSRT	88
30		20114			LX1	12		COMCSRT	89
31		15310			BX3	-X0*X1		COMCSRT	90
32	1201	6233000001			SB3	X3+1	WORD COUNT PLUS 1	CPS0323	15
33		64313			SB3	A1+B3	LWA+1 OF 77 TABLE	CPS0323	16
34		73643			SX6	X4+B3	COMPARE FILE SIZE TO TABLE SIZE	CPS0323	17
35	1202	0326001351 +			PL	X6,SRT13	ILLEGAL 77 TABLE, TEXT RECORD	CPS0323	18
36		6120000014			SB2	0.UCF		COMCSRT	91
37	1203	0303001351 +			ZR	X3,SRT13	IF UPDATE COMPRESSED COMPILE FILE	COMCSRT	92
38		63320			SB3	X2		COMCSRT	93
39	1204	6120000015			SB2	0.ACF		COMCSRT	94
40		0530001351 +			NZ	B3,SRT13	IF MODIFY COMPRESSED COMPILE FILE	COMCSRT	95
41	1205	63330			SB3	X3		COMCSRT	96
42		54123			SA1	A2+B3		COMCSRT	97
43		10611			BX6	X1	(X6) = FIRST WORD OF PROGRAM	COMCSRT	98
44								COMCSRT	99
45				**			IDENTIFY PP PROGRAM FORMAT.	COMCSRT	100
46				*			CHARACTER 3 .NZ.,	COMCSRT	101
47				*			CHARACTER 4 = 0,	COMCSRT	102
48				*			BYTE 3 = 0,	COMCSRT	103
49				*			BYTE 4 .NZ.	COMCSRT	104
50				*			IF CHARACTER 1 IS ALPHA, BYTE 2 .NZ.	COMCSRT	105
51				*				COMCSRT	106
52				*	ENTRY	(X2) = NAME IN 7700 TABLE.		COMCSRT	107
53				*		(X6) = FIRST WORD OF PROGRAM.		COMCSRT	108
54				*				COMCSRT	109

1206	5130001373 +	SRT1	SA3	SRTA	=77000077770000B	COMCSRT	110
	6120000017		SB2	0.DATA		COMCSRT	111
1207	11336		BX3	X3*X6	CHECK (NAME .LE. 3 CHARS) AND (BYTE 3 = 0)	COMCSRT	112
	43014		MX0	12		COMCSRT	113
	11106		BX1	X0*X6	CHECK FOR NUMERIC FIRST CHARACTER	COMCSRT	114
	20060		LX0	48		COMCSRT	115
1210	11706		BX7	X0*X6	CHECK FOR 3-CHARACTER NAME	CPS0323	19
	20114		LX1	12		COMCSRT	117
	20060		LX0	48		COMCSRT	118
1211	0313001217 +		NZ	X3,SRT3	IF (NAME .GE. 3 CHARS) OR (BYTE 3 .NZ.)	COMCSRT	119
	0307001217 +		ZR	X7,SRT3	IF NAME .LT. 3 CHARACTERS	CPS0323	20
1212	6231774476		SB3	X1-2R0A		COMCSRT	121
	11306		BX3	X0*X6		COMCSRT	122
	43006		MX0	6		COMCSRT	123
1213	20066		LX0	54		COMCSRT	124
	11706		BX7	X0*X6		COMCSRT	125
	0307001217 +		ZR	X7,SRT3	IF CHARACTER 2 = 0	COMCSRT	126
1214	0630001215 +		PL	B3,SRT2	IF NUMERIC PP NAME	COMCSRT	127
	0303001217 +		ZR	X3,SRT3	IF NO LOAD ADDRESS	COMCSRT	128
1215	43022	SRT2	MX0	18		COMCSRT	129
	63360		SB3	X6		COMCSRT	130
	0430001217 +		ZR	B3,SRT3	IF ZERO LENGTH PROGRAM	COMCSRT	131
1216	66210		SB2	B1	0.6PP	COMCSRT	132
	11202		BX2	X0*X2		COMCSRT	133
	0400001351 +		EQ	SRT13	EXIT	COMCSRT	134
						COMCSRT	135
						COMCSRT	136
		**	HAVE ALREADY SKIPPED (OPTIONAL) 7700-TABLE, NOW CHECK FOR --			COMCSRT	137
		*	3	REL	(7000, WC .NZ.), 3400	COMCSRT	138
		*	2	OVCAP	6000, WITH BIT 18 SET	CPS0345	9
		*	4	OVL	(7000, WC .NZ.), 5000	COMCSRT	139
		*	5	ULIB	7600	COMCSRT	140
		*	6	OPL	7001	COMCSRT	141
		*	7	OPLC	7002	COMCSRT	142
		*	8	OPLD	(7000, WC .ZR.)	COMCSRT	143
		*	9	ABS	(7000, WC .NZ.), 5100	COMCSRT	144
		*	10	7PP	5200	COMCSRT	145
		*	14	CAP	6000	COMCSRT	146
		*	16	.PROC	5720 = 36/6L.PROC,	CPS0281	8
		*	19	UPLR	6000, YANK, DECK	CPSA284	15
		*	20	UPLRC	6000, COMDECK	CPSA284	16
		*	21	8PP	6100	CPSA295	8
						COMCSRT	148
1217	6120000003	SRT3	SB2	0.REL		COMCSRT	149
	6231774377		SB3	X1-3400B		COMCSRT	150
1220	0430001370 +		ZR	B3,SRT17	IF 3400, MAY BE PIDL TABLE	CPSA257	5
	6231770777		SB3	X1-7000B		COMCSRT	152
1221	0530001227 +		NZ	B3,SRT4	IF NOT LDSET OR OPLD TABLE	COMCSRT	153
	10166		BX1	X6		COMCSRT	154
	20130		LX1	-36		COMCSRT	155
1222	43060		MX0	-12	EXTRACT 7000 TABLE WORD COUNT	COMCSRT	156
	15110		BX1	-X0*X1		COMCSRT	157
	6120000010		SB2	0.OPLD		COMCSRT	158
1223	0301001351 +		ZR	X1,SRT13	IF OPL DIRECTORY (7000,WC=0)	COMCSRT	159
						COMCSRT	160
	63211		SB2	X1+B1	NO, IS LDSET TABLE (7000, WC .NZ.)	COMCSRT	161
	74312		SX3	A1+B2	ADDR OF WORD PAST LDSET TABLE	CPS0323	21

1224	6120000000		SB2	O.TEXT	*TEXT*, JUST IN CASE WE RUN OUT OF ROOM	CPS0323	22
	36134		IX1	X3+X4	COMPARE NEXT ADDR TO BUFFER LWA+1	CPS0323	23
1225	0321001351 +		PL	X1,SRT13		CPS0323	24
	53130		SA1	X3	POSITION PAST THE LDSET TABLE	CPS0323	25
	10611		BX6	X1	FIRST WORD OF PROGRAM	COMCSRT	163
1226	20114		LX1	12		COMCSRT	164
	15110		BX1	-X0*X1	TABLE TYPE	COMCSRT	165
	0400001217 +		EQ	SRT3		COMCSRT	166
						COMCSRT	167
1227	6120000005	SRT4	SB2	O.ULIB		COMCSRT	168
	6231770177		SB3	X1-7600B		COMCSRT	169
1230	0430001351 +		ZR	B3,SRT13	IF USER LIBRARY	COMCSRT	170
	6120000006		SB2	O.OPL		COMCSRT	171
1231	6231770776		SB3	X1-7001B		COMCSRT	172
	0430001351 +		ZR	B3,SRT13	IF OLD PROGRAM LIBRARY	COMCSRT	173
1232	6120000007		SB2	O.OPLC		COMCSRT	174
	6231770775		SB3	X1-7002B		COMCSRT	175
1233	0430001351 +		ZR	B3,SRT13	IF OPL COMMON DECK	COMCSRT	176
	6120000011		SB2	O.ABS		COMCSRT	177
1234	6231772677		SB3	X1-5100B		COMCSRT	178
	0430001351 +		ZR	B3,SRT13	IF ABS	COMCSRT	179
1235	6231772477		SB3	X1-5300B		COMCSRT	180
	0530001240 +		NZ	B3,SRT6	IF NOT 5300 TABLE	COMCSRT	181
1236	6236000000		SB3	X6+		COMCSRT	182
	0730001351 +		NG	B3,SRT13	IF ABSOLUTE MODULE	COMCSRT	183
1237	6120000004	SRT5	SB2	O.OVL		COMCSRT	184
	0400001351 +		EQ	SRT13	IF OVL	COMCSRT	185
						COMCSRT	186
1240	6231772377	SRT6	SB3	X1-5400B		COMCSRT	187
	0530001243 +		NZ	B3,SRT7	IF NOT 5400 TABLE	COMCSRT	188
1241	10366		BX3	X6		COMCSRT	189
	20330		LX3	-36		COMCSRT	190
	73430		SX4	X3		COMCSRT	191
1242	0304001351 +		ZR	X4,SRT13	IF (0,0) OVERLAY, TYPE ABSOLUTE	COMCSRT	192
	0400001237 +		EQ	SRT5	ELSE TYPE OVL	COMCSRT	193
						COMCSRT	194
1243	6120000016	SRT7	SB2	O.CAP		COMCSRT	195
	6231771777		SB3	X1-6000B		COMCSRT	196
1244	0530001316 +		NZ	B3,SRT7.5	IF NOT CAPSULE OR RANDOM PL.	CPSA204	8
	54110		SA1	A1		CPSA284	17
	43060		MX0	-12		CPSA284	18
1245	20130		LX1	-36		CPSA284	19
	15110		BX1	-X0*X1		CPSA284	20
	7211777776		SX1	X1-1		CPSA284	21
1246	54311		SA3	A1+B1	FETCH SECOND WORD	CPSA204	9
	43052		MX0	42	7 CHARACTERS	CPSA230	6
	6130000060		SB3	48	SHIFT FACTOR	CPSA284	22
1247	10433		BX4	X3		CPSA204	12
	20406		LX4	6		CPSA230	8
	11640		BX6	X4*X0		CPSA230	9
1250	5130001376 +		SA3	SRTD	*COMDECK	CPSA204	13
	43060		MX0	48		CPSA284	23
	13663		BX6	X6-X3		CPSA230	11
1251	7170000024		SX7	O.UPLRC		CPSA284	24
	0306001263 +		ZR	X6,SRT7.1	IF COMDECK, THEN RANDOM PL.	CPSA284	25
1252	43030		MX0	24		CPSA230	12
	6130000036		SB3	30	SHIFT FACTOR FOR EXTRACTING *DECK DECK NAME	CPSA284	26

1253	5130001377 +	11404	BX4	X0*X4		CPSA204	22
	43036		SA3	SRTE	*YANK	CPSA204	23
			MX0	30	SET UP MASK FOR EXTRACTING *DECK DECK NAME.	CPSA284	27
1254	0316001256 +	37643	IX6	X4-X3		CPSA204	25
	5120001401 +		NZ	X6,SRT7.0	IF NOT YANK DECK	CPSA284	28
1255	6120000023		SA2	SRTG	YANK DECK (MUST BE RANDOM PL)	CPSA284	29
	0400001351 +		SB2	0.UPLR		CPSA284	30
			EQ	SRT13	INDICATE YANK\$\$\$, TYPE UPLR	CPSA284	31
						CPSA284	32
1256	5130001400 +	SRT7.0	SA3	SRTF	*DECK	CPSA284	33
	37643		IX6	X4-X3		CPSA204	28
1257	7170000023		SX7	0.UPLR		CPSA284	34
	0306001263 +		ZR	X6,SRT7.1	IF DECK, THEN RANDOM PL	CPS0345	11
1260	54110		SA1	A1		CPSA284	35
	10611		BX6	X1		CPSA284	36
	20651		LX6	59-18	CHECK OVCAP FLAG	CPS0345	14
1261	0326001351 +		PL	X6,SRT13	IF NOT SET, CAPSULE.	CPS0345	15
	6120000002		SB2	0.OVCAP	ELSE, OVERLAY CAPSULE.	CPS0345	16
1262	0400001351 +		EQ	SRT13		CPS0345	17
						CPSA204	30
		**		OBTAIN NAME OF DECK		CPSA204	31
		*		B3 = SHIFT FACTOR TO LEFT JUSTIFY DECKNAME.		CPSA204	32
						CPSA204	33
1263	54311	SRT7.1	SA3	A1+B1	REFETCH SECOND WORD	CPSA230	13
	43666		MX6	-6	MASK FOR ONE CHARACTER	CPSA230	14
						CPSA284	37
1264	6123777703	SRT7.2	SB2	B3-60		CPSA230	15
	0520001266 +		NZ	B2,SRT7.3		CPSA230	16
1265	54331		SA3	A3+B1	FETCH THE NEXT WORD	CPSA230	17
	6130000000		SB3	0		CPSA284	38
	43000		MX0	0		CPSA230	19
1266	6123000006	SRT7.3	SB2	B3+6		CPSA230	20
	22223		LX2	X3,B2	SHIFT FIRST CHAR. TO LOWEST POSITION	CPSA230	21
	15226		BX2	-X6*X2	MASK OFF CHARACTER	CPSA230	22
1267	6222777722		SB2	X2-1R	TEST FOR BLANK	CPSA230	23
	0420001276 +		ZR	B2,SRT7.36		CPSA284	39
1270	6222777721		SB2	X2-1R,	TEST FOR COMMA	CPSA284	40
	0420001276 +		ZR	B2,SRT7.36		CPSA284	41
1271	0312001304 +		NZ	X2,SRT7.4	READY TO GO	CPSA284	42
	6133000006		SB3	B3+6	SHIFT FIRST CHARACTER POSITION	CPSA284	43
1272	21006		AX0	6		CPSA284	44
	6123777703		SB2	B3-60		CPSA284	45
1273	0520001276 +		NZ	B2,SRT7.36	SHIFT SECOND CHARACTER POSITION	CPSA284	46
	54331		SA3	A3+B1	FAKE THE SECOND SHIFT	CPSA284	47
1274	6130000000		SB3	0		CPSA284	48
	43000		MX0	0		CPSA284	49
1275	0400001264 +		EQ	SRT7.2		CPSA284	50
1276	6133000006	SRT7.36	SB3	B3+6	INCREMENT SHIFT	CPSA284	51
1277	0300001302 +	SRT7.37	ZR	X0,SRT7.39	RESET MASK	CPSA284	52
	21006		AX0	6		CPSA284	53
1300	0400001264 +		EQ	SRT7.2		CPSA284	54
1301	43006	SRT7.38	MX0	6		CPSA284	55
	0400001264 +		EQ	SRT7.2	TRY NEXT CHARACTER	CPSA230	29
1302	0320001301 +	SRT7.39	PL	X0,SRT7.38		CPSA284	56
	43000		MX0	0		CPSA284	57
1303	0400001264 +		EQ	SRT7.2		CPSA284	58
1304	15230	SRT7.4	BX2	-X0*X3		CPSA284	59

43300		MX3	0		CPSA284	60
0301001306 +		ZR	X1,SRT7.41	IF ONLY ONE WORD ENTRY	CPSA284	61
1305 54331		SA3	A3+B1	FETCH NEXT WORD	CPSA204	37
1306 11303	SRT7.41	BX3	X0*X3		CPSA284	62
12223		BX2	X2+X3	PUT THE NAME IN ONE WORD	CPSA204	39
22232		LX2	B3	POSITION DECK NAME.	CPSA204	40
43006		MX0	6	CURRENT CHARACTER MASK	CPSA284	63
1307 6130000006		SB3	6		CPSA284	64
1310 11602	SRT7.43	BX6	X0*X2	CHARACTER	CPSA284	65
22636		LX6	X6,B3	POSITION AS LOW ORDER 6 BITS	CPSA284	66
0306001314 +		ZR	X6,SRT7.46	IF A ZERO	CPSA284	67
1311 7266777722		SX6	X6-1R		CPSA284	68
0306001314 +		ZR	X6,SRT7.46	IF A BLANK	CPSA284	69
1312 6133000006		SB3	B3+6		CPSA284	70
20066		LX0	-6	NEXT CHARACTER	CPSA284	71
1313 6123777703		SB2	B3-60		CPSA284	72
0520001310 +		NZ	B2,SRT7.43		CPSA284	73
1314 6133777771	SRT7.46	SB3	B3-6		CPSA284	74
43006		MX0	6		CPSA284	75
23030		AX0	X0,B3	FINAL MASK	CPSA284	76
1315 11202		BX2	X0*X2	DECK NAME	CPSA284	77
63270		SB2	X7		CPSA284	78
0400001351 +		EQ	SRT13		CPSA204	41
					CPSA204	42
1316 6120000012	SRT7.5	SB2	0.7PP		CPSA204	43
6231772577		SB3	X1-5200B		COMCSRT	199
1317 0430001351 +		ZR	B3,SRT13	IF PPU	COMCSRT	200
6120000025		SB2	0.8PP		CPSA295	9
1320 6231771677		SB3	X1-6100B		CPSA295	10
0430001351 +		ZR	B3,SRT13	IF 180 PPU	CPSA295	11
1321 6231772777		SB3	X1-5000B		COMCSRT	201
0530001324 +		NZ	B3,SRT8	IF NOT OVERLAY	COMCSRT	202
					COMCSRT	203
1322 6120000004		SB2	0.0VL		COMCSRT	204
13726		BX7	X2-X6		COMCSRT	205
1323 0317001351 +		NZ	X7,SRT13	IF NAME .NE. FIRST WORD OF PROGRAM	COMCSRT	206
1324 54310	SRT8	SA3	A1	REFETCH FIRST WORD	COMCSRT	207
43044		MX0	36		COMCSRT	208
11703		BX7	X0*X3	ISOLATE POSSIBLE *.PROC,*	COMCSRT	209
15430		BX4	-X0*X3		COMCSRT	210
1325 5130001375 +		SA3	SRTC	*.PROC,*	COMCSRT	211
13773		BX7	X7-X3		COMCSRT	212
1326 0317001341 +		NZ	X7,SRT11	IF NOT *.PROC,*	COMCSRT	213
					COMCSRT	214
					COMCSRT	215
*				OBTAIN NAME OF PROCEDURE.	COMCSRT	216
					COMCSRT	217
54311		SA3	A1+B1	PICK UP SECOND WORD OF BINARY	COMCSRT	218
43030		MX0	24		COMCSRT	219
1327 11303		BX3	X0*X3	ISOLATE THE NEXT FOUR CHARACTERS	COMCSRT	220
12443		BX4	X4+X3	COMBINE ALL EIGHT CHARACTERS	COMCSRT	221
20444		LX4	36	SHIFT INTO PLACE AT LEFT	COMCSRT	222
43066		MX0	-6		COMCSRT	223
1330 6130000060		SB3	48		COMCSRT	224
6120000065		SB2	53	CONSTANT FOR CREATING MASK	COMCSRT	225
1331 20406	SRT9	LX4	6	SHIFT NEXT CHARACTER TO LOW ORDER	COMCSRT	226
15740		BX7	-X0*X4		COMCSRT	227
0307001335 +		ZR	X7,SRT10	IF NOT LEGAL CHARACTER	COMCSRT	227

1332	7277777732		SX7	X7-1R+		CPSA210	5
	0327001335 +		PL	X7,SRT10	IF NOT ALPHA-NUMERIC	COMCSRT	229
1333	6133777771		SB3	B3-6	DECREMENT CHARACTER COUNT	COMCSRT	230
	0430001341 +		ZR	B3,SRT11	IF EIGHT CHARACTERS AND NO COMMA	COMCSRT	231
1334	0400001331 +		EQ	SRT9		COMCSRT	232
						COMCSRT	233
1335	6133777717	SRT10	SB3	B3-48		COMCSRT	234
	0430001341 +		ZR	B3,SRT11	IF NULL NAME	COMCSRT	235
1336	6133000066		SB3	B3+54	SHIFT COUNT TO RESTORE NAME IN PLACE	COMCSRT	236
	67223		SB2	B2-B3		COMCSRT	237
	43701		MX7	1		COMCSRT	238
1337	23727		AX7	B2	MASK FOR NAME	COMCSRT	239
	22434		LX4	B3	RESTORE NAME	COMCSRT	240
	11274		BX2	X7*X4	ISOLATE NAME	COMCSRT	241
1340	6120000020		SB2	0.PROC	PROCEDURE TYPE	COMCSRT	242
	0400001351 +		EQ	SRT13		COMCSRT	243
						COMCSRT	244
1341	10466	SRT11	BX4	X6		COMCSRT	245
	63360		SB3	X6		COMCSRT	246
	20452		LX4	59-17		COMCSRT	247
	12746		BX7	X4+X6		COMCSRT	248
1342	0337001344 +		MI	X7,SRT12	IF POSSIBLE TEXT	COMCSRT	249
	6120000000		SB2	0.TEXT		CPS0306	17
1343	0530001351 +		NZ	B3,SRT13	IF COS	COMCSRT	251
1344	43060	SRT12	MX0	-12		COMCSRT	252
	15760		BX7	-X0*X6		COMCSRT	253
	6120000017		SB2	0.DATA		COMCSRT	254
1345	0317001351 +		NZ	X7,SRT13	IF DATA	COMCSRT	255
	43006		MX0	6		COMCSRT	256
	11704		BX7	X0*X4		COMCSRT	257
1346	66200		SB2	B0	0.TEXT	COMCSRT	258
	0307001351 +		ZR	X7,SRT13	IF LOWER 18 BITS ARE ZERO, TEXT TYPE	COMCSRT	259
	20706		LX7	6		COMCSRT	260
1347	6237777722		SB3	X7-1R		COMCSRT	261
	0430001351 +		ZR	B3,SRT13	IF 8TH CHARACTER IS SPACE	COMCSRT	262
1350	6120000017		SB2	0.DATA		COMCSRT	263
						COMCSRT	264
		*		SET NAME AND TYPE.		COMCSRT	265
		*		(X2) = RECORD NAME.		COMCSRT	266
		*		(B2) = RECORD TYPE.		COMCSRT	267
						COMCSRT	268
1351	43066	SRT13	MX0	54		CPSA284	79
	7140000055		SX4	1R		COMCSRT	270
	11702		BX7	X0*X2		COMCSRT	271
1352	20414		LX4	12		COMCSRT	272
	43206		MX2	6		COMCSRT	273
	20222		LX2	-42		COMCSRT	274
						COMCSRT	275
		*		STRIP TRAILING SPACES FROM NAME.		COMCSRT	276
						COMCSRT	277
1353	20406	SRT14	LX4	6		COMCSRT	278
	0332001357 +		NG	X2,SRT15	IF END OF WORD	COMCSRT	279
	20206		LX2	6		COMCSRT	280
1354	11327		BX3	X2*X7		COMCSRT	281
	0303001353 +		ZR	X3,SRT14	IF COLON OR NULL CHARACTER	COMCSRT	282
	13643		BX6	X4-X3		COMCSRT	283
1355	0316001357 +		NZ	X6,SRT15	IF NOT BLANK	COMCSRT	284

1356	0400001353 +	15772	BX7 EQ	-X2*X7 SRT14	DELETE TRAILING BLANK	COMCSRT COMCSRT COMCSRT	285 286 287
1357	43052	SRT15	MX0	42		CPSA284	80
	76620		SX6	B2	TYPE	CPSA284	81
	11307		BX3	X0*X7		CPSA284	82
	36663		IX6	X6+X3		CPSA284	83
1360	0316001173 +		NZ	X6,SRTX	IF NAME NOT ALL BLANKS, RETURN	COMCSRT	290
	7160000017		SX6	0.DATA		COMCSRT	291
1361	0400001173 +		EQ	SRTX	RETURN	COMCSRT	292
						COMCSRT	293
	*	(X6) = FIRST WORD OF PROGRAM.				COMCSRT	294
						COMCSRT	295
1362	43036	SRT16	MX0	30		CPSA204	44
	5130001374 +		SA3	SRTB	*CHECK*	COMCSRT	297
	11406		BX4	X0*X6		COMCSRT	298
1363	6120000013		SB2	0.UPL		COMCSRT	299
	37743		IX7	X4-X3		COMCSRT	300
	43014		MX0	12		COMCSRT	301
1364	0307001351 +		ZR	X7,SRT13	IF UPL	COMCSRT	302
						COMCSRT	303
		**			CHECK FOR *SDR* TYPE.	COMCSRT	304
		*			*SDR* TYPE DEFINED AS A RECORD STARTING WITH A 50 TABLE.	COMCSRT	305
						COMCSRT	306
	11104		BX1	X0*X4		COMCSRT	307
	20114		LX1	12		COMCSRT	308
1365	6221772777		SB2	X1-5000B		CPSA104	37
	0520001206 +		NZ	B2,SRT1	IF NOT 50 TABLE	CPSA104	38
1366	54211		SA2	A1+B1	LOAD 77 TABLE NAME	COMCSRT	311
	6120000022		SB2	0.SDR		COMCSRT	312
1367	0400001351 +		EQ	SRT13		COMCSRT	313
						CPSA257	6
		**			CHECK FOR *LEGAL* PIDL TABLE	CPSA257	7
		*			LEGAL PIDL TABLE HAS WC .GT. ZERO	CPSA257	8
						CPSA257	9
1370	10166	SRT17	BX1	X6	SHIFT TO GET WORD COUNT	CPSA257	10
	20114		LX1	12		CPSA257	11
	63310		SB3	X1		CPSA257	12
1371	0530001351 +		NZ	B3,SRT13	IF LEGAL PIDL, RELOCATABLE	CPSA257	13
	6120000017		SB2	0.DATA	IF NOT A LEGAL PIDL, MUST BE DATA	CPSA257	14
1372	0400001351 +		EQ	SRT13		CPSA257	15
						COMCSRT	314
1373	00000077000077770000	SRTA	CON	77000077770000B		COMCSRT	315
1374	03100503130000000000	SRTB	CON	5LCHECK		COMCSRT	316
1375	57202217035600000000	SRTC	CON	6L.PROC,		COMCSRT	317
1376	03171504050313000000	SRTD	CON	7LCOMDECK		CPSA230	31
1377	31011613000000000000	SRTE	CON	4LYANK		CPSA230	32
1400	04050313000000000000	SRTF	CON	4LDECK		CPSA230	33
1401	31011613535353000000	SRTG	CON	7LYANK\$\$\$		CPSA284	84

D_D

QUAL\$

BASE

IF

QUAL

*

-DEF,QUAL\$

*

COMCSRT

319

COMCSRT

320

COMCSRT

321

COMCSRT

322

F4720D

14

COMCSRT

323

COMCSRT

324

COMCSRT

325

1173 +

SRT

EQU

/COMCSRT/SRT

1173 +

SRT=

EQU

/COMCSRT/SRT

25

L.SRT

EQU

/COMCSRT/L.SRT

QUAL\$

ENDIF

SRT

ENDX

1402

SST

CTEXT COMCSST - SHELL SORT TABLE.

COMCSST

2

D_D

IF -DEF,QUAL\$,1
QUAL COMCSST
BASE D

COMCSST 4
COMCSST 5
COMCSST 6

SST - SHELL SORT TABLE.

COMCSST 8

*

COMCSST 9

*

R. HOTCHKISS.

COMCSST 10

*

L. A. LIDDIARD.

COMCSST 11

*

E. J. MUNDSTOCK. 70/10/07. UNIVERSITY OF MINNESOTA.

COMCSST 12

*

CPSA245 158

*

CPSA245 159

*

* THIS COMMON DECK IS PART OF THE COMMON COMMON DECKS *

CPSA245 160

*

* RESIDING ON THE COMPASS PROGRAM LIBRARY, AND BEING *

CPSA245 161

*

* MAINTAINED BY THE COMPASS PROJECT. ANY CHANGES *

CPSA245 162

*

* REQUIRED SHOULD BE DIRECTED TO THE COMPASS PROJECT *

CPSA245 163

*

* THROUGH THE PROPER PROCEDURE. *

CPSA245 164

*

CPSA245 165

*

CPSA245 166

*

COMCSST 13

*

SST SORTS A TABLE USING A SHELL SORTING TECHNIQUE.

COMCSST 14

SST SORTS A TABLE OF ONE-WORD ENTRIES INTO ASCENDING ORDER.

COMCSST 16

*

ALL ENTRIES SHOULD BE OF THE SAME SIGN.

COMCSST 17

*

COMCSST 18

*

ORIGIN OF TECHNIQUE IS *COMMUNICATIONS OF THE ACM*

COMCSST 19

*

VOLUME 6, NUMBER 5 (MAY 1963), PAGE 209.

COMCSST 20

*

COMCSST 21

*

ENTRY (B1) = 1.

COMCSST 22

*

(B7) = ADDRESS OF TABLE TO BE SORTED.

COMCSST 23

*

(X1) = NUMBER OF ELEMENTS IN ARRAY.

COMCSST 24

*

COMCSST 25

*

EXIT TABLE SORTED.

COMCSST 26

*

COMCSST 27

*

USES X - 1, 2, 3, 4, 6, 7.

COMCSST 28

*

B - 2, 3, 4, 5.

COMCSST 29

*

A - 1, 2, 6, 7.

COMCSST 30

*

COMCSST 31

*

CALLS NONE.

COMCSST 32

COMCSST 33

COMCSST 34

1402 57754

SST1

SA7 B5-B4 T(J+K) = S

COMCSST 35

66221

SB2 B2+B1 I = I+1

COMCSST 36

0423001407 +

EQ B2,B3,SST4 IF END OF TABLE

COMCSST 37

1403 56220

SST2

SA2 B2 S = T(I)

COMCSST 38

46000

NO

COMCSST 39

66524

SB5 B2+B4 J = I-K

COMCSST 40

1412THE

1

		10722		BX7	X2		COMCSST	41
	1404	56150		SA1	B5	T(J)	COMCSST	42
		37321	SST3	IX3	X2-X1	COMPARE S AND T(J)	COMCSST	43
		0323001402 +		PL	X3,SST1	IF ELEMENTS IN ORDER	COMCSST	44
	1405	10611		BX6	X1	T(J+K) = T(J)	COMCSST	45
		66554		SB5	B5+B4	J = J-K	COMCSST	46
		55614		SA6	A1-B4		COMCSST	47
	1406	0657001404 +		GE	B5,B7,SST3	IF J .NE. FIRST	COMCSST	48
		0400001402 +		EQ	SST1		COMCSST	49
							COMCSST	50
							COMCSST	51
	1407	21401	SST4	AX4	1	K = K/2	COMCSST	52
		46000		NO			COMCSST	53
		63440		SB4	X4	(B4) = -K	COMCSST	54
		67274		SB2	B7-B4	I = FIRST+K	COMCSST	55
	1410	0314001403 +		NZ	X4,SST2	IF K .NE. 0	COMCSST	56
							COMCSST	57
	1411	0400401411 +	SST	SUBR		ENTRY/EXIT	COMCSST	58
	1412	43414		MX4	12	K = 2*(ENTIER(LOG2(COUNT))+1)	COMCSST	59
		63317		SB3	B7+X1	(B3) = LAST+1	COMCSST	60
		24621		NX6,B2	X1		COMCSST	61
		23424		AX4	X4,B2		COMCSST	62
	1413	0400001407 +		EQ	SST4	ENTER SORT LOOP	COMCSST	63
		D_D		BASE	*		COMCSST	65
			QUAL\$	IF	-DEF,QUAL\$		COMCSST	66
				QUAL	*		COMCSST	67
		1411 +	SST	EQU	/COMCSST/SST		COMCSST	68
		1411 +	SST=	EQU	/COMCSST/SST		F4720D	15
			QUAL\$	ENDIF			COMCSST	69
			SST	ENDX			COMCSST	70

2

1

1417	7170777657		OPEN	X2,ALTERNR,R	COMCSTF	35
1420	5110001425 +		SA1	STFA RESTORE PREVIOUS FUNCTION CODE	CPSA244	22
	43360		MX3	-12	CPSA244	23
		10611	BX6	X1	CPSA244	24
1421	53121		SA1	X2+B1	CPSA244	25
	53620		SA6	X2	CPSA244	26
		20114	LX1	-48	COMCSTF	38
		15413	BX4	-X3*X1	COMCSTF	39
1422	7264775353		SX6	X4-2RTT CHECK FOR DEVICE TYPE *TT*	COMCSTF	40
		0306001414 +	ZR	X6,STFX	COMCSTF	41
1423	21406		AX4	6	COMCSTF	42
	7264777716		SX6	X4-61B CHECK FOR DEVICE TYPE 61B	COMCSTF	43
1424	0400001414 +		EQ	STFX RETURN	COMCSTF	44
					CPSA244	27
1425	00000000000000000000	STFA	CON	0 SAVE FET FUNCTION CODE	CPSA244	28

		D_D	BASE	*	COMCSTF	46
		QUAL\$	IF	-DEF,QUAL\$	COMCSTF	47
			QUAL	*	COMCSTF	48
	1414 +	STF	EQU	/COMCSTF/STF	COMCSTF	49
	1414 +	STF=	EQU	/COMCSTF/STF	F4720D	16
		QUAL\$	ENDIF		COMCSTF	50
		STF	ENDX		COMCSTF	51

1412THE

1426

SVR

CTEXT COMCSVR - SAVE ALL REGISTERS.

COMCSVR 2

1							
2							
3			IF	-DEF,QUAL\$,1		COMCSVR	4
4			QUAL	COMCSVR		COMCSVR	5
5		D_D	BASE	D		COMCSVR	6
6		*	COMMENT	COPYRIGHT CONTROL DATA CORPORATION. 1978.		COMCSVR	7
7							
8							
9							
10							
11		***	SVR	- SAVE ALL REGISTERS.		COMCSVR	9
12		*				COMCSVR	10
13		*	AUTHOR	UNKNOWN. CIRCA 1971.		CPSA104	39
14		*	P. C. TAM.	77/06/18.		COMCSVR	11
15		*				COMCSVR	12
16		*	SVR	SAVES ALL REGISTERS IN A SPECIFIED REGISTER SAVE AREA.		COMCSVR	13
17		*				CPSA245	167
18		*		*****		CPSA245	168
19		*	*	THIS COMMON DECK IS PART OF THE COMMON COMMON DECKS *		CPSA245	169
20		*	*	RESIDING ON THE COMPASS PROGRAM LIBRARY, AND BEING *		CPSA245	170
21		*	*	MAINTAINED BY THE COMPASS PROJECT. ANY CHANGES *		CPSA245	171
22		*	*	REQUIRED SHOULD BE DIRECTED TO THE COMPASS PROJECT *		CPSA245	172
23		*	*	THROUGH THE PROPER PROCEDURE. *		CPSA245	173
24		*		*****		CPSA245	174
25		*				CPSA245	175
26							
27							
28							
29							
30		***	SVR	SAVES ALL REGISTERS IN A SPECIFIED REGISTER SAVE AREA.		COMCSVR	15
31		*		THE REGISTERS ARE SAVED IN THE FOLLOWING ORDER -		COMCSVR	16
32		*		B0, B1, ..., B7, A0, A1, ..., A7, X0, X1, ..., X7.		COMCSVR	17
33		*		EACH REGISTER OCCUPIES A FULL WORD WITH B AND A REGISTER		COMCSVR	18
34		*		VALUES IN BITS 17-0. B AND A REGISTERS ARE SIGN EXTENDED.		COMCSVR	19
35		*		MINUS ZERO (-0) IS PRESERVED IN ALL REGISTERS.		COMCSVR	20
36		*				COMCSVR	21
37		*	ENTRY	BITS 17-0 OF THE WORD FROM WHICH SVR= WAS CALLED		COMCSVR	22
38		*		CONTAIN THE ADDRESS OF THE REGISTER SAVE AREA.		COMCSVR	23
39		*				COMCSVR	24
40		*	EXIT	(SAVE - SAVE+7) = B REGISTERS.		COMCSVR	25
41		*		(SAVE+8 - SAVE+15) = A REGISTERS.		COMCSVR	26
42		*		(SAVE+16 - SAVE+23) = X REGISTERS.		COMCSVR	27
43		*				COMCSVR	28
44		*	USES	A - 0, 1, 2, 3, 4, 5, 6, 7.		COMCSVR	29
45		*		B - 1, 2, 3, 4, 5, 6, 7.		COMCSVR	30
46		*		X - 0, 1, 2, 3, 4, 5, 6, 7.		COMCSVR	31
47		*				COMCSVR	32
48		*	CALLS	NONE.		COMCSVR	33
49						COMCSVR	34
50						COMCSVR	35
51	0	SAVEB	EQU	0		COMCSVR	36
52	10	SAVEA	EQU	8		COMCSVR	37
53	20	SAVEX	EQU	16		COMCSVR	38
54						COMCSVR	39
55							
56							
57							
58							
59							
60							

1412THE

1426	0400401426 +	SVR	SUBR	ENTRY/EXIT	COMCSVR	40	
		*		CHECK FOR (B1) = 1. IF NOT, SAVE (B1) THE HARD WAY BY	COMCSVR	41	
		*		EXECUTING THE RJ SEQUENCE AT *SVR2*. IF BIT	COMCSVR	42	
		*		2**N WAS ON IN (B1), THEN THE *RJ* AT (SVR2+2*N+1) WILL BE	COMCSVR	43	
		*		EXECUTED, RESULTING IN AN /EQ SVR2+2*N+1/. IF BIT 2**N WAS	COMCSVR	44	
		*		NOT ON IN (B1), THEN THE *RJ* WILL NOT BE EXECUTED. BY	COMCSVR	45	
		*		QUERYING (SVR2+2*N+1), ONE CAN DETERMINE WHETHER OR NOT THE	COMCSVR	46	
		*		BIT 2**N WAS ON IN (B1) BY THE PRESENCE OF AN *EQ* OR AN *RJ*	COMCSVR	47	
		*		INSTRUCTION.	COMCSVR	48	
					COMCSVR	49	
					COMCSVR	50	
1427	0710001431 +		MI	B1,SVR2 IF (B1) .LE. 0 (PRESERVE -0)	COMCSVR	51	
	6111777776		SB1	B1-1	COMCSVR	52	
1430	0410001477 +		ZR	B1,SVR4 IF (B1) = 1	COMCSVR	53	
	6111000001		SB1	B1+1 RESTORE (B1)	COMCSVR	54	
		*		*RJ* SEQUENCE FOR SAVING (B1).	COMCSVR	55	
					COMCSVR	56	
					COMCSVR	57	
1431	0610001433 +	SVR2	PL	B1,*+2	COMCSVR	58	
1432	0100001432 +	+	RJ	*	COMCSVR	59	
	21	B.NE.1	DUP	17	COMCSVR	60	
		+	SB1	B1+B1	COMCSVR	61	
			NO		COMCSVR	62	
			PL	B1,*+2	COMCSVR	63	
		+	RJ	*	COMCSVR	64	
		B.NE.1	ENDD		COMCSVR	65	
					COMCSVR	66	
		*		FILLER BECAUSE RJ-S MUST BE 2 WORDS APART FOR RESTORE.	COMCSVR	67	
					COMCSVR	68	
1475	6100000000	+	SB0	B0+	COMCSVR	69	
1476	0100001476 +	SVR3	RJ	*	(B1) = 1/(B1) .NE. 1 FLAG	COMCSVR	70
		*		SAVE (A) - 4,5,6,7.	COMCSVR	71	
		*		(X) - 4,5,6,7.	COMCSVR	72	
					COMCSVR	73	
					COMCSVR	74	
1477	65170	SVR4	SB1	A7-B0	SAVE (A7) TEMPORARILY.	COMCSVR	75
	5170001534 +		SA7	SVRA	SAVE (X7) TEMPORARILY	COMCSVR	76
	75750		SX7	A5-B0		COMCSVR	77
1500	5170001535 +		SA7	SVRB	SAVE (A5) TEMPORARILY	COMCSVR	78
	10755		BX7	X5		COMCSVR	79
1501	5170001536 +		SA7	SVRC	SAVE (X5) TEMPORARILY	COMCSVR	80
	5150001426 +		SA5	SVRX	(X5) = 30/EQ CALLER+1, 30/0	COMCSVR	81
1502	20536		LX5	30		COMCSVR	82
	5255777776		SA5	X5-1	(X5) = 30/RJ SVR=, 30/FWA OF RSA	COMCSVR	83
	77710		SX7	B1-B0		COMCSVR	84
1503	6110000001		SB1	1		COMCSVR	85
	5275000017		SA7	X5+SAVEA+7	(A7) TO SAVE AREA	COMCSVR	86
1504	75760		SX7	A6-B0		COMCSVR	87
	5265000026		SA6	X5+SAVEX+6	(X6) TO SAVE AREA	COMCSVR	88
	55771		SA7	A7-B1	(A6) TO SAVE AREA	COMCSVR	89
1505	10644		BX6	X4		COMCSVR	90
	75740		SX7	A4-B0		COMCSVR	91
	5066777775		SA6	A6-2	(X4) TO SAVE AREA	COMCSVR	92
1506	5077777775		SA7	A7-2	(A4) TO SAVE AREA	COMCSVR	93
						COMCSVR	94
		*		SAVE (A) - 0,1,2,3.	COMCSVR	95	
		*		(X) - 0,1,2,3.	COMCSVR	96	

			SV=AX	ECHO	,N=(3,2,1,0)	COMCSVR	97
				BX6	X.N	COMCSVR	98
1				SX7	A.N-B0	COMCSVR	99
2				SA6	A6-B1 (X.N) TO SAVE AREA	COMCSVR	100
3				SA7	A7-B1 (A.N) TO SAVE AREA	COMCSVR	101
4			SV=AX	ENDD		COMCSVR	102
5						COMCSVR	103
6			*	SAVE	(X7), (A5), (X5) FINALLY.	COMCSVR	104
7						COMCSVR	105
8				SA2	SVRA (X2) = SAVED (X7)	COMCSVR	106
9	1513	5130001535 +		SA3	SVRB (X3) = SAVED (A5)	COMCSVR	107
10				SA4	SVRC (X4) = SAVED (X5)	COMCSVR	108
11	1514	10622		BX6	X2	COMCSVR	109
12		22703		LX7	X3	COMCSVR	110
13				SA6	X5+SAVEX+7 (X7) TO SAVE AREA	COMCSVR	111
14	1515	5275000015		SA7	X5+SAVEA+5 (A5) TO SAVE AREA	COMCSVR	112
15		10644		BX6	X4	COMCSVR	113
16	1516	5265000025		SA6	X5+SAVEX+5 (X5) TO SAVE AREA	COMCSVR	114
17						COMCSVR	115
18			*	SAVE	(B) - 0,1,2,3,4,5,6,7.	COMCSVR	116
19						COMCSVR	117
20				BX6	X6-X6	COMCSVR	118
21	1517	5265000000		SA6	X5+SAVEB+0 (B0) = 0 TO SAVE AREA	COMCSVR	119
22		76710		SX7	B1	COMCSVR	120
23		54761		SA7	A6+B1	COMCSVR	121
24			SV=B	ECHO	,U=(2,4,6),L=(3,5,7)	COMCSVR	122
25				SX6	B.U-B0	COMCSVR	123
26				SX7	B.L-B0	COMCSVR	124
27				SA6	A7+B1	COMCSVR	125
28				SA7	A6+B1	COMCSVR	126
29			SV=B	ENDD		COMCSVR	127
30						COMCSVR	128
31			*	SAVE	(B1).	COMCSVR	129
32						COMCSVR	130
33	1523	5150001476 +		SA5	SVR3 (X5) = (B1) = 1/(B1) .NE. 1 FLAG	COMCSVR	131
34		7140000100		SX4	0100B (X4) = *RJ* OP CODE	COMCSVR	132
35	1524	76310		SX3	B1	COMCSVR	133
36		20351		LX3	42-0-1 BIT FOR RECONSTRUCTION OF B1	COMCSVR	134
37		74650		SX6	A5	COMCSVR	135
38		20422		LX4	29-11	COMCSVR	136
39	1525	12646		BX6	X4+X6 (X6) = 30/0, 30/RJ *	COMCSVR	137
40		20636		LX6	59-29	COMCSVR	138
41		54650		SA6	A5 RESTORE RJ *	COMCSVR	139
42		20503		LX5	59-56	COMCSVR	140
43	1526	13777		BX7	X7-X7	COMCSVR	141
44		0325001426 +		PL	X5,SVRX IF (B1) = 1, RETURN	COMCSVR	142
45		66211		SB2	B1+B1	COMCSVR	143
46						COMCSVR	144
47			*	ASSEMBLE	ORIGINAL (B1) INTO (X7).	COMCSVR	145
48						COMCSVR	146
49	1527	55552	SVR5	SA5	A5-B2	COMCSVR	147
50		36333		IX3	X3+X3	COMCSVR	148
51		74650		SX6	A5	COMCSVR	149
52		20503		LX5	59-56	COMCSVR	150
53	1530	12646		BX6	X4+X6 (X6) = 30/0, 30/RJ *	COMCSVR	151
54		0325001531 +		PL	X5,SVR6 IF BIT WAS CLEAR	COMCSVR	152
55						COMCSVR	153
56							
57							
58							
59							
60							

1531	20636	12773	SVR6	BX7 LX6 SA6	X7+X3 59-29 A5	RESTORE RJ *	COMCSVR	154
	54650						COMCSVR	155
		0323001527 +		PL	X3,SVR5	IF MORE BITS TO ASSEMBLE	COMCSVR	156
			*				COMCSVR	157
						FINALLY SAVE (B1).	COMCSVR	158
							COMCSVR	159
1532	21752			AX7	42	SIGN EXTEND	COMCSVR	160
	5077777771			SA7	A7-7+1	(B1) TO SAVE AREA	COMCSVR	161
1533	0400001426 +			EQ	SVRX	RETURN	COMCSVR	162
			*				COMCSVR	163
						TEMPORARY SAVE AREAS.	COMCSVR	164
1534		1	SVRA	BSS	1	SAVE FOR (X7)	COMCSVR	165
1535		1	SVRB	BSS	1	SAVE FOR (A5)	COMCSVR	166
1536		1	SVRC	BSS	1	SAVE FOR (X5)	COMCSVR	167
		D_D		BASE	*		COMCSVR	171
			QUAL\$	IF	-DEF,QUAL\$		COMCSVR	172
				QUAL	*		COMCSVR	173
		1426 +	SVR	EQU	/COMCSVR/SVR		COMCSVR	174
		1426 +	SVR=	EQU	/COMCSVR/SVR		F4720D	17
			QUAL\$	ENDIF			COMCSVR	175
			SVR	ENDX			COMCSVR	176

2

14121HE

0400001540 +

EQ SYS1

COMCSYS 41

COMCSYS 42

COMCSYS 43

* INITIAL ENTRY TO SET TYPE OF CALL.

COMCSYS 44

1544 5110000066 SYS2 SA1 RA.CEJ TEST FOR CENTRAL EXCHANGE JUMP SUPPORT
0331001546 + MI X1,SYS3

COMCSYS 45

COMCSYS 46

1545 5110001537 + SA1 SYSA NO, USE WAIT LOOP
0400001547 + EQ SYS4

COMCSYS 47

COMCSYS 48

COMCSYS 49

1546 7110000130 SYS3 SX1 0130B YES, USE XJ INSTRUCTION
20160 LX1 48

COMCSYS 50

COMCSYS 51

1547 13661 SYS4 BX6 X6-X1 SWAP REGISTERS

COMCSYS 52

13161

COMCSYS 53

13661

COMCSYS 54

1550 5160001540 + SA6 SYS1 SET MONITOR CALL

COMCSYS 55

10611

COMCSYS 56

1551 5110000001 SA1 RA.MTR RESTORE (X6)

COMCSYS 57

0100001537 + RJ SYSA RESET (A1)

COMCSYS 58

CLEAR STACK

*** RCL - PLACE PROGRAM ON RECALL.

COMCSYS 60

*

COMCSYS 61

* G. R. MANSFIELD. 70/09/12.

COMCSYS 62

*

COMCSYS 63

* RCL ISSUES A SINGLE SYSTEM REQUEST FOR PERIODIC RECALL.

COMCSYS 64

*

IF RA+1 IS BUSY, NO REQUEST IS ISSUED.

COMCSYS 65

*** ENTRY NONE.

COMCSYS 67

*

COMCSYS 68

* EXIT REQUEST PROCESSED.

COMCSYS 69

*

COMCSYS 70

* USES A - 1.

COMCSYS 71

*

X - 1, 6.

COMCSYS 72

*

COMCSYS 73

* MACROS SYSTEM.

CPS0303 10

COMCSYS 75

COMCSYS 76

1552 20652 RCL1 LX6 42 PROCESS REQUEST
0100001541 + SYSTEM

COMCSYS 77

COMCSYS 78

1553 5110000001 + SA1 RA.MTR WAIT (RA.MTR) CLEAR

COMCSYS 79

0311001553 +

NZ X1,*

COMCSYS 80

COMCSYS 81

1554 0400401554 + RCL= SUBR ENTRY/EXIT

COMCSYS 82

1555 5110000001

COMCSYS 83

0311001554 +

NZ X1,RCL=

IF (RA.MTR) NOT CLEAR, RETURN

CPSA104 40

1556 7160220314

SX6 3RRCL

FORM RECALL REQUEST

COMCSYS 85

0400001552 +

EQ RCL1

COMCSYS 86

1412THE

***	WNB - WAIT NOT BUSY.	COMCSYS	88
*		COMCSYS	89
*	G. R. MANSFIELD. 70/09/12.	COMCSYS	90
*		COMCSYS	91
*	WAIT FOR STATUS WORD BIT 0 TO BE SET.	COMCSYS	92
*	IF WORD IS INITIALLY 0, RETURN.	COMCSYS	93

***	ENTRY (X2) = ADDRESS OF STATUS WORD.	COMCSYS	95
*		COMCSYS	96
*	EXIT RETURN WHEN BIT 0 OF STATUS WORD IS SET.	COMCSYS	97
*		COMCSYS	98
*	USES A - 1.	COMCSYS	99
*	X - 1, 6.	COMCSYS	100
*		COMCSYS	101
*	MACROS SYSTEM.	CPS0303	11

1557	20150	WNB2	LX1	40	SET AUTO RECALL FLAG	COMCSYS	103
	36661		IX6	X6+X1		COMCSYS	104
	0100001541 +		SYSTEM		PROCESS REQUEST	COMCSYS	105
						COMCSYS	106
1560	0400401560 +	WNB=	SUBR		ENTRY/EXIT	COMCSYS	107
1561	7160220314		SX6	3RRCL	FORM RECALL REQUEST	COMCSYS	108
	20652		LX6	42		COMCSYS	109
	36662		IX6	X6+X2		COMCSYS	110
1562	53160	WNB1	SA1	X6	CHECK STATUS WORD	COMCSYS	111
	20173		LX1	59		COMCSYS	112
	0331001560 +		MI	X1,WNB=	IF COMPLETE BIT SET, RETURN	CPSA104	41
1563	0301001560 +		ZR	X1,WNB=	IF BLANK STATUS, RETURN	CPSA104	42
	5110000001		SA1	RA.MTR	WAIT (RA.MTR) CLEAR	COMCSYS	117
1564	0311001562 +		NZ	X1,WNB1		COMCSYS	118
	7110000001		SX1	1	CONTINUE RECALL	COMCSYS	119
1565	0400001557 +		EQ	WNB2		COMCSYS	120

***	MSG - SEND MESSAGE.	COMCSYS	122
*		COMCSYS	123
*	G. R. MANSFIELD. 70/09/12.	COMCSYS	124
*		COMCSYS	125
*	MSG FORMATS AND ISSUES A SYSTEM REQUEST TO SEND A DAYFILE	COMCSYS	126
*	MESSAGE.	COMCSYS	127

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*						COMCUPC	41
*	EXIT	(X6) = 0 IF NO ERROR DURING UNPACK.				COMCUPC	42
*		(B6) = PARAMETER COUNT.				COMCUPC	43
*						COMCUPC	44
*	USES	X - 0, 1, 2, 3, 4, 5, 6, 7.				COMCUPC	45
*		B - 2, 3, 4, 5, 6.				COMCUPC	46
*		A - 1, 2, 5, 6, 7.				COMCUPC	47
*						COMCUPC	48
*	CALLS	NONE.				COMCUPC	49
						COMCUPC	50
						COMCUPC	51
1577	0400401577 +	UPC	SUBR		ENTRY/EXIT	COMCUPC	52
1600	66270		SB2	B7		COMCUPC	53
	0620001601 +		PL	B2,UPC1	IF (B7) IS NEGATIVE ON ENTRY	COMCUPC	54
	67207		SB2	-B7	IF NEGATIVE, RESET	COMCUPC	55
1601	56620	UPC1	SA6	B2	PRESET A6 FOR WRITE	COMCUPC	56
	7130004100		SX3	4100B	(X3) = MASK FOR TERMINATORS	COMCUPC	57
1602	6150000074		SB5	60	(B5) = CONSTANT 60	COMCUPC	58
	43066		MX0	-6	(X0) = CHARACTER MASK	COMCUPC	59
	13666		BX6	X6-X6	CLEAR ASSEMBLY	COMCUPC	60
1603	66250		SB2	B5	CLEAR CHARACTER COUNT	COMCUPC	61
	43222		MX2	18	(X2) = EXCESS CHARACTER MASK	COMCUPC	62
	43401		MX4	1	(X4) = CHARACTER COUNTER	COMCUPC	63
	66600		SB6	B0	(B6) = ASSEMBLY INDEX	COMCUPC	64
1604	0400001606 +		EQ	UPC3	ENTER LOOP	COMCUPC	65
						COMCUPC	66
1605	20606	UPC2	LX6	6	ADVANCE ASSEMBLY	COMCUPC	67
	6122777771		SB2	B2-6		COMCUPC	68
	12667		BX6	X6+X7		COMCUPC	69
1606	20506	UPC3	LX5	6	NEXT CHARACTER	COMCUPC	70
	15750		BX7	-X0*X5		COMCUPC	71
	6237777733		SB3	X7-1R9	CHECK CHARACTER	COMCUPC	72
1607	20406		LX4	6	ADVANCE DISASSEMBLY	COMCUPC	73
	0324001610 +		PL	X4,UPC4		COMCUPC	74
						COMCUPC	75
*					00 CHARACTER IS ILLEGAL AND * IS ALPHANUMERIC.	COMCUPC	76
						COMCUPC	77
	54551		SA5	A5+B1		COMCUPC	78
1610	0307001624 +	UPC4	ZR	X7,UPC7	IF CHARACTER = 00	COMCUPC	79
	0731001605 +		LT	B3,B1,UPC2	IF ALPHA/NUMERIC	COMCUPC	80
1611	6247777717		SB4	X7-60B	CHARS. 60-77B ARE ILLEGAL	CPS0278	4
	0640001624 +		GE	B4,UPC7		CPS0278	5
1612	6247777730		SB4	X7-1R*		COMCUPC	81
	0440001605 +		ZR	B4,UPC2	IF CHARACTER = *	COMCUPC	82
						COMCUPC	83
*					CHECK FOR BLANK AS SEPARATOR.	COMCUPC	84
						COMCUPC	85
1613	6247777722		SB4	X7-1R	CHECK CHARACTER	COMCUPC	86
	0540001616 +		NZ	B4,UPC5	NOT BLANK, MUST BE SEPARATOR	COMCUPC	87
1614	0670001606 +		PL	B7,UPC3	(B7) POSITIVE, BLANK IGNORED	COMCUPC	88
	0560001606 +		NZ	B6,UPC3	NOT JUST AFTER KEYWORD, BLANK IGNORED	COMCUPC	89
1615	0306001606 +		ZR	X6,UPC3	IF LEADING BLANK	CPSA276	9
						COMCUPC	90
*					CHECK FOR PARAMETER .GT. 7 CHARACTERS.	COMCUPC	91
						COMCUPC	92
1616	11126	UPC5	BX1	X2*X6	CHECK ASSEMBLY	COMCUPC	93
	22626		LX6	X6,B2	LEFT JUSTIFY ASSEMBLY	COMCUPC	94

1617 23133 0311001624 +
0441001620 +

NZ X1,UPC7
AX1 X3,B3
EQ B4,B1,UPC6

IF .GT. 7 CHARACTERS ASSEMBLED
CHECK FOR TERMINATOR
IF SEPARATOR = *,*

COMCUPC 95
COMCUPC 96
COMCUPC 97

12667
1620 54660 66250
UPC6

BX6 X6+X7
SA6 A6
SB2 B5

INSERT SEPARATOR
RESET ASSEMBLY

COMCUPC 98
COMCUPC 99
COMCUPC 100

13666
20173
1621 66661

BX6 X6-X6
LX1 59
SB6 B6+B1

COMCUPC 101
COMCUPC 102
COMCUPC 103

54661
0321001606 +
1622 55261

SA6 A6+B1
PL X1,UPC3
SA2 A6-B1

CLEAR LAST + 1
LOOP IF NOT TERMINATOR
CLEAR TERMINATOR

COMCUPC 104
COMCUPC 105
COMCUPC 106

43352
11732
54720

MX3 42
BX7 X3*X2
SA7 A2

COMCUPC 107
COMCUPC 108
COMCUPC 109

1623 0400001577 +
1624 76610
UPC7

EQ
SX6

UPCX
B1
RETURN
RETURN ERROR

COMCUPC 110
COMCUPC 111
COMCUPC 112

66600
0400001577 +

SB6
EQ

B0
UPCX
RETURN

COMCUPC 113
COMCUPC 114

D_D

QUAL\$

BASE *
IF -DEF,QUAL\$
QUAL *

COMCUPC 116
COMCUPC 117
COMCUPC 118

1577 +
1577 +

UPC
UPC=
QUAL\$
UPC

EQU /COMCUPC/UPC
EQU /COMCUPC/UPC
ENDIF
ENDX

COMCUPC 119
F4720D 18
COMCUPC 120
COMCUPC 121

1412THE

		36767		IX7	X6+X7	.K.L.	.P.Q.	.A.B.	.F.G.	COMCWOD	41
		11521		BX5	X2*X1	D....	I....	N....	S....	COMCWOD	42
1631	20103			LX1	3	EFGHI	JKLMN	OPQRS	TABCD	COMCWOD	43
		20017		LX0	15	H....	M....	R....	C....	COMCWOD	44
		11621		BX6	X2*X1	E....	J....	O....	T....	COMCWOD	45
		36770		IX7	X7+X0	HK.L.	MP.Q.	RA.B.	CF.G.	COMCWOD	46
1632	20511			LX5	9	..I..	..N..	..S..	..D..	COMCWOD	47
		20603		LX6	3	....J	....0	....T	....E	COMCWOD	48
		36776		IX7	X7+X6	HK.LJ	MP.Q0	RA.BT	CF.GE	COMCWOD	49
		54421		SA4	A2+B1	.7.7.	7.7.7	.....	.....	COMCWOD	50
1633	54341			SA3	A4+B1	.....	.7.7.	7.7.7	.....	COMCWOD	51
		12775		BX7	X7+X5	HKILJ	MPNQ0	RASBT	CFDGE	COMCWOD	52
		11274		BX2	X7*X4	.K.L.	M.N.0	.....	.....	COMCWOD	53
		54531		SA5	A3+B1	00000	00000	00000	00000	COMCWOD	54
1634	11173			BX1	X7*X3	.....	.P.Q.	R.S.T	.....	COMCWOD	55
		20736		LX7	30	RASBT	CFDGE	HKILJ	MPNQ0	COMCWOD	56
		36252		IX2	X5+X2	.K.L.	M.N.0	00000	00000	COMCWOD	57
		11074		BX0	X7*X4	.A.B.	C.D.E	.....	.....	COMCWOD	58
1635	36005			IX0	X0+X5	.A.B.	C.D.E	00000	00000	COMCWOD	59
		20155		LX1	45	.....	.....	.P.Q.	R.S.T	COMCWOD	60
		11373		BX3	X7*X3	.....	.F.G.	H.I.J	.....	COMCWOD	61
		36712		IX7	X1+X2	.K.L.	M.N.0	.P.Q.	R.S.T	COMCWOD	62
1636	20355			LX3	45	.....	.....	.F.G.	H.I.J	COMCWOD	63
		36603		IX6	X0+X3	.A.B.	C.D.E	.F.G.	H.I.J	COMCWOD	64
		0400001625 +		EQ	WODX	RETURN				COMCWOD	65
										COMCWOD	66
1637	70000700007000070000		WODA	CON	70000700007000070000B					COMCWOD	67
1640	07070707070000000000			CON	07070707070000000000B					COMCWOD	68
1641	00000070707070700000			CON	00000070707070700000B					COMCWOD	69
1642	33333333333333333333			CON	10H00000000000					COMCWOD	70

	D_D		BASE	*		COMCWOD	72
		QUAL\$	IF	-DEF,QUAL\$		COMCWOD	73
			QUAL	*		COMCWOD	74
	1625 +	WOD	EQU	/COMCWOD/WOD		COMCWOD	75
	1625 +	WOD=	EQU	/COMCWOD/WOD	F4720D		19
		QUAL\$	ENDIF		COMCWOD		76
		WOD	ENDX		COMCWOD		77

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				IF	-DEF,B1=1,1		COMCWTC	40	
				SB1	1		COMCWTC	41	
		5212000004		SA1	X2+4	(B5) = LIMIT	COMCWTC	42	
1	1646	53321		SA3	X2+B1	(X3) = FIRST	COMCWTC	43	1
2		43460		MX4	-12	(X4) = BYTE MASK	COMCWTC	44	2
3		63510		SB5	X1		COMCWTC	45	3
4							COMCWTC	46	4
5			*		INITIALIZE REGISTERS FOR TRANSFER.		COMCWTC	47	5
6							COMCWTC	48	6
7	1647	53220	WTC1	SA2	X2	(B2) = FET STATUS	CPSA242	50	7
8		5013000002		SA1	A3+2	(B4) = OUT	CPSA242	51	8
9		63220		SB2	X2		CPSA242	52	9
10	1650	54231		SA2	A3+B1	(X2) = IN	COMCWTC	50	10
11		63410		SB4	X1		COMCWTC	51	11
12							COMCWTC	52	12
13			*		TRANSFER DATA FROM WORKING BUFFER TO CIRCULAR BUFFER.		COMCWTC	53	13
14							COMCWTC	54	14
15	1651	56160	WTC2	SA1	B6	READ NEXT WORD	COMCWTC	55	15
16		63321		SB3	X2+B1	(IN+1)	COMCWTC	56	16
17		0435001655 +		EQ	B3,B5,WTC4	IF (IN+1) = LIMIT	COMCWTC	57	17
18	1652	0434002107 +	WTC3	EQ	B3,B4,=XDCB=	DUMP CIRCULAR BUFFER IF (IN+1) = OUT	COMCWTC	58	18
19		10611		BX6	X1		COMCWTC	59	19
20		66661		SB6	B6+B1	ADVANCE WORKING BUFFER	COMCWTC	60	20
21	1653	15714		BX7	-X4*X1		COMCWTC	61	21
22		53620		SA6	X2	STORE WORD	COMCWTC	62	22
23		7123000000		SX2	B3+	IN = IN+1	COMCWTC	63	23
24	1654	0317001651 +		NZ	X7,WTC2	LOOP TO END OF LINE	COMCWTC	64	24
25		0400002074 +		EQ	=XWTX=	EXIT	COMCWTC	65	25
26							COMCWTC	66	26
27	1655	63330	WTC4	SB3	X3	(IN+1) = FIRST	COMCWTC	67	27
28		0400001652 +		EQ	WTC3		COMCWTC	68	28
29									29
30									30
31									31
32									32
33		D_D		BASE	*		COMCWTC	70	33
34			QUAL\$	IF	-DEF,QUAL\$		COMCWTC	71	34
35				QUAL	*		COMCWTC	72	35
36		1644 +	WTC=	EQU	/COMCWTC/WTC=		COMCWTC	73	36
37			QUAL\$	ENDIF			COMCWTC	74	37
38			WTC	ENDX			COMCWTC	75	38
39									39
40									40
41									41
42									42
43									43
44									44
45									45
46									46
47									47
48									48
49									49
50									50
51									51
52									52
53									53
54									54
55									55
56									56
57									57
58									58
59									59
60									60

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			*	CALLS	DCB=, WTX=.		COMCWTH	40	
							COMCWTH	41	
							COMCWTH	42	
1	1656	0400001665 +	+	EQ	WTH3	ENTRY FROM DCB= ON A WRITE REQUEST	COMCWTH	43	1
2							COMCWTH	44	2
3	1657	0400401657 +	WTH=	SUBR		ENTRY/EXIT	COMCWTH	45	3
4	1660	5140001657 +		SA4	WTH=	SET RETURN ADDRESS	CPSA104	43	4
5		0470001657 +		ZR	B7,WTH=	IF WORKING BUFFER EMPTY, RETURN	CPSA104	44	5
6				IF	-DEF,B1=1,1		COMCWTH	48	6
7				SB1	1		COMCWTH	49	7
8							COMCWTH	50	8
9			*		DELETE TRAILING BLANK WORDS.		COMCWTH	51	9
10							COMCWTH	52	10
11	1661	5130001706 +		SA3	WTHA	=1H	COMCWTH	53	11
12		56167		SA1	B6+B7	PRESET (A1)	COMCWTH	54	12
13		66771		SB7	B7+B1		COMCWTH	55	13
14	1662	55111	WTH1	SA1	A1-B1		COMCWTH	56	14
15		37613		IX6	X1-X3		COMCWTH	57	15
16		67771		SB7	B7-B1		COMCWTH	58	16
17	1663	0471001664 +		EQ	B7,B1,WTH2		COMCWTH	59	17
18		0306001662 +		ZR	X6,WTH1		COMCWTH	60	18
19	1664	5212000004	WTH2	SA1	X2+4	(B5) = LIMIT	COMCWTH	61	19
20		53321		SA3	X2+B1	(X3) = FIRST	COMCWTH	62	20
21		63510		SB5	X1		COMCWTH	63	21
22							COMCWTH	64	22
23			*		INITIALIZE REGISTERS FOR TRANSFER.		COMCWTH	65	23
24							COMCWTH	66	24
25	1665	53220	WTH3	SA2	X2	(B2) = FET STATUS	CPSA242	63	25
26		5013000002		SA1	A3+2	(B4) = OUT	CPSA242	64	26
27		63220		SB2	X2		CPSA242	65	27
28	1666	54231		SA2	A3+B1	(X2) = IN	COMCWTH	68	28
29		63410		SB4	X1		COMCWTH	69	29
30							COMCWTH	70	30
31			*		TRANSFER DATA FROM WORKING BUFFER TO CIRCULAR BUFFER.		COMCWTH	71	31
32							COMCWTH	72	32
33	1667	6232000001	WTH4	SB3	X2+1	(IN+1)	COMCWTH	73	33
34		0435001705 +		EQ	B3,B5,WTH9	IF (IN+1) = LIMIT	COMCWTH	74	34
35	1670	0434002107 +	WTH5	EQ	B3,B4,=XDCB=	DUMP CIRCULAR BUFFER IF (IN+1) = OUT	COMCWTH	75	35
36		56160		SA1	B6	READ WORD	COMCWTH	76	36
37		67771		SB7	B7-B1	DECREMENT WORD COUNT	COMCWTH	77	37
38	1671	10611		BX6	X1		COMCWTH	78	38
39		53620		SA6	X2	STORE WORD	COMCWTH	79	39
40		66661		SB6	B6+B1	ADVANCE WORKING BUFFER	COMCWTH	80	40
41		76230		SX2	B3	IN = (IN+1)	COMCWTH	81	41
42	1672	0671001667 +		GE	B7,B1,WTH4	LOOP TO LAST WORD	COMCWTH	82	42
43							COMCWTH	83	43
44		43160		MX1	-12	CHECK LAST BYTE	COMCWTH	84	44
45		15761		BX7	-X1*X6		COMCWTH	85	45
46	1673	0307002074 +		ZR	X7,=XWTX=	EXIT IF 0000 BYTE	COMCWTH	86	46
47		6160001707 +		SB6	WTHB	PREPARE ZERO WORD	COMCWTH	87	47
48	1674	7277772222		SX7	X7-2R		COMCWTH	88	48
49		0307001677 +		ZR	X7,WTH6	IF * * BYTE	COMCWTH	89	49
50	1675	43466		MX4	-6	SET CHARACTER MASK	COMCWTH	90	50
51		15464		BX4	-X4*X6	GET LAST CHARACTER OF WORD	COMCWTH	91	51
52		0314001667 +		NZ	X4,WTH4	IF LAST CHARACTER NOT *00*	COMCWTH	92	52
53	1676	6160001710 +		SB6	WTHC	PRESERVE *00* CHARACTER WITH * *	COMCWTH	93	53
54		0400001667 +		EQ	WTH4		COMCWTH	94	54
55									55
56									56
57									57
58									58
59									59
60									60

1412THE

* DELETE TRAILING SPACE BYTES.

COMCWTH 95
COMCWTH 96
COMCWTH 97
COMCWTH 98
COMCWTH 99
COMCWTH 100
COMCWTH 101
COMCWTH 102
COMCWTH 103
COMCWTH 104
COMCWTH 105
COMCWTH 106
COMCWTH 107
COMCWTH 108
COMCWTH 109
COMCWTH 110
COMCWTH 111
COMCWTH 112
COMCWTH 113
COMCWTH 114
COMCWTH 115
COMCWTH 116
COMCWTH 117
COMCWTH 118
COMCWTH 119
COMCWTH 120
COMCWTH 121

1677 43466 WTH6 MX4 -6 SINGLE CHARACTER MASK
20414 LX4 12
15764 BX7 -X4*X6
1700 0307001667 + ZR X7,WTH4 IF *00* CHARACTER ADD BLANK BYTE
7120005555 SX2 2R SET SPACE BYTE
1701 11616 WTH7 BX6 X1*X6 ZERO OUT SPACE BYTE
20114 LX1 12 CHECK NEXT BYTE
20214 LX2 12
15761 BX7 -X1*X6 GET BYTE
1702 20414 LX4 12
13772 BX7 X7-X2 CHECK FOR SPACE BYTE
0317001704 + NZ X7,WTH8 IF NOT SPACE BYTE
1703 15764 BX7 -X4*X6 CHECK CHARACTER BEFORE BYTE
0317001701 + NZ X7,WTH7 IF NOT *00* CHARACTER
1704 54660 WTH8 SA6 A6
76230 SX2 B3
0400002074 + EQ =XWTX= EXIT
1705 63330 WTH9 SB3 X3 (IN+1) = FIRST
0400001670 + EQ WTH5
1706 55555555555555555555 WTHA DATA 1H
1707 00000000000000000000 WTHB CON 0
1710 55550000000000000000 WTHC DATA 2L

D_D BASE *
QUAL\$ IF -DEF,QUAL\$
1657 + WTH= QUAL *
QUAL\$ EQU /COMCWTH/WTH=
WTH ENDIF
ENDX

COMCWTH 123
COMCWTH 124
COMCWTH 125
COMCWTH 126
COMCWTH 127
COMCWTH 128

1412THE

1711

WTO

CTEXT

COMCWTO - WRITE ONE WORD.

COMCWTO

2

D_D

*

IF -DEF,QUAL\$,1

QUAL COMCWTO

BASE D

COMMENT COPYRIGHT CONTROL DATA CORPORATION. 1970, 1978.

COMCWTO 4

COMCWTO 5

COMCWTO 6

COMCWTO 7

WTO - WRITE ONE WORD.

COMCWTO 9

*

COMCWTO 10

*

D. A. CAHALANDER. 70/10/09.

COMCWTO 11

*

C. J. CONRAD. 81/08/06.

CPSA242 66

*

CPSA242 67

*

CPSA242 68

*

* THIS COMMON DECK IS PART OF THE COMMON COMMON DECKS *

CPSA242 69

*

* RESIDING ON THE COMPASS PROGRAM LIBRARY, AND BEING *

CPSA242 70

*

* MAINTAINED BY THE COMPASS PROJECT. ANY CHANGES *

CPSA242 71

*

* REQUIRED SHOULD BE DIRECTED TO THE COMPASS PROJECT *

CPSA242 72

*

* THROUGH THE PROPER PROCEDURE. *

CPSA242 73

*

CPSA242 74

*

CPSA242 75

*

COMCWTO 12

*

WTO WRITES ONE WORD TO A FILE FROM X6.

COMCWTO 13

WTO WRITES ONE WORD TO A CIO BUFFER FROM X6.

COMCWTO 15

*

IF THE BUFFER BECOMES SUFFICIENTLY FULL TO REQUIRE WRITING,

COMCWTO 16

*

WTO WILL PERFORM A *WRITE* FUNCTION UNLESS THE SYMBOL *WRIF\$*

COMCWTO 17

*

IS DEFINED. IN THIS CASE, THE CIO FUNCTION THAT IS IN THE FET

COMCWTO 18

*

WILL BE RE-ISSUED.

COMCWTO 19

*

COMCWTO 20

*

ENTRY (A1) = ADDRESS OF IN POINTER.

COMCWTO 21

*

(X1) = IN.

COMCWTO 22

*

(X6) = WORD TO WRITE.

COMCWTO 23

*

COMCWTO 24

*

EXIT (X2) = ADDRESS OF FET OF FILE.

COMCWTO 25

*

(B1) = 1.

COMCWTO 26

*

COMCWTO 27

*

USES X - 1, 2, 3, 4, 6, 7.

COMCWTO 28

*

B - 1.

COMCWTO 29

*

A - 1, 2, 3, 4, 6, 7.

COMCWTO 30

*

COMCWTO 31

*

MACROS RECALL, WRITE.

CPS0303 13

COMCWTO 33

1711 53610

702177775

WT01

SA6

X1

STORE WORD

COMCWTO 34

SX2

A1-2

COMCWTO 35

54710

SA7

A1

UPDATE IN

COMCWTO 36

1712 0400401712 +

WT0=

SUBR

ENTRY/EXIT

COMCWTO 37

COMCWTO 38

COMCWTO 39

1

2

1

							COMCWTS	40
							COMCWTS	41
	1727	0400001737	+		EQ	WTS3	ENTRY FROM DCB= ON A WRITE REQUEST	COMCWTS 42
								COMCWTS 43
	1730	0400401730	+		WTS=	SUBR	ENTRY/EXIT	COMCWTS 44
	1731	5140001730	+			SA4	WTS=	COMCWTS 46
							SET RETURN ADDRESS	CPSA104 46
					IF	-DEF,B1=1,1		COMCWTS 46
					SB1	1		COMCWTS 47
								COMCWTS 48
			0470001730	+		ZR	B7,WTS=	CPSA104 47
	1732	5212000004				SA1	X2+4	COMCWTS 50
		66467				SB4	B6+B7	COMCWTS 51
			63510			SB5	X1	COMCWTS 52
	1733	7170000055				SX7	1R	COMCWTS 53
		57141				SA1	B4-B1	COMCWTS 54
			66211				READ LAST CHARACTER	COMCWTS 55
	1734	13617		WTS1		SB2	B1+B1	COMCWTS 56
		55111				BX6	X1-X7	COMCWTS 57
						SA1	A1-B1	COMCWTS 58
			0306001734	+			(2)	COMCWTS 59
	1735	64712				ZR	X6,WTS1	COMCWTS 60
		0767001736	+			SB7	A1+B2	COMCWTS 61
			66761			LT	B6,B7,WTS2	COMCWTS 62
							IF NOT TO PAST START OF BUFFER	COMCWTS 63
	1736	5232000001		WTS2		SB7	B6+B1	COMCWTS 64
		7140000000				SA3	X2+1	COMCWTS 65
						SX4	0	COMCWTS 66
							(A3) = ADDRESS OF FIRST	COMCWTS 67
							(X4) = WORD COUNT TRANSFERED TO BUFFER	COMCWTS 68
								COMCWTS 69
				*			INITIALIZE REGISTERS FOR TRANSFER.	COMCWTS 70
								COMCWTS 71
	1737	55131		WTS3		SA1	A3-B1	CPSA242 100
		54231				SA2	A3+B1	CPSA242 101
		10611				BX6	X1	CPSA242 102
			54121			SA1	A2+B1	CPSA242 103
	1740	5160002001	+			SA6	WTS4	CPSA242 104
		63321				SB3	X2+B1	COMCWTS 69
			63410				(B3) = IN+1	COMCWTS 70
	1741	77643				SB4	X1	COMCWTS 71
		0326001742	+			SX6	B4-B3	COMCWTS 72
			77653			PL	X6,WTS4	COMCWTS 73
							OUT - IN+1	COMCWTS 74
	1742	63460		WTS4		SX6	B5-B3	COMCWTS 75
		73320				SB4	X6	COMCWTS 76
						SX3	X2	COMCWTS 77
			0316001750	+			(B4) = FREE BUFFER SPACE	COMCWTS 78
						NZ	X6,WTS6	COMCWTS 79
							IF SPACE AVAILABLE	COMCWTS 80
				*			PROCESS EXHAUSTED FREE BUFFER SPACE.	COMCWTS 81
								COMCWTS 82
	1743	5110002001	+	WTS5		SA1	WTS4	COMCWTS 83
		54231				SA2	A3+B1	CPSA242 105
			63210			SA2	A3+B1	CPSA242 106
	1744	73230				SB2	X1	CPSA242 107
		0535002107	+			SX2	X3	COMCWTS 81
			54130			NE	B3,B5,=XDCB=	COMCWTS 82
							IF IN+1 .NE. LIMIT	COMCWTS 83
	1745	73610				SA1	A3	COMCWTS 84
		55131				SX6	X1	COMCWTS 85
			63210			SA1	A3-B1	CPSA242 108
			54121			SB2	X1	COMCWTS 86
	1746	37716				SA1	A2+B1	CPSA242 109
		63360				IX7	X1-X6	COMCWTS 87
			0307002107	+			OUT	COMCWTS 88
	1747	63470				SB3	X6	COMCWTS 89
						ZR	X7,=XDCB=	COMCWTS 90
						SB4	X7	COMCWTS 91
							(B4) = FREE BUFFER SPACE	COMCWTS 92

* CHECK ASSEMBLY BUFFER.

COMCWTS	90
COMCWTS	91
COMCWTS	92
COMCWTS	93
COMCWTS	94
COMCWTS	95
COMCWTS	96
COMCWTS	97
COMCWTS	98
COMCWTS	99
COMCWTS	100
COMCWTS	101
COMCWTS	102
COMCWTS	103
COMCWTS	104
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COMCWTS	133
COMCWTS	134
COMCWTS	135
COMCWTS	136
COMCWTS	137
COMCWTS	138
COMCWTS	139
COMCWTS	140
COMCWTS	141
COMCWTS	142
COMCWTS	143
COMCWTS	144
COMCWTS	145
COMCWTS	146

* ASSEMBLE WORD.

* PROCESS LAST .LE. 9 CHARACTERS.

* PROCESS LAST WORD.

1750	6126000012	WTS6	SB2	B6+10	SET LAST CHARACTER
	43600		MX6	0	CLEAR ASSEMBLY
	56160		SA1	B6	GET FIRST CHARACTER
1751	0772001760 +		LT	B7,B2,WTS8	IF ASSEMBLY OVERRUNS WORKING BUFFER
	54211		SA2	A1+B1	GET SECOND CHARACTER
	64621		SB6	A2+B1	INCREMENT CHARACTER ADDRESS
* ASSEMBLE WORD.					
1752	20106	WTS7	LX1	6	POSITION ODD CHARACTER
	6166000002		SB6	B6+2	ADVANCE CHARACTER ADDRESS
	12661		BX6	X6+X1	ASSEMBLE CHARACTER
1753	54121		SA1	A2+B1	GET NEXT ODD CHARACTER
	12662		BX6	X6+X2	ASSEMBLE CHARACTER
	54211		SA2	A1+B1	GET NEXT EVEN CHARACTER
	20614		LX6	12	POSITION ASSEMBLY
1754	0562001752 +		NE	B6,B2,WTS7	LOOP FOR 10 CHARACTERS
	20106		LX1	6	POSITION 9TH CHARACTER
	12662		BX6	X6+X2	ASSEMBLE CHARACTER
1755	66331		SB3	B3+B1	IN+1 = IN+1 + 1
	12661		BX6	X6+X1	ASSEMBLE CHARACTER
	67441		SB4	B4-B1	DECREMENT FREE BUFFER SPACE
	53630		SA6	X3	STORE WORD
1756	73441		SX4	X4+B1	COUNT WORD
	77331		SX3	B3-B1	IN = IN+1
	0540001750 +		NZ	B4,WTS6	LOOP TO LAST CHARACTER OF FULL BUFFER
1757	0400001743 +		EQ	WTS5	CHECK BUFFER POINTERS
* PROCESS LAST .LE. 9 CHARACTERS.					
1760	7170000000	WTS8	SX7	0	SET ADD-ON CHARACTER
	6120000066		SB2	54	(B2) = SHIFT COUNT
1761	0467001765 +		EQ	B6,B7,WTS10	IF WORKING BUFFER EMPTY
	77276		SX2	B7-B6	SET CHARACTER COUNT REMAINING
	20273		LX2	59-0	CHECK FOR ODD OR EVEN CHARACTER COUNT
1762	0322001763 +		PL	X2,WTS9	IF EVEN CHARACTER COUNT
	7170000055		SX7	1R	
1763	22121	WTS9	LX1	X1,B2	POSITION CHARACTER
	66661		SB6	B6+B1	ADVANCE CHARACTER ADDRESS
	6122777771		SB2	B2-6	DECREMENT SHIFT COUNT
1764	12661		BX6	X6+X1	ASSEMBLE CHARACTER
	56160		SA1	B6	GET NEXT CHARACTER
	0567001763 +		NE	B6,B7,WTS9	LOOP TO END OF BUFFER
* PROCESS LAST WORD.					
1765	0317001770 +	WTS10	NZ	X7,WTS11	IF ODD NUMBER OF CHARACTERS
	0420001770 +		ZR	B2,WTS11	IF WORD FULL
1766	5011777776		SA1	A1-1	GET LAST CHARACTER IN BUFFER
	0311001770 +		NZ	X1,WTS11	IF NOT *00* CHARACTER
1767	7170005555		SX7	2R	PRESERVE *00* CHARACTER WITH * *
	6122777771		SB2	B2-6	REVISE SHIFT COUNT
1770	22727	WTS11	LX7	X7,B2	ADD LAST CHARACTER(S)
	54231		SA2	A3+B1	SET (A2) = IN

		43160		MX1	-12		COMCWTS	147
		12667		BX6	X6+X7		COMCWTS	148
	1771	73441		SX4	X4+B1	COUNT WORD	COMCWTS	149
		53630		SA6	X3	STORE LAST WORD	COMCWTS	150
		15761		BX7	-X1*X6		COMCWTS	151
		76230		SX2	B3	IN = IN+1	COMCWTS	152
	1772	63640		SB6	X4	SET WORD COUNT TRANSFERRED	COMCWTS	153
		54330		SA3	A3	(X3) = FIRST	COMCWTS	154
		0307002000 +		ZR	X7,WTS13	IF VALID END OF LINE, EXIT	COMCWTS	155
	1773	66331		SB3	B3+B1	ADVANCE IN+1	COMCWTS	156
		67441		SB4	B4-B1	DECREMENT FREE BUFFER SPACE	COMCWTS	157
		43166		MX1	-6		COMCWTS	158
		15171		BX1	-X1*X7	GET LAST CHARACTER	COMCWTS	159
	1774	7232000000		SX3	X2+	(X3) = IN	COMCWTS	160
		6167000000		SB6	B7+	RESET CHARACTER POSITION	COMCWTS	161
	1775	0440001743 +		ZR	B4,WTS5	IF FREE SPACE EXHAUSTED	COMCWTS	162
		7160000000		SX6	B0+		COMCWTS	163
	1776	0311001777 +		NZ	X1,WTS12	IF NOT *00* CHARACTER	COMCWTS	164
		7160005555		SX6	2R	PRESERVE *00* CHARACTER WITH * *	COMCWTS	165
	1777	20660	WTS12	LX6	48		COMCWTS	166
		63641		SB6	X4+B1	RESET WORD COUNT	COMCWTS	167
		53620		SA6	X2		COMCWTS	168
		76230		SX2	B3	IN = IN+1	COMCWTS	169
	2000	54121	WTS13	SA1	A2+B1	SET OUT	COMCWTS	170
		63410		SB4	X1		COMCWTS	171
		0400002074 +		EQ	=XWTS=	EXIT	COMCWTS	172
							CPSA242	110
							CPSA242	111
	2001	00000000000000000000	WTS13	CON	0	FET STATUS PRIOR TO READING OUT	CPSA242	112

		D_D		BASE	*		COMCWTS	174
			QUAL\$	IF	-DEF,QUAL\$		COMCWTS	175
				QUAL	*		COMCWTS	176
		1730 +	WTS=	EQU	/COMCWTS/WTS=		COMCWTS	177
			QUAL\$	ENDIF			COMCWTS	178
			WTS	ENDX			COMCWTS	179

2

□

*	ENTRY	(X2) = ADDRESS OF FET FOR FILE.	COMCWTW	33			
*		(B6) = FWA WORKING BUFFER.	COMCWTW	34			
*		(B7) = WORD COUNT OF WORKING BUFFER.	COMCWTW	35			
*		IF (B7) = 0, NO TRANSFER WILL BE PERFORMED.	COMCWTW	36			
*			COMCWTW	37			
*	EXIT	(B1) = 1.	COMCWTW	38			
*		(X2) = ADDRESS OF FET FOR FILE.	COMCWTW	39			
*		(B6) = ADDRESS OF NEXT WORD TO BE TRANSFERRED FROM	COMCWTW	40			
*		WORKING BUFFER.	COMCWTW	41			
*		(B7) = 0 IF TRANSFER COMPLETE.	COMCWTW	42			
*		= REMAINING WORD COUNT IF *CIO=* WAS CALLED TO	COMCWTW	43			
*		WRITE DATA AND RETURNED AN ERROR STATUS.	COMCWTW	44			
*		(X7) = ERROR STATUS IF (B7) = 0.	COMCWTW	45			
*			COMCWTW	46			
*	USES	X - 1, 2, 3, 4, 6, 7.	COMCWTW	47			
*		B - 1, 2, 3, 4, 5, 6, 7.	COMCWTW	48			
*		A - 1, 2, 3, 4, 6, 7.	COMCWTW	49			
*			COMCWTW	50			
*	CALLS	CIO=.	COMCWTW	51			
*			CPS0303	14			
*	MACROS	RECALL, WRITE.	CPS0303	15			
			COMCWTW	52			
			COMCWTW	53			
2002	76634	WTW18	SX6	B3+B4	ADVANCE IN	COMCWTW	54
	66334		SB3	B3+B4		COMCWTW	55
	66664		SB6	B6+B4		COMCWTW	56
	67774		SB7	B7-B4		COMCWTW	57
2003	53121		SA1	X2+B1		COMCWTW	58
	0535002004 +		NE	B3,B5,WTW19	IF IN .NE. LIMIT	COMCWTW	59
	73610		SX6	X1	IN = FIRST	COMCWTW	60
2004	54611	WTW19	SA6	A1+B1	UPDATE IN	COMCWTW	61
	0570002010 +		NZ	B7,WTW1	IF NOT END OF TRANSFER	COMCWTW	62
	53420		SA4	X2		COMCWTW	63
2005	20473		LX4	59-0		COMCWTW	64
	0324002007 +		PL	X4,WTW=	IF BUFFER BUSY, RETURN	CPSA104	48
	21166		AX1	54	CHECK FOR DT = 61XX (NOS/BE TERMINAL)	COMCWTW	66
2006	7211000016		SX1	X1+77B-61B		COMCWTW	67
	0301002046 +		ZR	X1,WTW11	IF NOS/BE TERMINAL, FLUSH BUFFER	COMCWTW	68
						COMCWTW	69
2007	0400402007 +	WTW=	SUBR		ENTRY/EXIT	COMCWTW	70
2010	5212000003	WTW1	SA1	X2+3	(B4) = OUT	COMCWTW	71
	5232000002		SA3	X2+2	(B3) = IN	COMCWTW	72
			IF	-DEF,B1=1,1		COMCWTW	73
			SB1	1		COMCWTW	74
2011	54411		SA4	A1+B1	(B5) = LIMIT	COMCWTW	75
	0470002007 +		ZR	B7,WTW=	IF WORKING BUFFER EMPTY, RETURN	CPSA104	49
	63410		SB4	X1		COMCWTW	77
2012	53121		SA1	X2+B1	(B2) = FIRST	COMCWTW	78
	63330		SB3	X3		COMCWTW	79
	63540		SB5	X4		COMCWTW	80
	63210		SB2	X1		COMCWTW	81
2013	56160		SA1	B6	READ FIRST WORD	COMCWTW	82
	0524002014 +		NE	B2,B4,WTW2	IF OUT .NE. FIRST	COMCWTW	83
	66450		SB4	B5		COMCWTW	84
2014	0734002015 +	WTW2	LT	B3,B4,WTW3	IF NO END AROUND	COMCWTW	85
	6145000001		SB4	B5+1		COMCWTW	86
2015	67441	WTW3	SB4	B4-B1	CALCULATE FREE DATA SPACE	COMCWTW	87

67443	SB4	B4-B3	(B4) = TRANSFER LENGTH	COMCWTW	88
0440002051 +	ZR	B4,WTW13	IF NO ROOM	COMCWTW	89
2016 10711	BX7	X1		COMCWTW	90
0674002017 +	LE	B4,B7,WTW4	IF NOT ENOUGH ROOM	COMCWTW	91
66470	SB4	B7		COMCWTW	92
				COMCWTW	93
	*		INITIALIZE REGISTERS FOR TRANSFER.	COMCWTW	94
				COMCWTW	95
2017	WTWA	BSS	0	COMCWTW	96
2017 5130002067 +	WTW4	SA3	WTWC PRESET CMU CODE AND VOID STACK	COMCWTW	97
0100002067 +		RJ	WTW16	COMCWTW	98
	*	SA1	A1+B1 (NO CMU)	COMCWTW	99
	*	SX4	B4-B1 (NO CMU)	COMCWTW	100
	*	MX6	-3 (NO CMU)	COMCWTW	101
	*	SA7	B3 (NO CMU)	COMCWTW	102
	*			COMCWTW	103
	*	GT	B4,B1,WTW14 IF MORE THAN 1 WORD (CMU)	COMCWTW	104
	*	BX4	X4-X4 (CMU)	COMCWTW	105
	*	SA7	B3 (CMU)	COMCWTW	106
				COMCWTW	107
2020 15346	WTW5	BX3	-X6*X4 NUMBER OF ODD WORDS	COMCWTW	108
21403	AX4	3	NUMBER OF BLOCKS	COMCWTW	109
0303002023 +	ZR	X3,WTW7	IF NO ODD WORDS	COMCWTW	110
				COMCWTW	111
	*		TRANSFER UP TO 7 WORDS.	COMCWTW	112
				COMCWTW	113
2021 7233777776	WTW6	SX3	X3-1	COMCWTW	114
10711	BX7	X1		COMCWTW	115
54111	SA1	A1+B1		COMCWTW	116
2022 54771	SA7	A7+B1		COMCWTW	117
0313002021 +	NZ	X3,WTW6	LOOP	COMCWTW	118
				COMCWTW	119
	*		PRE-READ REGISTERS.	COMCWTW	120
				COMCWTW	121
2023 0304002002 +	WTW7	ZR	X4,WTW18 IF NO BLOCKS	COMCWTW	122
63520	SB5	X2	(B5) = FET ADDRESS	COMCWTW	123
54211	SA2	A1+B1		COMCWTW	124
2024 66211	SB2	B1+B1	(B2) = 2	COMCWTW	125
54321	SA3	A2+B1		COMCWTW	126
63340	SB3	X4	(B3) = BLOCK COUNT	COMCWTW	127
54431	SA4	A3+B1		COMCWTW	128
				COMCWTW	129
	*		TRANSFER 8 WORD BLOCKS.	COMCWTW	130
				COMCWTW	131
2025 10611	WTW8	BX6	X1	COMCWTW	132
22702	LX7	X2		COMCWTW	133
54132	SA1	A3+B2		COMCWTW	134
54242	SA2	A4+B2		COMCWTW	135
2026 54671	SA6	A7+B1		COMCWTW	136
67331	SB3	B3-B1		COMCWTW	137
54761	SA7	A6+B1		COMCWTW	138
10633	BX6	X3		COMCWTW	139
2027 22704	LX7	X4		COMCWTW	140
54312	SA3	A1+B2		COMCWTW	141
54422	SA4	A2+B2		COMCWTW	142
54662	SA6	A6+B2		COMCWTW	143
2030 54772	SA7	A7+B2		COMCWTW	144

		10611		BX6	X1		COMCWTW	145	
		22702		LX7	X2		COMCWTW	146	
		54132		SA1	A3+B2		COMCWTW	147	
1	2031	54242		SA2	A4+B2		COMCWTW	148	1
2		54662		SA6	A6+B2		COMCWTW	149	2
3		54772		SA7	A7+B2		COMCWTW	150	3
4			10633	BX6	X3		COMCWTW	151	4
5	2032	22704		LX7	X4		COMCWTW	152	5
6		54312		SA3	A1+B2		COMCWTW	153	6
7		54422		SA4	A2+B2		COMCWTW	154	7
8		54662		SA6	A6+B2		COMCWTW	155	8
9	2033	54772		SA7	A7+B2		COMCWTW	156	9
10		0530002025	+	NZ	B3,WTW8	LOOP	COMCWTW	157	10
11							COMCWTW	158	11
12			*		WRITE EXIT.		COMCWTW	159	12
13							COMCWTW	160	13
14			56352	SA3	B5+B2	READ IN	COMCWTW	161	14
15	2034	54132		SA1	A3+B2	(B5) = LIMIT	COMCWTW	162	15
16		76250		SX2	B5		COMCWTW	163	16
17		63510		SB5	X1		COMCWTW	164	17
18		53420		SA4	X2	CHECK BUFFER STATUS	COMCWTW	165	18
19	2035	66664		SB6	B6+B4		COMCWTW	166	19
20		67774		SB7	B7-B4		COMCWTW	167	20
21		63334		SB3	X3+B4	ADVANCE IN	COMCWTW	168	21
22			73634	SX6	X3+B4		COMCWTW	169	22
23	2036	20473		LX4	59-0		COMCWTW	170	23
24		53321		SA3	X2+B1	READ FIRST	COMCWTW	171	24
25		6223000000		SB2	X3+		COMCWTW	172	25
26	2037	0535002040	+	NE	B3,B5,WTW10	IF IN .NE. LIMIT	COMCWTW	173	26
27		7263000000		SX6	X3+	IN = FIRST	COMCWTW	174	27
28			WTX\$	IF	DEF,WTX\$		CPSA242	130	28
29			WTW10	EQ	WTW19	CLEAN UP AND RETURN	CPSA261	5	29
30			WTX\$	ELSE			CPSA242	132	30
31							COMCWTW	175	31
32			*		TRY TO BUFFER AHEAD.		COMCWTW	176	32
33							COMCWTW	177	33
34	2040	54631		SA6	A3+B1	STORE IN	COMCWTW	178	34
35		0324002050	+	PL	X4,WTW12	IF BUFFER BUSY	COMCWTW	179	35
36		21366		AX3	54	CHECK FOR DT = 61XX (NOS/BE TERMINAL)	COMCWTW	180	36
37	2041	7233000016		SX3	X3+77B-61B		COMCWTW	181	37
38		0303002046	+	ZR	X3,WTW11	IF NOS/BE TERMINAL, FLUSH BUFFER	COMCWTW	182	38
39	2042	5212000003		SA1	X2+3	READ OUT	COMCWTW	183	39
40		37616		IX6	X1-X6	(OUT-IN)	COMCWTW	184	40
41		77752		SX7	B5-B2	(LIMIT-FIRST)	COMCWTW	185	41
42	2043	22316		LX3	X6,B1	2*(OUT-IN)	COMCWTW	186	42
43		21674		AX6	60	SIGN OF (OUT-IN)	COMCWTW	187	43
44		13467		BX4	X6-X7	INVERT BUFFER IF IN .GE. OUT	COMCWTW	188	44
45		37643		IX6	X4-X3	BUFFER SIZE - 2*(OUT-IN)	COMCWTW	189	45
46	2044	0336002050	+	NG	X6,WTW12	IF BUFFER THRESHOLD NOT REACHED	COMCWTW	190	46
47		21711		AX7	9		COMCWTW	191	47
48	2045	0307002050	+	ZR	X7,WTW12	IF BUFFER NOT BIG ENOUGH TO WRITE AHEAD	COMCWTW	192	48
49			WTX\$	ENDIF			CPSA242	133	49
50			WRIF\$	IF	DEF,WRIF\$		COMCWTW	193	50
51			WTW11	SA1	X2	RE-ISSUE CURRENT WRITE FUNCTION	COMCWTW	194	51
52				SX6	774B		COMCWTW	195	52
53				BX7	X6*X1		COMCWTW	196	53
54				RJ	=XCIO=		COMCWTW	197	54
55									55
56									56
57									57
58									58
59									59
60									60

2046	7170000014	WRIF\$	ELSE	1		COMCWTW	198
2047	0317002007 +	WTW11	WRITE	X2		COMCWTW	199
2050	0570002010 +	WTW12	NZ	X7,WTW=	IF ERROR IN LAST *CIO* REQUEST, RETURN	CPSA104	50
	0400002007 +		NZ	B7,WTW1	IF NOT DONE	COMCWTW	201
			EQ	WTW=	RETURN	CPSA104	51
						COMCWTW	203
		*			DUMP CIRCULAR BUFFER.	COMCWTW	204
2051	53120	WTW13	SA1	X2	CHECK BUFFER STATUS	COMCWTW	205
	20173		LX1	59-0		COMCWTW	206
	0331002046 +		NG	X1,WTW11	IF NOT BUSY	COMCWTW	207
2052	0301002046 +		ZR	X1,WTW11	IF BLANK FET	COMCWTW	208
	0100001554 +		RECALL			COMCWTW	209
2053	0400002010 +		EQ	WTW1	CONTINUE WRITE	COMCWTW	210
						COMCWTW	211
						COMCWTW	212
		*			MOVE DATA WITH CMU.	COMCWTW	213
2054	7144776314	WTW14	SX4	B4-819		COMCWTW	214
	0324002065 +		PL	X4,WTW15	IF TOO BIG FOR CMU	COMCWTW	215
2055	76440		SX4	B4	10 * WORDS = CHARACTERS	COMCWTW	216
	22614		LX6	X4,B1		COMCWTW	217
	10100		BX1	X0	SAVE X0	COMCWTW	218
	20403		LX4	3		COMCWTW	219
2056	36646		IX6	X4+X6		COMCWTW	220
	76760		SX7	B6	SET SOURCE ADDRESS	COMCWTW	221
	76430		SX4	B3	SET DESTINATION ADDRESS	COMCWTW	222
	20736		LX7	30		COMCWTW	223
2057	12447		BX4	X4+X7		COMCWTW	224
	43770		MX7	-4		COMCWTW	225
	11376		BX3	X7*X6	EXTRACT UPPER PORTION	COMCWTW	226
	15667		BX6	-X7*X6	EXTRACT LOWER PORTION	COMCWTW	227
2060	20354		LX3	48-4		COMCWTW	228
	12443		BX4	X4+X3		COMCWTW	229
	20632		LX6	26		COMCWTW	230
	12646		BX6	X4+X6		COMCWTW	231
2061	21363		AX3	51		COMCWTW	232
	5160002067 +		SA6	WTWC	STORE DESCRIPTOR WORD	COMCWTW	233
2062	4640002067 +		IM	WTWC	MOVE DATA	COMCWTW	234
2063	10011		BX0	X1	RESTORE X0	COMCWTW	235
	0303002002 +		ZR	X3,WTW18	IF NO WRITE EXIT	COMCWTW	236
	53420		SA4	X2		COMCWTW	237
2064	76330		SX3	B3	RESET IN	COMCWTW	238
	0400002035 +		EQ	WTW9		COMCWTW	239
						COMCWTW	240
						COMCWTW	241
2065		WTWB	BSS	0		COMCWTW	242
2065	54111	WTW15	SA1	A1+B1	MOVE DATA WITHOUT CMU	COMCWTW	243
	77441		SX4	B4-B1		COMCWTW	244
	43671		MX6	-3		COMCWTW	245
	56730		SA7	B3		COMCWTW	246
2066	0400002020 +		EQ	WTW5		COMCWTW	247
						COMCWTW	248
		*			CMU PRESET CODE.	COMCWTW	249
		*			WTWC IS READ UP AND THEN RETURN JUMPED TO IN ORDER TO VOID	COMCWTW	250
		*			THE INSTRUCTION STACK. WTWC IS ALSO USED AS THE CMU	COMCWTW	251
		*			DESCRIPTOR WORD.	COMCWTW	252
						COMCWTW	253
2067	0714002054 +	WTWC	GT	B4,B1,WTW14	IF MORE THAN 1 WORD TO MOVE (CMU)	COMCWTW	254

13444 BX4 X4-X4 COMCWTW 255
56730 SA7 B3 COMCWTW 256
2067 + WTW16 EQU WTWC USED TO VOID STACK COMCWTW 257

1
2 * PRESET FOR CMU CODE. COMCWTW 258
3
4 2070 5140000065 SA4 RA.CMU CHECK IF CMU AVAILABLE COMCWTW 261
5 6140002017 + SB4 WTWA COMCWTW 262
6 2071 0334002072 + NG X4,WTW17 IF CMU COMCWTW 263
7 5130002065 + SA3 WTWB COMCWTW 264
8 2072 10633 WTW17 BX6 X3 COMCWTW 265
9 56640 SA6 B4 COMCWTW 266
10 0100002072 + RJ * VOID INSTRUCTION STACK. CPSA163 8
11 2073 0400002010 + EQ WTW1 COMCWTW 267
12 COMCWTW 268
13
14
15
16

17 ** WTX - WRITE EXIT. COMCWTW 270
18 * IF BUFFER IS BUSY, RETURN. COMCWTW 271
19 * IF DEVICE TYPE = 61XX (NOS/BE TERMINAL), ALWAYS ISSUE WRITE. COMCWTW 272
20 * OTHERWISE, WORD COUNT OF BUFFER IS CHECKED, AND A WRITE COMCWTW 273
21 * FUNCTION IS REQUESTED IF NECESSARY. COMCWTW 274
22 * COMCWTW 275
23 * ENTRY (A2) = ADDRESS OF IN. COMCWTW 276
24 * (A3) = ADDRESS OF FIRST. COMCWTW 277
25 * (A4) = RETURN ADDRESS. COMCWTW 278
26 * (B3) = IN+1. COMCWTW 279
27 * (B4) = OUT. COMCWTW 280
28 * (B5) = LIMIT. COMCWTW 281
29 * (X2) = IN COMCWTW 282
30 * (B1) = 1. COMCWTW 283
31 * COMCWTW 284
32 * EXIT TO RETURN ADDRESS. COMCWTW 285
33 * COMCWTW 286
34 * CALLS CIO=. COMCWTW 287
35 * CPS0303 16
36 * MACROS WRITE. CPS0303 17

37 COMCWTW 288
38 COMCWTW 289
39 2074 55131 WTX= SA1 A3-B1 CHECK BUFFER STATUS COMCWTW 290
40 73620 SX6 X2 STORE IN COMCWTW 291
41 20173 LX1 59 COMCWTW 292
42 54620 SA6 A2 COMCWTW 293
43 WTX\$ IF -DEF,WTX\$ CPSA242 134
44 2075 0321002106 + PL X1,WTX1 IF BUFFER BUSY COMCWTW 294
45 54330 SA3 A3 CHECK DEVICE TYPE COMCWTW 295
46 10633 BX6 X3 COMCWTW 296
47 2076 21666 AX6 54 COMCWTW 297
48 7266000016 SX6 X6+77B-61B COMCWTW 298
49 2077 0306002104 + ZR X6,WTX0 IF NOS/BE TERMINAL COMCWTW 299
50 COMCWTW 300
51 * IF BUFFER IS NOT BUSY, CHECK SIZE OF BUFFER. COMCWTW 301
52 * ISSUE WRITE IF THRESHOLD IS REACHED. COMCWTW 302
53 COMCWTW 303
54 54121 SA1 A2+B1 REREAD OUT CPSA242 135
55
56
57
58
59
60

1412THE

WRIF\$ IF DEF,WRIF\$
DCB1 SA1 A3-B1 RE-ISSUE CURRENT WRITE FUNCTION
SX6 774B
BX7 X6*X1
SX2 A1 SET FET ADDRESS
RJ =XCIO=

COMCWTW 350
COMCWTW 351
COMCWTW 352
COMCWTW 353
COMCWTW 354
COMCWTW 355
COMCWTW 356
COMCWTW 357
COMCWTW 358
COMCWTW 359

2113 75231
2115 65241

ELSE 1
WRITE A3-B1
SB2 A4-B1 CONTINUE WRITE
JP B2

0222000000

D_D BASE *
QUAL\$ IF -DEF,QUAL\$
QUAL *
2007 + WTW= EQU /COMCWTW/WTW=
2074 + WTX= EQU /COMCWTW/WTX=
2107 + DCB= EQU /COMCWTW/DCB=
QUAL\$ ENDIF
WTW ENDX

COMCWTW 361
COMCWTW 362
COMCWTW 363
COMCWTW 364
COMCWTW 365
COMCWTW 366
COMCWTW 367
COMCWTW 368

1412THE

2115

XJR

CTEXT

COMCXJR - RESTORE REGISTERS.

COMCXJR

2

[illegible]

0	SAVEB	EQU	0
10	SAVEA	EQU	8
20	SAVEX	EQU	16

COMCXJR	32
COMCXJR	33
COMCXJR	34

2116	0400402116 +	XJR	SUBR	ENTRY/EXIT
			IF	-DEF,B1=1,1

COMCXJR	35
COMCXJR	36
COMCXJR	37

2117	43052		SB1	1	
	6120000007		MX0	-18	(X0) = 77777777777777000000B
			SB2	7	(B2) = NUMBER OF HIGHEST REGISTER

COMCXJR	38
COMCXJR	39
COMCXJR	40

*	COPY REGISTERS FROM THE SAVED FORMAT TO THE EXCHANGE
*	PACKAGE FORMAT.

COMCXJR	41
COMCXJR	42
COMCXJR	43

2120	63412	XJR1	SB4	B2+X1	
	5124000010		SA2	SAVEA+B4	(X2) - A.(B2)
	56340		SA3	B4	(X3) - B.(B2)
2121	15220		BX2	-X0*X2	CLEAR UPPER BITS
	5144000020		SA4	SAVEX+B4	(X4) - X.(B2)
	15330		BX3	-X0*X3	CLEAR UPPER BITS
2122	20222		LX2	18D	(X2) = POSITIONED A.(B2)
	12623		BX6	X2+X3	(X6) = A.(B2) AND B.(B2) PACKED
	22704		LX7	X4	
2123	5162002131 +		SA6	XJRA+B2	STORE FORMATTED WORD IN EXCHANGE PACKAGE
	5172002141 +		SA7	XJRA+8+B2	
2124	67221		SB2	B2-B1	BACK UP ONE REGISTER
	0620002120 +		PL	B2,XJR1	IF ANOTHER B/A/X REGISTER TO MOVE

COMCXJR	44
COMCXJR	45
COMCXJR	46
COMCXJR	47
COMCXJR	48
COMCXJR	49
COMCXJR	50
COMCXJR	51
COMCXJR	52
COMCXJR	53
COMCXJR	54
COMCXJR	55
COMCXJR	56
COMCXJR	57
COMCXJR	58

*	INSERT P AND RESTORE ALL REGISTERS.
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COMCXJR	59
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2125	7150002116 +		SX5	XJRX	(X5) = P REGISTER FOR RETURN TO CALLER
	20544		LX5	2*18D	(X5) = POSITIONED P-REGISTER
	12665		BX6	X6+X5	(X6) = P, A0, B0
2126	54660		SA6	A6	REPLACE OLD RSRA+0 WORD
	7160301222		SYSTEM	XJR,R,XJRA	

COMCXJR	60
COMCXJR	61
COMCXJR	62
COMCXJR	63
COMCXJR	64
COMCXJR	65

2131	20	XJRA	BSS	2*8	EXCHANGE PACKAGE FOR XJR REQUEST
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COMCXJR	67
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D_D		BASE	*
	QUAL\$	IF	-DEF,QUAL\$
		QUAL	*
2116 +	XJR	EQU	/COMCXJR/XJR
2116 +	XJR=	EQU	/COMCXJR/XJR
	QUAL\$	ENDIF	
	XJR	ENDX	

COMCXJR	69
COMCXJR	70
COMCXJR	71
COMCXJR	72
F4720D	20
COMCXJR	73
COMCXJR	74

9

37767
12767
2155 15337

IX7 X6-X7
BX7 X6+X7
BX3 -X7*X3
IX6 X1+X3
EQ ZTB
SELECT SPACE CODES
MERGE SPACES

COMCZTB 41
COMCZTB 42
COMCZTB 43
COMCZTB 44
COMCZTB 45
COMCZTB 46
COMCZTB 47
COMCZTB 48

2156 37373737373737373737
2157 55555555555555555555

ZTBA

CON 37373737373737373737B
CON 1H

D_D

QUAL\$

BASE *
IF -DEF,QUAL\$
QUAL *
EQU /COMCZTB/ZTB
EQU /COMCZTB/ZTB
ENDIF
ENDX
END

COMCZTB 50
COMCZTB 51
COMCZTB 52
COMCZTB 53
F4720D 21
COMCZTB 54
COMCZTB 55
CALLCPU 56

2151 +
2151 +

ZTB
ZTB=
QUAL\$
ZTB

2161

57400B CM STORAGE USED
PARALLEL CPU ASSEMBLY

6602 STATEMENTS
2.462 SECONDS

561 SYMBOLS
1298 REFERENCES

SYMBOLIC REFERENCE TABLE.

ADW	335	PROGRAM*	49/04	D								
AMU	351	PROGRAM*	49/05	D								
ARG	0	PROGRAM*	5/41	D								
ARG=	0	PROGRAM*	5/42	D								
ATS	354	PROGRAM*	49/06	D								
B1=1	0		13/13	F	59/05	F	66/45	F	79/02	F	112/01	F
			56/13	F	63/04	F	70/37	F	109/44	F	114/09	F
CDD	32	PROGRAM*	7/25	D								
CDD=	32	PROGRAM*	7/26	D								
CFD	42	PROGRAM*	10/04	D								
CFD=	42	PROGRAM*	10/05	D								
CIO=	100	PROGRAM*	13/34	D	72/48		76/35		97/01		126/02	
			63/39		75/33		77/04		117/38		128/19	
COD	105	PROGRAM*	15/18	D								
COD=	105	PROGRAM*	15/19	D								
CPM=	115	PROGRAM*	17/04	D								
CPT	121	PROGRAM*	19/41	D								
CPT=	121	PROGRAM*	19/42	D								
DCB=	2107	PROGRAM*	112/21		114/38		119/48		119/56		129/20	D
DXB	150	PROGRAM*	22/20	D								
DXB=	150	PROGRAM*	22/21	D								
EQS	462	PROGRAM*	49/07	D								
FTAB	332	PROGRAM*	39/06	F	39/07		42/49		43/46		44/09	
			39/07	L	40/56		43/36		44/05		44/43	
F.TEND	332	PROGRAM*	39/07	L	48/41						45/38	
LCB=	1101	PROGRAM*	56/35		59/25		67/09		77/23	D		
LM	327	PROGRAM*	39/07	L	43/35		47/52					

LTAB	333	PROGRAM*	39/07 L	41/47	43/54	44/49	45/39	48/01
			39/07	42/50	44/11	45/04	46/35	48/32
			41/02	43/32	44/33	45/15	47/28	
1	L.SRT	25	93/06 D					
2	L.TEND	333	39/07 L					
3	MEML	0	2/28 D	39/07	39/07			
4	MES	473	49/08 D					
5	MNS	217	30/24 D	30/25				
6	MNS=	217	30/25 D	34/06 S	34/07			
7	MOS	301	34/15 D					
8	MOS=	301	34/16 D					
9	MSG=	1570	105/47 D					
10	MTD	477	49/09 D					
11	MTU	513	49/10 D					
12	MU	326	39/07 L	41/38				
13	MVE=	544	44/52	45/09	48/10	48/37	54/20 D	
14	NTAB	1	37/18 D	39/07	39/07	39/07 D	48/42	
15	U QUAL\$		3/06 F	15/16 F	31/06 F	61/02 F	82/06 F	101/22 F 113/06 F 131/45 F
16			5/39 F	16/06 F	34/13 F	62/06 F	83/13 F	102/06 F 115/33 F 132/06 F
17			6/06 F	17/02 F	39/12 F	64/02 F	84/06 F	105/42 F 116/06 F 133/14 F
18			7/23 F	18/06 F	49/02 F	65/06 F	93/02 F	106/06 F 117/45 F
19			8/06 F	19/39 F	50/06 F	68/29 F	94/06 F	108/26 F 118/06 F
20			10/02 F	20/06 F	54/18 F	69/06 F	95/29 F	109/06 F 121/35 F
21			11/06 F	22/18 F	55/06 F	77/19 F	96/06 F	110/36 F 122/06 F
22			13/32 F	23/06 F	57/15 F	78/06 F	97/21 F	111/06 F 129/16 F
23			14/06 F	30/22 F	58/06 F	81/16 F	98/06 F	112/37 F 130/06 F
24	RA.CEJ	66	CPUTEXT	103/05				
25	RA.CMU	65	CPUTEXT	24/23	51/11	74/14	127/07	
26	RA.MTR	1	CPUTEXT	79/35	102/55	103/17	103/45	103/49 104/33
27	RCL=	1554	PROGRAM*	63/26	73/26	76/19	105/45 D	126/13 128/55
28	RDC=	603	PROGRAM*	57/17 D				
29	RDH=	623	PROGRAM*	61/04 D				
30	RDO=	666	PROGRAM*	64/04 D				
31	RDS=	722	PROGRAM*	68/31 D				
32	RDW=	767	PROGRAM*	77/21 D				
33	RDX=	1066	PROGRAM*	56/56	60/02	60/14	60/46	68/23
34			57/09	60/10	60/30	68/21	77/22 D	
35	RSR	1125	PROGRAM*	81/18 D				
36	RSR=	1125	PROGRAM*	81/19 D				
37	SFN	1164	PROGRAM*	83/15 D				
38	SFN=	1164	PROGRAM*	83/16 D				
39	SRT	1173	PROGRAM*	93/04 D				
40	SRT=	1173	PROGRAM*	93/05 D				
41	SST	1411	PROGRAM*	95/31 D				
42	SST=	1411	PROGRAM*	95/32 D				
43	STF	1414	PROGRAM*	97/23 D				
44	STF=	1414	PROGRAM*	97/24 D				
45	SVR	1426	PROGRAM*	101/24 D				
46	SVR=	1426	PROGRAM*	101/25 D				
47	SYS=	1541	PROGRAM*	13/06	16/47	105/44 D	131/34	
48	TEND	0	39/07 D	39/07	39/07			
49	TN	330	PROGRAM*	39/07 L	41/44	43/27	47/53	
50	TO	331	PROGRAM*	39/07 L	45/45			
51	TOV	0	2/29 D	39/07				
52	UPC	1577	PROGRAM*	108/28 D				
53	UPC=	1577	PROGRAM*	108/29 D				
54	WNB=	1560	PROGRAM*	12/26	105/46 D	117/28		

WOD 1625 PROGRAM* 110/38 D
WOD= 1625 PROGRAM* 110/39 D
WTC= 1644 PROGRAM* 112/39 D
WTH= 1657 PROGRAM* 115/35 D
WTO= 1712 PROGRAM* 117/47 D
WTS= 1730 PROGRAM* 121/37 D
WTW= 2007 PROGRAM* 129/18 D
WTX= 2074 PROGRAM* 112/28
XJR 2116 PROGRAM* 131/47 D
XJR= 2116 PROGRAM* 131/48 D
ZTB 2151 PROGRAM* 133/16 D
ZTB= 2151 PROGRAM* 133/17 D

SYMBOL QUALIFIER = COMCARG

ARG 0 PROGRAM* 4/22 L 5/41 5/42
ARG1 3 PROGRAM* 4/30 L 5/31
ARG2 4 PROGRAM* 4/33 L 4/37
ARG3 7 PROGRAM* 4/35 4/42 L
ARG4 14 PROGRAM* 4/46 4/57 L
ARG4.0 16 PROGRAM* 5/02 5/05 L
ARG4.1 20 PROGRAM* 5/10 5/12 L
ARG5 22 PROGRAM* 4/52 5/04 5/13 5/19 L
ARG6 25 PROGRAM* 5/23 5/29 L

SYMBOL QUALIFIER = COMCCDD

CDD 32 PROGRAM* 7/05 L 7/25 7/26
CDDA 36 PROGRAM* 7/06 7/15 L
CDD1 27 PROGRAM* 6/50 L 7/01 7/13

SYMBOL QUALIFIER = COMCCFD

CFD 42 PROGRAM* 9/03 L 10/04 10/05
CFDA 62 PROGRAM* 9/04 9/47 L
CFDB 64 PROGRAM* 9/05 9/49 L
CFDC 67 PROGRAM* 8/56 9/52 L
CFD1 51 PROGRAM* 9/18 9/21 L 9/29
CFD2 60 PROGRAM* 9/41 9/43 L
CFD3 41 PROGRAM* 8/56 L 9/12

SYMBOL QUALIFIER = COMCCIO

	CI02	70	PROGRAM*	12/26	L	13/12		
	CI03	71	PROGRAM*	12/27	L	13/11		
	CI04	75	PROGRAM*	12/38		12/45	L	
	CI05	76	PROGRAM*	12/45		12/48	L	
	CI0=	100	PROGRAM*	12/43		13/08	L	13/25 13/34
U	ERP1\$			12/20	F	12/29	F	12/51 F
U	ERP\$			12/15	F	12/28	F	12/50 F

SYMBOL QUALIFIER = COMCCOD

	COD	105	PROGRAM*	14/50	L	15/18	15/19	
	CODA	113	PROGRAM*	14/51		15/10	L	
	COD1	110	PROGRAM*	14/56	L	15/05		

SYMBOL QUALIFIER = COMCCPM

	CPM1	114	PROGRAM*	16/47	L	16/57		
	CPM=	115	PROGRAM*	16/49	L	17/04		

SYMBOL QUALIFIER = COMCCPT

	CPT	121	PROGRAM*	18/54	L	19/41	19/42	
	CPTA	135	PROGRAM*	19/04		19/30	L	
	CPT1	131	PROGRAM*	19/13		19/17	L	19/25
	CPT2	134	PROGRAM*	19/01		19/05	19/15	19/19 19/26 L

SYMBOL QUALIFIER = COMCDXB

	DXB	150	PROGRAM*	21/53	L	22/20	22/21	
	DXB1	140	PROGRAM*	21/10	L	21/24		
U	DXB1\$			21/28	F			
	DXB2	142	PROGRAM*	21/18	L	22/12		
	DXB3	146	PROGRAM*	21/30		21/32	21/34 L	22/06

SYMBOL QUALIFIER = COMCMNS

	MNS	217	PROGRAM*	26/48		27/01	L	29/05 30/24
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MNSA	157	PROGRAM*	27/03	30/10	D			
MNSB	220	PROGRAM*	24/29	S	30/11	D		
MNSC	270	PROGRAM*	24/24		30/12	L		
MNSD	271	PROGRAM*	24/21		30/14	L		
MNSE	272	PROGRAM*	28/25		30/15	L		
MNSF	273	PROGRAM*	28/18	S	28/20		30/16	L
MNS02	220	PROGRAM*	24/33		27/03	L	30/11	
MNS04	232	PROGRAM*	27/50	L	28/46			
MNS06	253	PROGRAM*	27/19		27/44		29/14	L 30/13
MNS10	261	PROGRAM*	29/43	L	29/50			
MNS100	211	PROGRAM*	26/18		26/31	L		
MNS110	212	PROGRAM*	25/12		26/40	L		
MNS120	214	PROGRAM*	24/45		26/42		26/45	L 29/35 30/03
MNS20	264	PROGRAM*	29/42		29/51	L		
MNS30	267	PROGRAM*	29/54		30/02	L		
MNS32	157	PROGRAM*	24/20	L	27/04		30/10	
MNS40	164	PROGRAM*	24/40	L	29/24			
MNS50	170	PROGRAM*	24/40		25/01	L		
MNS60	174	PROGRAM*	24/51		25/21	L		
MNS70	200	PROGRAM*	25/43	L	25/57			
MNS80	204	PROGRAM*	25/38		26/06	L		
MNS90	206	PROGRAM*	25/25		26/17	L		

SYMBOL QUALIFIER = COMCMOS

MOS	301	PROGRAM*	32/47	L	34/04		34/15	34/16
MOS10	313	PROGRAM*	33/18		33/21	L		
MOS20	314	PROGRAM*	33/21		33/30	L		
MOS30	323	PROGRAM*	33/46		33/55	L		
MOS40	324	PROGRAM*	32/49		32/56		33/04	34/04 L
MOS50	274	PROGRAM*	32/18	L	32/30			
MOS60	275	PROGRAM*	32/26	L	33/57			

SYMBOL QUALIFIER = COMCMTP

ADW	335	PROGRAM*	40/55	L	49/04			
ADWA	345	PROGRAM*	41/09	S	41/12		41/16	L
ADW1	334	PROGRAM*	40/50	L	41/06		41/14	
AMU	351	PROGRAM*	41/43	L	45/14		49/05	
AMU1	346	PROGRAM*	41/34	L	41/37		41/48	
ATS	354	PROGRAM*	41/11		42/48	L	49/06	
ATSA	447	PROGRAM*	45/16		46/02	L		
ATSB	450	PROGRAM*	43/07	S	43/53		44/32	45/19 45/56 46/04 L
ATSC	461	PROGRAM*	45/49	S	45/54		46/13	L
ATS1	366	PROGRAM*	43/27	L	45/57			
ATS10	445	PROGRAM*	45/48		45/54	L		
ATS2	370	PROGRAM*	43/31	L	43/34			
ATS3	401	PROGRAM*	44/08	L	44/31			
ATS4	411	PROGRAM*	44/15		44/21	L		

ATS5	416	PROGRAM*	44/42 L	44/53	
ATS6	422	PROGRAM*	44/45	44/48	44/53 L
ATS7	423	PROGRAM*	44/56 L	45/02	45/10
ATS8	430	PROGRAM*	44/56	45/14 L	
ATS9	442	PROGRAM*	43/45	45/45 L	
EQS	462	PROGRAM*	46/33 L	49/07	
MES	473	PROGRAM*	47/26 L	49/08	
MES1	470	PROGRAM*	47/17 L	47/20	47/33
MTD	477	PROGRAM*	47/51 L	49/09	
MTD1	502	PROGRAM*	47/57 L	48/11	
MTD2	506	PROGRAM*	48/07	48/11 L	
MTU	513	PROGRAM*	48/40 L	49/10	
MTU1	507	PROGRAM*	48/30 L	48/38	48/44
U	TOVT		43/41 F		

SYMBOL QUALIFIER = COMCMVE

MVEA	545	PROGRAM*	51/16 S	52/30 L					
MVEB	516	PROGRAM*	51/06 L	52/31	53/17	53/46	54/08 S	54/10	
MVEC	517	PROGRAM*	51/10 L	52/27	53/02				
MVED	524	PROGRAM*	51/13	51/20 L					
MVEE	544	PROGRAM*	52/26 L	52/27					
MVELL	25		52/27 D	53/11	53/14	53/21	53/34		
MVE1	545	PROGRAM*	51/18	52/31 L					
MVE10	575	PROGRAM*	52/57	53/16	53/45	53/56 L			
MVE11	516	PROGRAM*	51/05 L	52/32					
MVE12	521	PROGRAM*	51/12	51/14 L					
MVE13	525	PROGRAM*	51/08	51/27 L					
MVE14	530	PROGRAM*	51/33	51/38 L					
MVE15	532	PROGRAM*	51/29	51/45 L					
MVE16	535	PROGRAM*	51/41	51/49	52/01 L				
MVE17	541	PROGRAM*	52/16 L	52/24					
MVE2	550	PROGRAM*	52/47	52/49 L					
MVE3	553	PROGRAM*	52/51	53/02 L					
MVE4	555	PROGRAM*	53/10 L	53/25					
MVE5	557	PROGRAM*	53/13	53/15 L					
MVE6	564	PROGRAM*	53/03	53/29 L					
MVE7	566	PROGRAM*	53/34 L	53/50					
MVE8	570	PROGRAM*	53/38	53/40 L					
MVE9	573	PROGRAM*	52/56	53/47 L					
MVE=	544	PROGRAM*	52/01	52/10	52/29 L	52/44	53/20	53/49	54/20

SYMBOL QUALIFIER = COMCRDC

RDC1	606	PROGRAM*	56/17	56/19 L					
RDC1A	607	PROGRAM*	56/19	56/21 L					
RDC2	610	PROGRAM*	56/09	56/28 L					
RDC3	611	PROGRAM*	56/35 L	56/42	56/45	56/46			
RDC4	613	PROGRAM*	56/41 L	57/03					

RDC5	616	PROGRAM*	56/41	56/52 L	
RDC6	620	PROGRAM*	56/39	57/01 L	
RDC7	621	PROGRAM*	56/52	57/05 L	
RDC=	603	PROGRAM*	56/11 L	56/12	57/17

SYMBOL QUALIFIER = COMCRDH

RDHA	662	PROGRAM*	60/16	60/48 L	
RDHB	663	PROGRAM*	60/37	60/49 L	
RDHC	664	PROGRAM*	59/12 S	60/04	60/50 L
RDH1	627	PROGRAM*	59/17 L	60/34	
RDH2	631	PROGRAM*	59/25 L	59/32	59/35 59/36 59/48
RDH3	633	PROGRAM*	59/31 L	59/52	
RDH4	637	PROGRAM*	59/29	59/50 L	
RDH5	640	PROGRAM*	59/31	59/56 L	
RDH5.1	642	PROGRAM*	59/57	60/03 L	
RDH5.2	647	PROGRAM*	60/03	60/06	60/16 L
RDH6	655	PROGRAM*	59/04	60/36 L	
RDH7	657	PROGRAM*	60/39 L	60/41	
RDH8	661	PROGRAM*	59/56	60/44 L	
RDH=	623	PROGRAM*	59/03 L	60/36	60/42 61/04

SYMBOL QUALIFIER = COMCRDO

RD01	665	PROGRAM*	62/54 L	63/10	63/16 63/19
RD02	667	PROGRAM*	63/03 L	63/28	
RD03	674	PROGRAM*	63/13	63/23 L	
RD04	676	PROGRAM*	63/27 L	63/32	63/40
RD05	677	PROGRAM*	63/25	63/30 L	
RD06	704	PROGRAM*	63/34	63/42 L	
RDO=	666	PROGRAM*	63/02 L	63/48	63/51 63/53 64/04

SYMBOL QUALIFIER = COMCRDS

RDS0	726	PROGRAM*	66/49	66/52 L	
RDS1	727	PROGRAM*	66/15	66/40	67/02 L 67/19
RDS10	754	PROGRAM*	67/25	67/38	67/43 67/48 68/06 68/11 L
RDS11	757	PROGRAM*	68/16	68/18 L	
RDS12	711	PROGRAM*	66/19 L	66/43	
RDS13	716	PROGRAM*	66/29	66/33 L	66/36
RDS14	720	PROGRAM*	66/32	66/37 L	
RDS2	731	PROGRAM*	67/07	67/09 L	
RDS3	732	PROGRAM*	67/14 L	67/52	67/55 68/15
RDS4	733	PROGRAM*	67/14	67/17 L	
RDS5	737	PROGRAM*	67/27	67/32 L	67/39 67/49

RDS6	740	PROGRAM*	67/36 L	67/50					
RDS6.1	745	PROGRAM*	67/47	67/49 L					
RDS7	746	PROGRAM*	67/44	67/52 L					
RDS8	750	PROGRAM*	67/28	67/57 L					
RDS9	752	PROGRAM*	68/01	68/05 L					
RDS=	722	PROGRAM*	66/19	66/26	66/38	66/42 L	66/50	68/31	

SYMBOL QUALIFIER = COMCRDW

LCB1	1103	PROGRAM*	76/20 L	76/26					
LCB2	1104	PROGRAM*	76/18	76/24 L					
LCB3	1111	PROGRAM*	76/29	76/39 L					
LCB4	1116	PROGRAM*	76/46	76/51	76/54 L				
LCB5	1117	PROGRAM*	76/56 L	77/09					
LCB6	1120	PROGRAM*	76/53	77/03 L					
LCB7	1123	PROGRAM*	76/55	77/08 L					
LCB=	1101	PROGRAM*	76/14 L	77/23					
RDWA	775	PROGRAM*	70/49 L	74/15					
RDWB	1060	PROGRAM*	70/50	73/49 S	73/50	74/07 L	74/10		
RDWC	1065	PROGRAM*	74/17	74/23 L					
RDW1	771	PROGRAM*	70/31	70/35 L	72/52	73/06	73/27	74/21	
RDW10	1025	PROGRAM*	72/39 L	73/07					
RDW11	1033	PROGRAM*	70/18	72/57 L					
RDW12	1042	PROGRAM*	73/14	73/17	73/19 L				
RDW13	1044	PROGRAM*	73/03	73/26 L					
RDW14	1046	PROGRAM*	73/31 L	74/08					
RDW15	1057	PROGRAM*	73/32	73/56 L					
RDW16	1060	PROGRAM*	70/51	74/10 D					
RDW17	1063	PROGRAM*	74/16	74/18 L					
RDW18	762	PROGRAM*	70/18 L	74/07	74/23				
RDW19	763	PROGRAM*	70/21 L	71/22	73/52				
RDW2	774	PROGRAM*	70/44	70/46 L					
RDW20	765	PROGRAM*	70/25	70/28 L	72/23	72/25	72/35	72/36	72/45
RDW21	766	PROGRAM*	70/29 L	70/34					
RDW3	775	PROGRAM*	70/47	70/50 L					
RDW4	776	PROGRAM*	71/04 L	74/01					
RDW5	1000	PROGRAM*	71/14 L	71/18					
RDW6	1002	PROGRAM*	71/12	71/22 L					
RDW7	1004	PROGRAM*	71/32 L	71/57					
RDW8	1014	PROGRAM*	72/08 L	73/54					
RDW9	1017	PROGRAM*	72/15	72/23 L					
RDW=	767	PROGRAM*	70/33 L	72/50	72/53	73/22	77/21		
U RDX1	1100	PROGRAM*	75/07	75/09	75/21	75/27	75/28	75/34 L	
U RDX\$			72/17 F	75/06 F					
U RDX=	1066	PROGRAM*	75/01 L	77/22					

SYMBOL QUALIFIER = COMCRSR

RSR	1125	PROGRAM*	79/01 L	81/18	81/19				
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RSR2	1131	PROGRAM*	79/17 L	79/28		
RSR3	1135	PROGRAM*	79/35 L	79/36		
RSR4	1157	PROGRAM*	79/18	81/06 L		
SAVEA	10		78/52 D	79/34	80/13	80/49
SAVEB	0		78/51 D	79/09		
SAVEX	20		78/53 D	80/04	80/14	

SYMBOL QUALIFIER = COMCSFN

SFN	1164	PROGRAM*	82/48 L	83/15	83/16
SFNA	1171	PROGRAM*	82/50	83/06 L	

SYMBOL QUALIFIER = COMCSRT

L.SRT	25		86/11 D	93/06		
O.ABS	11		85/53 D	88/19		
O.ACF	15		85/57 D	86/42		
O.CAP	16		86/01 D	88/37		
O.DATA	17		86/02 D	87/02	91/27	91/36 92/09 92/40
O.OPL	6		85/50 D	88/13		
O.OPLC	7		85/51 D	88/16		
O.OPLD	10		85/52 D	87/53		
O.OVCAP	2		85/46 D	89/18		
O.OVL	4		85/48 D	88/26	90/34	
O.PROC	20		86/03 D	91/15		
O.REL	3		85/47 D	87/44		
O.SDR	22		86/05 D	92/30		
O.TEXT	0		85/44 D	88/01	91/23	
O.UCF	14		85/56 D	86/39		
O.ULIB	5		85/49 D	88/10		
O.UPL	13		85/55 D	92/17		
O.UPLR	23		86/06 D	89/07	89/12	
O.UPLRC	24		86/07 D	88/54		
O.6PP	1		85/45 D			
O.7PP	12		85/54 D	90/25		
O.8PP	25		86/08 D	86/11	90/28	
SRT	1173	PROGRAM*	86/14 L	93/04	93/05	
SRTA	1373	PROGRAM*	87/01	92/43 L		
SRTB	1374	PROGRAM*	92/15	92/44 L		
SRTC	1375	PROGRAM*	90/41	92/45 L		
SRTD	1376	PROGRAM*	88/51	92/46 L		
S RTE	1377	PROGRAM*	89/02	92/47 L		
SRTF	1400	PROGRAM*	89/10	92/48 L		
SRTG	1401	PROGRAM*	89/06	92/49 L		
SRT1	1206	PROGRAM*	87/01 L	92/28		
SRT10	1335	PROGRAM*	90/57	91/02	91/07 L	
SRT11	1341	PROGRAM*	90/43	91/04	91/08	91/18 L
SRT12	1344	PROGRAM*	91/22	91/25 L		

SRT13	1351	PROGRAM*	86/38	87/54	88/18	88/34	90/23	91/16	91/35	92/39
			86/40	88/03	88/21	89/08	90/27	91/24	91/42 L	92/41
			86/43	88/12	88/25	89/17	90/30	91/28	92/20	
			87/25	88/15	88/27	89/19	90/36	91/32	92/31	
SRT14	1353	PROGRAM*	91/51 L	91/55	92/02					
SRT15	1357	PROGRAM*	91/52	91/57	92/04 L					
SRT16	1362	PROGRAM*	86/27	92/14 L						
SRT17	1370	PROGRAM*	87/46	92/36 L						
SRT2	1215	PROGRAM*	87/18	87/20 L						
SRT3	1217	PROGRAM*	87/10	87/11	87/17	87/19	87/22	87/44 L	88/08	
SRT4	1227	PROGRAM*	87/48	88/10 L						
SRT5	1237	PROGRAM*	88/26 L	88/35						
SRT6	1240	PROGRAM*	88/23	88/29 L						
SRT7	1243	PROGRAM*	88/30	88/37 L						
SRT7.0	1256	PROGRAM*	89/05	89/10 L						
SRT7.1	1263	PROGRAM*	88/55	89/13	89/24 L					
SRT7.2	1264	PROGRAM*	89/27 L	89/47	89/51	89/53	89/56			
SRT7.3	1266	PROGRAM*	89/28	89/32 L						
SRT7.36	1276	PROGRAM*	89/36	89/38	89/43	89/48 L				
SRT7.37	1277	PROGRAM*	89/49 L							
SRT7.38	1301	PROGRAM*	89/52 L	89/54						
SRT7.39	1302	PROGRAM*	89/49	89/54 L						
SRT7.4	1304	PROGRAM*	89/39	89/57 L						
SRT7.41	1306	PROGRAM*	90/02	90/04 L						
SRT7.43	1310	PROGRAM*	90/09 L	90/17						
SRT7.46	1314	PROGRAM*	90/11	90/13	90/18 L					
SRT7.5	1316	PROGRAM*	88/39	90/25 L						
SRT8	1324	PROGRAM*	90/32	90/37 L						
SRT9	1331	PROGRAM*	90/55 L	91/05						
SYMBOL QUALIFIER = COMCSST										
SST	1411	PROGRAM*	95/18 L	95/31	95/32					
SST1	1402	PROGRAM*	94/52 L	95/04	95/09					
SST2	1403	PROGRAM*	94/55 L	95/16						
SST3	1404	PROGRAM*	95/02 L	95/08						
SST4	1407	PROGRAM*	94/54	95/12 L	95/23					
SYMBOL QUALIFIER = COMCSTF										
STF	1414	PROGRAM*	96/52 L	97/23	97/24					
STFA	1425	PROGRAM*	96/57 S	97/02	97/15 L					

SYMBOL QUALIFIER = COMCSVR

SAVEA	10		98/55 D	99/47 S	100/17 S	
SAVEB	0		98/54 D	100/24 S		
SAVEX	20		98/56 D	99/49 S	100/16 S	100/19 S
SVR	1426	PROGRAM*	99/01 L	101/24	101/25	
SVRA	1534	PROGRAM*	99/37 S	100/11	101/14 L	
SVRB	1535	PROGRAM*	99/39 S	100/12	101/15 L	
SVRC	1536	PROGRAM*	99/41 S	100/13	101/16 L	
SVR2	1431	PROGRAM*	99/12	99/19 L		
SVR3	1476	PROGRAM*	99/31 L	100/36		
SVR4	1477	PROGRAM*	99/14	99/36 L		
SVR5	1527	PROGRAM*	100/52 L	101/04		
SVR6	1531	PROGRAM*	100/57	101/02 L		

SYMBOL QUALIFIER = COMCSYS

MSGA	1576	PROGRAM*	105/29 S	105/35 L		
MSG1	1566	PROGRAM*	105/14 L	105/25	105/33	
MSG=	1570	PROGRAM*	105/19 L	105/47		
RCL1	1552	PROGRAM*	103/43 L	103/52		
RCL=	1554	PROGRAM*	103/48 L	103/50	105/45	
SYSA	1537	PROGRAM*	102/48 L	103/07	103/18	
SYS1	1540	PROGRAM*	102/50	102/52 L	103/01	103/15 S
SYS2	1544	PROGRAM*	102/52	103/05 L		
SYS3	1546	PROGRAM*	103/06	103/10 L		
SYS4	1547	PROGRAM*	103/08	103/12 L		
SYS=	1541	PROGRAM*	102/54 L	103/44	104/23	105/17 105/44
WNB1	1562	PROGRAM*	104/29 L	104/34		
WNB2	1557	PROGRAM*	104/21 L	104/36		
WNB=	1560	PROGRAM*	104/25 L	104/31	104/32	105/46

SYMBOL QUALIFIER = COMCUPC

UPC	1577	PROGRAM*	107/12 L	108/28	108/29	
UPC1	1601	PROGRAM*	107/14	107/16 L		
UPC2	1605	PROGRAM*	107/27 L	107/40	107/44	
UPC3	1606	PROGRAM*	107/25	107/30 L	107/50	107/51 107/52 108/11
UPC4	1610	PROGRAM*	107/34	107/39 L		
UPC5	1616	PROGRAM*	107/49	107/56 L		
UPC6	1620	PROGRAM*	108/03	108/05 L		
UPC7	1624	PROGRAM*	107/39	107/42	108/01	108/18 L

SYMBOL QUALIFIER = COMCWOD

WOD	1625	PROGRAM*	109/43 L	110/38	110/39	
WODA	1637	PROGRAM*	109/49	110/27 L		

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1

WTS4	1742	PROGRAM*	119/36	119/38 L		
WTS5	1743	PROGRAM*	119/44 L	120/30	121/16	
WTS6	1750	PROGRAM*	119/40	120/04 L	120/29	
WTS7	1752	PROGRAM*	120/13 L	120/20		
WTS8	1760	PROGRAM*	120/07	120/34 L		
WTS9	1763	PROGRAM*	120/39	120/41 L	120/46	
WTS=	1730	PROGRAM*	119/05 L	119/06	119/10	121/37

SYMBOL QUALIFIER = COMCWTW

DCB1	2113	PROGRAM*	128/52	128/53	129/08 L		
DCB=	2107	PROGRAM*	128/48 L	129/20			
U	WRIF\$		125/53 F	128/12 F	129/01 F		
WTWA	2017	PROGRAM*	124/09 L	127/08			
WTWB	2065	PROGRAM*	126/45 L	127/10			
WTWC	2067	PROGRAM*	124/10	126/37 S	126/38	126/57 L	127/03
WTW1	2010	PROGRAM*	123/32	123/41 L	126/04	126/14	127/14
WTW10	2040	PROGRAM*	125/29	125/37 L			
WTW11	2046	PROGRAM*	123/38	125/41	126/02 L	126/11	126/12
WTW12	2050	PROGRAM*	125/38	125/49	125/51	126/04 L	
WTW13	2051	PROGRAM*	124/02	126/09 L			
WTW14	2054	PROGRAM*	126/18 L	126/57			
WTW15	2065	PROGRAM*	126/19	126/46 L			
WTW16	2067	PROGRAM*	124/11	127/03 D			
WTW17	2072	PROGRAM*	127/09	127/11 L			
WTW18	2002	PROGRAM*	123/24 L	124/35	126/40		
WTW19	2004	PROGRAM*	123/29	123/31 L			
WTW2	2014	PROGRAM*	123/53	123/55 L			
WTW3	2015	PROGRAM*	123/55	123/57 L			
WTW4	2017	PROGRAM*	124/04	124/10 L			
WTW5	2020	PROGRAM*	124/21 L	126/50			
WTW6	2021	PROGRAM*	124/27 L	124/31			
WTW7	2023	PROGRAM*	124/23	124/35 L			
WTW8	2025	PROGRAM*	124/45 L	125/13			
WTW9	2035	PROGRAM*	125/22 L	126/43			
WTW=	2007	PROGRAM*	123/35	123/40 L	123/46	126/03	126/05 129/18
WTX0	2104	PROGRAM*	127/52	128/19 L			
WTX1	2106	PROGRAM*	127/47	128/09	128/11	128/22 L	
U	WTX\$		125/31 F	127/46 F			
WTX=	2074	PROGRAM*	127/42 L	129/19			

SYMBOL QUALIFIER = COMCXJR

SAVEA	10		131/02 D	131/15		
SAVEB	0		131/01 D			
SAVEX	20		131/03 D	131/18		
XJR	2116	PROGRAM*	131/05 L	131/47	131/48	
XJRA	2131	PROGRAM*	131/23 S	131/24 S	131/34	131/39 L
XJR1	2120	PROGRAM*	131/14 L	131/26		

SYMBOL QUALIFIER = COMCZTB

1	ZTB	2151	PROGRAM*	132/48 L	133/05	133/16	133/17	1
2	ZTBA	2156	PROGRAM*	132/49	133/07 L			2
3								3
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60								60

ADDRESSLENGTHBINARY CONTROL CARDS.

104262IDENTCOMPASS,ORGZ

366

BLOCKSTYPEADDRESSLENGTH

PROGRAM*ABSOLUTE0366

BUFFERSABSOLUTE3660

ENTRY POINTS.

COMPASS366ARG=1MFL=35346

ADDRESSLENGTHBINARY CONTROL CARDS.

366425IDENTI/O BUFFERS AND INITIALIZATION.
1013

BLOCKSTYPEADDRESSLENGTH

PROGRAM*ABSOLUTE01012

LITERALS*ABSOLUTE10121

ADDRESSLENGTHBINARY CONTROL CARDS.

30001342IDENTCOMP3\$,CP.ORG+1,CMPMAIN PROGRAM
4342362SEGSYSTEM COMMUNICATION SUBROUTINES.
47241343SEGUTILITY SUBROUTINES.
62671123SEGADDRESS SCANNING ROUTINES.
7412766SEGLISTING SUBROUTINES.
10400107SEGCONTROL.
105071163SEGINITIALIZATION.
116721540SEGOPCODE TABLE PROTOTYPE.
13432

BLOCKSTYPEADDRESSLENGTH

PROGRAM*ABSOLUTE04270

LITERALS*ABSOLUTE427052

SYSTEMABSOLUTE4342362

UTILITYABSOLUTE47241343

SCANABSOLUTE62671123

LISTABSOLUTE7412766

CONTROLABSOLUTE10400107

PASS0ABSOLUTE105071163

OPCODESABSOLUTE116721540

ADDRESS

LENGTH

BINARY CONTROL CARDS.

10562	1532	IDENT	COMP3\$A,ORGA+1,,1,1	SECONDARY OVERLAY
12314	2071	SEG	PSEUDO-OP PROCESSING (A-E).	
14405	1723	SEG	PSEUDO-OP PROCESSING (F-Q).	
16330	1474	SEG	PSEUDO-OP PROCESSING (R-Z).	
20024	2077	SEG	PASS 1 SUBROUTINES (A-P).	
22123	1365	SEG	PASS 1 SUBROUTINES (Q-Z).	
23510	1606	SEG	PASS 2 SUBROUTINES.	
25316	1120	SEG	BINARY OUTPUT SUBROUTINES.	
26436	0	SEG	BUFFERS.	
26436		END	COMPASS	

BLOCKS

TYPE

ADDRESS

LENGTH

PROGRAM*	ABSOLUTE	0	12132
LITERALS*	ABSOLUTE	12132	162
PSEUDO	ABSOLUTE	12314	5510
SUBS	ABSOLUTE	20024	6412
BUFFERS	ABSOLUTE	26436	7300

IDENT	COMPASS,ORGZ	CP139CP	95
ABS		COMPASS	3
IPARAMS		CPS028	86
SYSKOM B1		COMPASS	8
LIST F,X		CMP30	3

***	COMPASS - CYBER 70 SERIES COMPREHENSIVE ASSEMBLER PROGRAM.	CMP30	6
*		CMP30	7
*		CMP30	8
*	VERSION 1.0 67/01/01 D. M. KURN.	CMP30	9
*	VERSION 1.1 67/09/01 D. M. KURN.	CMP30	10
*	VERSION 2.0 69/06/07 D. A. CAHLANDER.	CMP30	11
*	VERSION 3.0 71/03/01 R. H. GOODELL.	CMP30	12
*	VERSION 3.1 74/10/07 R. H. GOODELL.	CP096A	25
*	VERSION 3.2 75/03/01 R. H. GOODELL.	CP096A	26
*	VERSION 3.3 75/10/23 R. H. GOODELL, V. M. AMEZCUA.	CP154	4
*	VERSION 3.4 76/09/22 V. M. AMEZCUA, C. M. MCDONALD	FEAT184NA	4
*	R. L. DEMER, J. E. GARCIA.	FEAT184NA	5
*	VERSION 3.5 77/05/24 J. E. GARCIA.	FEAT184NA	6
*	VERSION 3.6 78/06/16. J. E. GARCIA	F4810B	4
*	VERSION 3.7 86/07/14 A. MCDEARMON.	CPSA300	6
*		FEAT184NA	7
*		CMP30	13
*		CMP30	14
*	CONTROL DATA PROPRIETARY PRODUCT.	CMP30	15
*	COPYRIGHT CONTROL DATA CORP. 1971, 1972, 1973, 1974, 1975,	CPS*76	5
*	1976, 1977, 1978, 1979, 1980,	CPS*81	5
*	1981, 1982.	CPS*82	5

* INITIALIZE CONDITIONAL ASSEMBLY SYMBOLS.

CPSA134 6

* DETERMINE IF MODEL 76 ASSEMBLY.

CPSA134 7

MODL76 IFC EQ,*"MODEL"*76*,1
SET 1 ASSEMBLED IF MODEL 76 ASSEMBLY

CPSA134 8

CPSA134 9

CPSA134 10

CPSA134 11

* DETERMINE IF NOS OR KRONOS 1.0 (SCOPE1) ASSEMBLY

CPSA134 12

CPSA134 13

CPSA134 14

SCP IFC EQ,*"OS.NAME"*KRONOS*
SCOPE1 IFC EQ,*"OS.VER"*1.0 *
EQU 1 ASSEMBLED IF KRONOS 1.0 (SCOPE1)

CPSA134 15

CPSA134 16

CPSA134 17

1 SCP ELSE
NOS EQU 1 ASSEMBLED IF NOS
ENDIF

CPSA134 18

CPSA134 19

CPSA134 20

* DETERMINE IF NOS/BE OR SCOPE 2.

CPSA134 21

CPS2660 7

CPSA134 23

SCOPE2 IFC EQ,*"OS.NAME"*SCOPE *,4
IFC EQ,*"OS.VER"*2.1 *,1
EQU 1 ASSEMBLED IF SCOPE 2 ASSEMBLY

CPS2660 8

CPSA134 25

CPSA134 26

NOSBE IFC NE,*"OS.VER"*2.1 *,1
EQU 1 ASSEMBLED IF NOS/BE ASSEMBLY

CPS2660 9

CPS2660 10

CPSA134 27

* DETERMINE IF ECS OR LCM MACHINE

CPSA134 28

CPSA134 29

CPSA134 30

DEFINHF

1 LCMTYP IF MIC,HF.L,1
EQU 1 ASSEMBLED IF LCM AVAILABLE

CPSA134 31

CPSA134 32

CPSA134 33

1 HAFEXIT IF -MIC,HF.E,1
EQU 1 ASSEMBLED IF ECS HALF-EXIT AVAILABLE

CPSA134 34

CPSA134 35

CPSA134 36

** ENTRY POINTS AND ORIGIN OF (0,0) OVERLAY.

CPSA134 37

CP139CP 97

CP139CP 98

ENTRY COMPASS PRIMARY ENTRY POINT

CP139CP 99

CP139CP 100

CP139CP 101

IF DEF,NOS
ENTRY ARG= SUPPRESS ARGUMENT CHECKING BY SYSTEM
ENTRY MFL= DECLARE MINIMUM FIELD LENGTH

CPSA134 38

CP139CP 103

CP139CP 104

104 ORGZ EQU RA.ORG+1+3 LEAVE ROOM FOR 3 ENTRY POINTS

CP139CP 105

ORGZ EQU RA.ORG+1+1 LEAVE ROOM FOR 1 ENTRY POINT
ENDIF

CP139CP 106

CP139CP 107

CP139CP 108

CP139CP 109

IF DEF,SCOPE1,2

CPSA134 39

CP.BASE EQU RA.ORG+4 LEAVE ROOM FOR ENTRY POINTS ONLY

CPSA134 40

ELSE 1

CPSA134 41

114 CP.BASE EQU RA.ORG+10B+4 LEAVE ROOM FOR 54 TABLE AND ENTRY POINTS

CPSA134 42

CPSA134 43

104 ORG ORGZ ALIGN *COMPCOM* ORIGIN

CPSA134 43

CP139CP 116

CP139CP 117

104 10 BSS CP.BASE-* WITH CALLING COMPILERS

CP139CP 118

*** CONTROL CARD CALL.

*

* COMPASS(P1,P2,...,PN)

*

* OPTION

*

* A

*

* B

*

* B=0

*

* B=LFN

*

* D

*

* F

*

* F=NUMBER

*

* F=NAME

*

* G

*

* G=0

*

* G=LFN

*

* G=LFN/OVL

*

* I

*

* I=LFN

*

* L

*

* L=0

*

* L=LFN

*

* LO

*

* LO=0

*

* LO=CCC-CCC

*

* ML=STRING

*

* N

*

* O

*

* O=0

*

* O=LFN

*

* P

*

* PC=STRING

*

* PD

*

* PD

*

* PD=X

*

* PD=Z

*

* OMITTED

*

* PS

*

* PS=X

*

* PS=Z

MEANING

ABORT IF ERRORS.

BINARY ON FILE *LGO*.

NO BINARY.

BINARY ON FILE *LFN*.

GENERATE BINARY EVEN IF ASSEMBLY ERRORS.

*F SET TO 0.

*F SET TO NUMBER.

*F SET TO NUMBER CORRESPONDING TO NAME
(0=COMPASS, 1=RUN, 2=FTN4, 3=FTN5)

SYSTEXT FROM FILE *SYSTEXT*

NO SYSTEXT FROM A FILE.

SYSTEXT FROM FILE *LFN*.

SYSTEXT FROM OVERLAY *OVL* IN FILE *LFN*.

INPUT FROM FILE *COMPILE*.

INPUT FROM FILE *LFN*.

LONG LIST ON FILE *OUTPUT*.

NO LONG LIST.

LONG LIST ON FILE *LFN*.

SET LIST OPTIONS C, F, G, AND X.

NORMAL LIST OPTIONS (B, L, N, AND R).

TOGGLE LIST OPTIONS CCC-CCC.

VALUE OF *MODLEVEL* MICRO.

NO EJECT FLAG.

SHORT LIST ON FILE *OUTPUT*.

NO SHORT LIST.

SHORT LIST ON FILE *LFN*.

SELECT CONSECUTIVE PAGE NUMBERING.

VALUE OF *PCOMMENT* MICRO.

PRINT DENSITY IN LINES/INCH.

8 LINES/INCH PRINT DENSITY.

X LINES/INCH WHERE X=6D OR X=8D.

IP.PD LINES/INCH WHERE Z.NE.6 AND Z.NE.8.

IP.PD LINES/INCH PRINT DENSITY

PAGE SIZE IN LINES/PAGE.

X LINES/PAGE WHERE 4.LE.X.LE.99D.

IP.PS LINES/PAGE WHERE Z.LT.4 OR Z.GT.99D.

COMPASS

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	*	OMITTED	IP.PS LINES/PAGE IF PD NOT SPECIFIED.	F4810A	15	
	*	OMITTED	(PD*IP.PS)/IP.PD LINES/PAGE IF PD SPECIFIED	F4810A	16	
	*			F4810A	17	
1	*	S	SYSTEXT FROM LIBRARY OVERLAY *SYSTEXT*.	CMP30	28	1
2	*	S=0	NO SYSTEXT FROM A LIBRARY.	CMP30	29	2
3	*	S=OVL	SYSTEXT FROM LIBRARY OVERLAY *OVL*.	CMP30	30	3
4	*	S=LIB/OVL	SYSTEXT FROM OVERLAY *OVL* IN LIBRARY *LIB*	CMP30	31	4
5	*			CMP30	32	5
6	*	W	USE *SPY* TO WATCH P-REGISTER WITH N=100B.	CMP30	33	6
7	*	W=N	USE *SPY* WITH BIN WIDTH *N* (20,40,100).	CMP30	34	7
8	*			COMPASS	62	8
9	*	X	XTEXT FILE NAME *OPL*.	COMPASS	63	9
10	*	X=LFN	XTEXT FROM FILE *LFN*.	CMP30	35	10
11	*			CMP30	36	11
12	*			CMP30	37	12
13	*	IF THE *L* AND *O* PARAMETERS SPECIFY THE SAME FILE, *O=0*		CMP30	38	13
14	*	IS ASSUMED.		CMP30	39	14
15	*			CMP30	40	15
16	*	MULTIPLE *G* AND *S* PARAMETERS MAY BE USED TO SPECIFY A		CMP30	41	16
17	*	TOTAL OF UP TO SEVEN SYSTEM TEXTS. THEY ARE LOADED IN THE		CMP30	42	17
18	*	ORDER IN WHICH THEY ARE NAMED ON THE CONTROL CARD, LEFT TO		CMP30	43	18
19	*	RIGHT. IF A MACRO, MICRO, OR SYMBOL IS DEFINED MORE THAN		CMP30	44	19
20	*	ONCE, THE LAST DEFINITION HOLDS.		CMP30	45	20
21	*			CMP30	46	21
22	*	THE *X* PARAMETER APPLIES ONLY TO *XTEXT* PSEUDO INSTRUCTIONS		CMP30	47	22
23	*	IN WHICH THE LOCATION FIELD (FILE NAME) IS EMPTY.		CMP30	48	23
24	*			CMP30	49	24
25	*	AFTER THE SEPARATOR FOLLOWING *COMPASS*, BLANKS IN THE		CMP30	50	25
26	*	CONTROL CARD ARE IGNORED. A PARAMETER VALUE MAY BE ENCLOSED		CMP30	51	26
27	*	IN DOLLAR SIGNS. WITHIN A \$-DELIMITED STRING, ALL SPECIAL		CMP30	52	27
28	*	CHARACTERS ARE TREATED AS LETTERS, BLANKS ARE SIGNIFICANT,		CMP30	53	28
29	*	AND \$\$ REPRESENTS A SINGLE DOLLAR SIGN. THE CONTROL		CMP30	54	29
30	*	STATEMENT MAY BE CONTINUED ONTO AS MANY CARDS AS NECESSARY,		CMP30	55	30
31	*	WITH COLUMN 80 OF EACH CARD FOLLOWED BY COLUMN 1 OF THE NEXT		CMP30	56	31
32	*	CARD, UNTIL A RIGHT PARENTHESIS OR PERIOD IS ENCOUNTERED.		CMP30	57	32
33						33
34						34
35						35
36						36
37	***	NORMAL CONTROL CARD OPTIONS.		COMPASS	66	37
38	*			COMPASS	67	38
39	*			CMP20	3	39
40	*	A NOT SELECTED.		CMP20	4	40
41	*	B=LGO		COMPASS	68	41
42	*	D NOT SELECTED.		COMPASS	69	42
43	*	F=0		CMP15	5	43
44	*	G=0		CMP8	2	44
45	*	I=INPUT		COMPASS	72	45
46	*	L=OUTPUT		COMPASS	73	46
47	*	LO=0		CMP19	2	47
48	*	ML = JULIAN DATE (YYDDD).		CMP30	58	48
49	*	N NOT SELECTED.		COMPASS	74	49
50	*	O=OUTPUT		COMPASS	75	50
51	*	P NOT SELECTED.		COMPASS	76	51
52	*	PC = 30 BLANKS.		CMP30	59	52
53	*	S=SYSTEXT		COMPASS	77	53
54	*	W NOT SELECTED.		CMP30	60	54
55						55
56						56
57						57
58						58
59						59
60						60

*

X=OLDPL

CMP20

5



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***** INSTALLATION OPTIONS AND OTHER ASSEMBLY PARAMETERS.

CMP30 62

CP139CP 119

CP139CP 120

CP139CP 121

CP139CP 122

CP139CP 123

CP139CP 124

CMP30 63

CMP30 64

CMP30 65

CMP30 66

CMP30 67

CMP30 68

CMP30 69

CMP30 70

CMP30 71

CMP30 72

CMP30 73

CMP30 74

CMP30 75

CMP30 76

CMP30 77

CMP30 78

CMP30 79

CMP30 80

CMP30 91

CMP30 92

CMP30 93

CPS028 87

CMP30 95

CPS028 89

CMP30 97

CPSA134 44

CPS028 91

CPS028 92

CPS028 96

CPS028 97

CMP30 99

CMP30 100

CMP30 101

CMP30 102

CMP30 103

CMP30 104

CMP30 105

CMP30 106

CP139CP 125

CP139CP 126

CP139CP 127

F4810B 5

F4810B 6

F4810B 7

CPSA125 5

F4810B 9

F4810B 10

F4810B 11

CP139CP 128

CP139CP 129

** SUPPRESS CONTROL STATEMENT ARGUMENT CHECKING BY SYSTEM.

1 ARG= EQU 1

** MINIMUM I/O BUFFER LENGTH.

BUFL MICRO 1,, 1001B

** DEFAULT COMMENT COLUMN NUMBER.

36 COMCOL EQU 30

** CONCATENATION MARK (DISPLAY CODE).

65 CONCAT EQU 65B PRINT 1 RIGHT-ARROW OR PRINT 2 UNDERSCORE

** SELECTION OF ASSEMBLY-TIME I/O SYSTEM.

* CP#RM = 0 TO ISSUE *CIO* CALLS DIRECTLY.

* = 7 TO USE 7000 RECORD MANGLER.

IF -DEF,SCOPE2

0 CP#RM EQU 0 USE CIO ON 6000 AND CYBER 70/ MODELS 71-74

ELSE

CP#RM EQU 7 USE 7RM ON 7000 SCOPE 2

ENDIF

** DEBUGGING FACILITY CONTROL.

* DEBUG = 0 TO OMIT DEBUGGING FACILITY.

* = 1 TO INCLUDE DEBUGGING FACILITY.

0 DEBUG EQU 0

** FL INCREMENT BY WHICH COMPASS WILL INCREASE FL ON EACH MEMORY REQUEST.

FLINC CEQU 4000B NUMBER OF WORDS PER CENTRAL MEMORY REQUEST

** INSTALLATION PARAMETERS FOR PRINT FORMATS.

	IP.PD	IF CEQU	-DEF,IP.PD,1 6	PRINT DENSITY - 3, 4, 6, OR 8 LINES / INCH	CPSA214 CP139CP	6 130
		IF	-DEF,IP.PS,1		CPSA214	7
1	IP.PS	CEQU	IP.PD*10	PAGE SIZE - NUMBER OF LINES PER PAGE	CP139CP	131
2		IF	-DEF,IP.PW,1		CPSA214	8
3	IP.PW	CEQU	136	PAGE WIDTH - NUMBER OF CHARACTERS PER LINE	CP139CP	132
4					CMP30	121
5					CMP30	122
6					CMP30	123
7	**		MAXIMUM RECURSION DEPTH.		CMP30	124
8					CMP30	125
9	LIMRECUR	MICRO	1,, 400		CMP30	126
10					CMP30	127
11					CMP30	128
12					CMP30	129
13	**		RECORD MANAGER LISTING CONTROL.		CMP30	130
14	*		LISTRM = * * TO LIST RECORD MANAGER ROUTINES.		CMP30	131
15	*		= *-* TO SUPPRESS LISTING OF RM CODE.		CMP30	132
16					CMP30	133
17	LISTRM	MICRO	1,, -		CMP30	134
18					CPS028	98
19					CPS028	99
20					CPS028	100
21	**		MAXIMUM ECS/LCM FIELD LENGTH FOR COMPASS.		CPS028	101
22					CPS028	102
23	200000	MFLL	EQU 200000B	= 65536 DECIMAL	CPS028	103
24					CP139CP	133
25					CP139CP	134
26					CP139CP	135
27	**		MINIMUM FIELD LENGTH FOR COMPASS.		CP139CP	136
28					CP139CP	137
29	*MFL=	EQU	MIN.FL	DEFINED AT END OF PROGRAM.	CPSA241	5
30					CMP30	135
31					CMP30	136
32					CMP30	137
33	**		MICRO SUBSTITUTION MARK (DISPLAY CODE).		CMP30	138
34					CMP30	139
35	64	MICMARK	EQU 64B	PRINT 1 NOT-EQUAL OR PRINT 2 DOUBLE-QUOTE	CMP30	140
36					CMP30	153
37					CMP30	154
38					CMP30	155
39	**		FL AT WHICH COMPASS WILL DUMP TABLES TO FILES.		F4810B	13
40					F4810B	14
41	MIDFL	CEQU	60000B	FL TO DUMP TABLES TO FILES	F4810B	15
42					F4810B	16
43					F4810B	17
44					F4810B	18
45	**		MAXIMUM NUMBER OF ENTRIES IN PUSH-DOWN STACKS.		CMP30	156
46	*		APPLIES TO THE BASE, CODE, LIST, QUAL, AND USE STACKS.		CMP30	157
47					CMP30	158
48	62	MSTACK	EQU 50		CMP30	159
49					CMP30	160
50					CMP30	161
51					CMP30	162
52	**		MAXIMUM NUMBER OF CARDS PER STATEMENT - MUST NOT EXCEED 15.		CMP30	163
53					CMP30	164
54	12	NCARDS	EQU 10		CMP30	165
55						
56						
57						
58						
59						
60						

									CMP30	166
									CMP30	167
									CMP30	168
1		**	MAXIMUM NUMBER OF VALUE WORDS IN A LITERAL.						CMP30	169
2									CMP30	170
3	144	NLITS	EQU	100					CMP30	171
4									CPS028	104
5									CPS028	105
6									CPS028	106
7		**	NOMINAL FIELD LENGTH FOR *REDUCE* MODE UNDER SCOPE 2.						CPS028	107
8									CPS028	108
9	60000	NOM.FL	EQU	60000B					CPS028	109
10									CMP30	172
11									CMP30	173
12									CMP30	174
13		**	BASE NUMBER OF OPCODE TABLE ENTRIES - MUST BE A POWER OF 2.						CMP30	175
14									CMP30	176
15	200	NOPCT	EQU	128					CMP30	177
16									CMP30	178
17									CMP30	179
18									CMP30	180
19		**	BASE NUMBER OF SYMBOL TABLE ENTRIES - MUST BE A POWER OF 2.						CMP30	181
20									CMP30	182
21	400	NSYMT	EQU	256					CMP30	183
22									CMP30	201
23									CMP30	202
24									CMP30	203
25		**	OVERLAY CONTROL.						CMP30	204
26		*	OVERLAY = 0 FOR ONE (0,0) OVERLAY.						CMP30	205
27		*	= 1 FOR TWO OVERLAYS, (0,0) AND (1,0).						CMP30	206
28									CMP30	207
29	1	OVERLAY	SET	1					CMP30	208
30	1	OVERLAY	MIN	OVERLAY,1-DEBUG	FORCE OVERLAY = 0	IF DEBUG = 1			CMP30	209
31									CMP30	210
32									CMP30	211
33									CMP30	212
34		**	PROGRAM LIBRARY FILE NAME FOR RECORD MANAGER.						CMP30	219
35		*	USED IN *XTEXT* CARDS THAT OBTAIN RECORD MANAGER CODE						CMP30	220
36		*	MODULES FROM ITS PROGRAM LIBRARY FILE WHEN COMPASS						CMP30	221
37		*	IS ASSEMBLED WITH CP#RM = 1 AND "MODEL" < 75.						CMP30	222
38									CMP30	223
39		#PLRM#	MICRO	1,8,*	*				CMP30	224
40									CMP30	225
41									CMP30	226
42									CMP30	227
43		**	TIMING ANALYSIS OPTION.						CMP30	228
44		*	SPY = 0 TO OMIT TIMING ANALYSIS.						CMP30	229
45		*	= 1 TO CALL *SPY* FOR TIMING ANALYSIS.						CMP30	230
46									CMP30	231
47	0	SPY	EQU	0					CMP30	232
48									CPS010	3
49									CPS010	4
50									CPS010	5
51		**	INITIAL SPACE REQUIRED BY COMPASS TO LOAD TEXTS.						F4810B	19
52									F4810B	20
53		TXTFL	CEQU	20000B					F4810B	21
54									F4810B	22
55										
56										
57										
58										
59										
60										

					F4810B	23
	**	*XREF*	DEFAULT VALUE.		CPS010	6
	*	XRDV = -1	FOR PAGE/LINE (P) FORMAT.		CPS010	7
	*	= 0	FOR ADDRESS (A) FORMAT.		CPS010	8
	*	= +1	FOR BOTH (B) FORMAT.		CPS010	9
					CPS010	10
		-1	XRDV EQU -1		CPS010	11
					CMP30	241
					CMP30	242
					CMP30	243
	**		ASSEMBLER VERSION AND MODIFICATION LEVEL.		CMP30	244
	*		PLACED IN HEADER LINE OF EACH LISTING PAGE AND IN		CMP30	245
	*		WORDS 5-6 OF EACH PRFX TABLE IN BINARY OUTPUT.		CMP30	246
		VERSION MICRO	1,3,*3.7*		CP096A	27
		PSRLEVEL MICRO	1,3,*871*		PSRLEVEL	1
					PSRLEVEL	2
					CMP30	247
			IFC -EQ,*"MODLEVEL"*"JDATE"*,1		CPSA098	6
		PSRLEVEL MICRO	1,5,*"MODLEVEL"*		CPSA098	7
		PVERSION MICRO	1,8,*"VERSION"*"PSRLEVEL"*		CPSA098	8
		VERSION MICRO	1,9,*"VERSION"*"PSRLEVEL"*		CPSA098	9
					CMP30	249
					CMP30	250
					CMP30	251
	**		COMMENT AND TITLE CARDS.		CMP30	252
					CMP30	253
		COMMENT	CYBER 70/ MODEL "MODEL"		CMP30	254
		COMMENT	COMPREHENSIVE ASSEMBLER PROGRAM VERSION "VERSION".		CMP30	255
					CMP30	257
					CMP30	258
					CMP30	259
	**		DEFINITIONS USED BY COMPILER/COMPASS COMMON DECK.		CMP30	260
					CMP30	261
		CP.ABORT MICRO	1,, 0	DEFAULT IS NO ABORT ON ASSEMBLY ERRORS	CMP30	262
		CP.BLF MICRO	1,, 0	DEFAULT VALUE OF *BL* PARAMETER	CP139CP	139
		CP.F= MICRO	1,, 0	DEFAULT VALUE OF *F* PARAMETER	CMP30	263
		CP.LISTF MICRO	1,, 1	DEFAULT IS DO WRITE LONG LISTING	CMP30	264
		CP.PAGE MICRO	1,, 1S59	DEFAULT IS NO PAGE NUMBER PROPAGATION	CMP30	265
					CMP30	266
					CMP30	267
					CMP30	268
	****				COMPASS	113
	**		LOG2 - LOG TO THE BASE 2 MACRO.		COMPASS	115
	* SYM	LOG2	VAL		COMPASS	116
	*	ENTRY	(VAL) = ARGUMENT.		COMPASS	117
	*	EXIT	(SYM) = LOG(2) OF ARGUMENT.		COMPASS	118
					COMPASS	119
					COMPASS	120
		MACRO	LOG2,SYM,VAL		COMPASS	121
		IFLE	VAL,1,1		COMPASS	122
	SYM	SET	0		COMPASS	123
		IFGE	VAL,2,2		COMPASS	124
	SYM	LOG2	VAL/2		COMPASS	125

SYM SET
 ENDM SYM+1

COMPASS 126
COMPASS 127
COMPASS 128
COMPASS 129
COMPASS 130
COMPASS 131

TLUOPSHF LOG2 NOPCT
SHIFTQ LOG2 NSYMT LOGARITHM OF NOPCT
LOGARITHM OF NSYMT

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RM IFEQ CP#RM,0

CMP30 269

** FET - FILE ENVIRONMENT TABLE MACRO.
* FET FNAME,BUF,BUFL,STATUS,RANDOM
* ENTRY (FNAME) = FILE NAME.
* (BUF) = FIRST WORD ADDRESS OF BUFFER.
* (BUFL) = LENGTH OF BUFFER.
* (RANDOM) = RANDOM FILE INDICATION.
* (STATUS) = BUFFER STATUS.

COMPASS 133
CMP30 271
COMPASS 135
COMPASS 136
COMPASS 137
COMPASS 138
COMPASS 139

FET MACRO FNAME,BUF,BUFL,STATUS,RANDOM
CON 0L;A+STATUS
VFD 24/RANDOM,18/3,18/BUF
CON BUF
CON BUF
CON BUF+BUFL
BSSZ 3
ENDM

COMPASS 140
COMPASS 141
CMP30 272
COMPASS 143
COMPASS 144
COMPASS 145
COMPASS 146
COMPASS 147
COMPASS 148

** EQUIVALENCED I/O MACROS.

CMP30 273
CMP30 274
CMP30 275
CMP30 276
CMP30 277

CHECK OPSYN RECALL
REWINDM OPSYN REWIND
WEOR OPSYN WRITER

COMPASS 149
CMP30 278
CMP30 279
CMP30 280

RM ENDIF

COMPASS 148
CMP30 281
CMP30 282
CMP30 283

** JOBMSG - SEND MESSAGE TO JOB DAYFILE AND B-DISPLAY.
* JOBMSG M,L
* ENTRY (M) = FIRST WORD ADDRESS OF MESSAGE.
* (L) = NONBLANK FOR AUTORECALL.

CMP20 7
CMP20 8
CMP20 9
CMP20 10
CMP20 11

JOBMSG MACRO M,L
IFEQ CP#RM,7
MESSAGE (M),,L
ELSE
MESSAGE (M),LOCAL,L
ENDIF
ENDM

CMP20 12
CMP20 13
CPS028 114
CMP30 290
CPS028 115
CPS028 116
CMP30 291
CMP20 21

3 LOCAL EQU 3 LOCAL DAYFILE FLAG FOR KRONOS AND SCOPE 1

CPS028 117
CPS028 118
CPS028 119

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COMPASS	151
COMPASS	152
COMPASS	153
COMPASS	154
COMPASS	155
COMPASS	156
COMPASS	157
COMPASS	158
COMPASS	159
COMPASS	160
COMPASS	161

COMPASS	157
COMPASS	158
COMPASS	159
COMPASS	160
COMPASS	161

COMPASS	163
COMPASS	164
COMPASS	165
COMPASS	166
COMPASS	167
COMPASS	168

COMPASS	169
CP096A	31
CP096A	32
COMPASS	171
COMPASS	174
COMPASS	175

COMPASS	176
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COMPASS 177

CP096A	33
COMPASS	179

COMPASS	179
COMPASS	180

COMPASS 181

COMPASS 182

COMPASS	183
CPS028	120

CPS028	120
CPS028	121

CPS028 122

CPS028	123
CPS000	104

CPS028	124
COMPASS	185

CONF ASS 103

COMPASS 187

COMPASS 187

COMPASS 188

COMPASS 189

COMPASS 190
COMPASS 191

COMPASS 191
COMPASS 192

COMPASS	193
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COMPASS 194

COMPASS 195

COMPASS	197
COMPASS	198
COMPASS	199

COMPASS	202
COMPASS	203
COMPASS	204
COMPASS	205

CMP30	293
CMP30	294
CMP30	295
CMP30	296
CMP30	297
CMP30	298

CMP30	301
CMP30	302
CMP30	303
CMP30	304
CMP30	305
CMP30	306
CMP30	307
CMP30	308
CMP30	309
CMP30	310
CMP30	311

CMP30	313
CMP30	314
CMP30	315
CPS028	125
CPS028	126
CMP30	317
CMP30	318

CMP30	320
CMP30	321
CMP30	322
CPSA134	45
CMP30	326
CMP30	327
CMP30	328
CMP30	329
CPS153	5
CMP30	330

		IF	-DEF,SCOPE1,1		CPSA134	46
		IF	DEF,NOS		CPSA134	47
		PURGMAC	MESSAGE		CMP30	331
1	MESSAGE	MACRO	M,X,L		CMP30	332
2		R=	X1,M		CMP30	333
3		IFC	EQ, L ,2		CMP30	334
4		R=	X6,X		CMP30	335
5		SKIP	1		CMP30	336
6		R=	X6,1S16+X		CMP30	337
7		RJ	=XMSG=		CMP30	339
8		ENDM			CMP30	340
9					CMP30	341
10		PURGMAC	RETURN		CMP30	342
11	RETURN	MACRO	F,L		CMP30	343
12		R=	X2,F		CPSA096	5
13	RT	IFC	EQ,*L**		CPSA096	6
14		SX7	70B		CPSA096	7
15	RT	ELSE	1		CPSA096	8
16		SX7	-70B		CPSA096	9
17		RJ	=XCIO=		CPSA096	10
18		ENDM			CMP30	345
19					CMP30	346
20		ENDIF			CPSA134	48
21						
22						
23						
24						
25	**	REDEFINE	LCM INSTRUCTIONS FOR SYSTEMS OTHER THAN SCOPE 2.		CP096A	35
26					CP096A	36
27					CP096A	37
28	RM	IFNE	CP#RM,7		CPSA214	9
29					CP096A	39
30		PURGDEF	RXX		CP096A	40
31	RXX	OPDEF	I,K		CP096A	41
32		SA.I	X.K		CP096A	42
33		ERRMI	I-1	RX.I ILLEGAL	CP096A	43
34		ERRPL	I-6	RX.I ILLEGAL	CP096A	44
35		ENDM			CP096A	45
36					CP096A	46
37		PURGDEF	WXX		CP096A	47
38	WXX	OPDEF	I,K		CP096A	48
39		SA.I	X.K		CP096A	49
40		ERRMI	I-6	WX.I ILLEGAL	CP096A	50
41		ENDM			CP096A	51
42					CP096A	52
43	RM	ENDIF			CP096A	53
44					CMP30	348
45					CMP30	349
46						
47						
48						
49						
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1412THE

**	COMPCOM - COMPILER / ASSEMBLER COMMUNICATION AREA.	COMPCOM	3
*		COMPCOM	4
*		COMPCOM	5
*		COMPCOM	6
*	COMPCOM CONTAINS ALL INFORMATION PASSED BETWEEN	COMPCOM	7
*	COMPASS AND A COMPILER CALLING COMPASS AS A LEVEL (1,0)	COMPCOM	8
*	OVERLAY TO PROCESS COMPASS SOURCE SUBPROGRAMS OCCURRING	COMPCOM	9
*	BETWEEN COMPILER LANGUAGE SUBPROGRAMS, OR TO ASSEMBLE	COMPCOM	10
*	OBJECT PROGRAMS PRODUCED BY THE COMPILER IN THE FORM OF	COMPCOM	11
*	COMPASS SOURCE STATEMENTS. COMPCOM IS A COMMON DECK IN	COMPCOM	12
*	THE COMPASS PROGRAM LIBRARY FILE, AND IS ACCESSED BY	COMPCOM	13
*	COMPASS VIA AN UPDATE *CALL CARD AND BY COMPILERS VIA	COMPCOM	14
*	COMPASS XTEXT PSEUDO INSTRUCTIONS.	COMPCOM	15
*		COMPCOM	16
*		COMPCOM	17
*	R. H. GOODELL. 71/05/21.	COMPCOM	18
*	R. H. GOODELL. 75/10/23. 54-TABLE, BL, PD, PS, PW.	CP139CP	10
		COMPCOM	19
		COMPCOM	20
**	THE FOLLOWING MUST BE ESTABLISHED WHEN COMPCOM IS CALLED.	COMPCOM	21
*		COMPCOM	22
*	IN AN ABSOLUTE ASSEMBLY, THE LOCATION COUNTER MUST EQUAL	COMPCOM	23
*	114B IF 54-TABLES ARE USED, ELSE 104B. IN A RELOCATABLE	CP139CP	11
*	ASSEMBLY, THE LOCATION COUNTER MUST BE AT THE LOCATION	CP139CP	12
*	THAT WILL CORRESPOND TO 114B OR 104B AFTER RELOCATION BY	CP139CP	13
*	THE OVERLAY GENERATOR.	CP139CP	14
*		COMPCOM	27
*	THE FOLLOWING MACROS, MICROS, AND SYMBOLS MUST BE DEFINED.	COMPCOM	28
*		COMPCOM	29
*	BUFL MICRO STANDARD CIO BUFFER SIZE.	COMPCOM	30
*		COMPCOM	31
*	CP.ABORT MICRO DEFAULT CONTENT OF BIT 29 OF WORD	CPS150	3
*	CP.ABORT MAY BE *0* OR */*.	CPS150	4
*		CP139CP	15
*	CP.BLF MICRO DEFAULT CONTENT OF WORD CP.BLF.	CP139CP	16
*	MAY BE *0* OR *1S59*.	CP139CP	17
*		COMPCOM	34
*	CP.F= MICRO DEFAULT CONTENT OF WORD CP.BATCH.	COMPCOM	35
*	MAY BE *0*, *-1*, *-2*, ETC.	COMPCOM	36
*		COMPCOM	37
*	CP.LISTF MICRO DEFAULT CONTENT OF WORD CP.LISTF.	COMPCOM	38
*	MAY BE *0* OR *1*.	COMPCOM	39
*		COMPCOM	40
*	CP.PAGE MICRO DEFAULT CONTENT OF WORD CP.PAGE.	COMPCOM	41
*	MAY BE *0* OR *1S59*.	COMPCOM	42
*		COMPCOM	46
*	CP#RM SYMBOL 0 = ASSEMBLE DIRECT *CIO* CALLS FOR I/O.	COMPCOM	47
*	6 = ASSEMBLE 6RM USAGE FOR I/O.	CPS028	2
*	7 = ASSEMBLE 7RM USAGE FOR I/O.	CPS028	3
*		COMPCOM	49
*	FET MACRO USED IF CP#RM = 0 TO DEFINE FET"S.	COMPCOM	50
*	CALL - LOCSYM FET LFN,BUF,SIZE	COMPCOM	51
*		COMPCOM	52
*	IBUF SYMBOL FWA OF SOURCE INPUT FILE CIO BUFFER.	COMPCOM	53
*	NEED NOT BE PREVIOUSLY DEFINED.	COMPCOM	54
*		COMPCOM	55
*	LISTRM MICRO CONTROLS LISTING OF I/O SUBROUTINES.	COMPCOM	56

*				* * = LIST, *-* = DO NOT LIST.	COMPCOM	57
*					COMPCOM	58
*	MIN.FL	SYMBOL		MINIMUM SCM FIELD LENGTH REQUIRED.	COMPCOM	59
*				INITIAL CONTENT OF WORD CP.MAXFL.	COMPCOM	60
*				NEED NOT BE PREVIOUSLY DEFINED.	COMPCOM	61
*					COMPCOM	62
*	MODEL	MICRO		CYBER 70/ MODEL ON WHICH PROCESSOR IS USED.	COMPCOM	63
*				MAY BE *72*, *73*, *74*, *76*, OR *17X*.	CP139CP	18
*					COMPCOM	65
*	OBUF	SYMBOL		FWA OF LISTING OUTPUT FILE CIO BUFFER.	COMPCOM	66
*				NEED NOT BE PREVIOUSLY DEFINED.	COMPCOM	67
*					COMPCOM	68
*	OBUFL	SYMBOL		LISTING OUTPUT FILE CIO BUFFER LENGTH.	COMPCOM	69
*				NEED NOT BE PREVIOUSLY DEFINED.	COMPCOM	70
*					COMPCOM	71
*	STOP	SYMBOL		ADDRESS FOR RETURN FROM COMPASS TO CALLING	COMPCOM	72
*				COMPILER. NEED NOT BE PREVIOUSLY DEFINED.	COMPCOM	73
					COMPCOM	74
					COMPCOM	75
					COMPCOM	76
	*****				COMPCOM	77
					COMPCOM	78
					COMPCOM	79
					COMPCOM	80
**	REDEFINE "BUFL" = *0*			IF APPROPRIATE.	COMPCOM	81
	IFEQ	CP#RM,7,1			COMPCOM	82
	BUFL	MICRO 1,, 0			CPS028	4
					COMPCOM	85
					COMPCOM	86
					COMPCOM	87
					COMPCOM	88
**	SOURCE INPUT FILE BUFFER LENGTH.				COMPCOM	89
					COMPCOM	90
1001	IBUFL	EQU	"BUFL"		COMPCOM	91
					CPS028	5
					CPS028	6
					CPS028	7
**	LIBRARY CONTAINING COMPASS OVERLAYS.				CPS028	8
*	USED WHEN COMPASS (0,0) IS LOADED FROM LIBRARY *NUCLEUS*.				CPS064	1
					CPS028	9
CP.OVLIB	MICRO			SEARCH GLOBAL LIBRARY SET	CPS028	10
					COMPCOM	92
					COMPCOM	93
					COMPCOM	94
**	NAME OF COMPASS (1,0) OVERLAY.				COMPCOM	95
					COMPCOM	96
CP.NAME	MICRO 1,, COMP3\$				CPS064	2
					COMPCOM	98
					COMPCOM	99
					COMPCOM	100
**	ORIGIN OF COMPASS (1,0) OVERLAY.				COMPCOM	101
					COMPCOM	102
2777	CP.ORG	IFEQ	CP#RM,0,1		CPS028	11
		EQU	2777B		COMPCOM	104
		IFEQ	CP#RM,6,1		CPS028	12
	CP.ORG	EQU	12777B		CPS028	13
		IFEQ	CP#RM,7,1		CPS028	14

CP.ORG EQU 777B

COMPCOM 109
COMPCOM 111
COMPCOM 112
COMPCOM 113
CP139CP 19
CP139CP 20
COMPCOM 115
CP139CP 21
CP139CP 22
CP139CP 23
CP139CP 24
CP139CP 25
CP139CP 26
CP139CP 27
CP139CP 28
CP139CP 29
CP139CP 30
CP139CP 31
CP139CP 32
CP139CP 33
CP139CP 34
CP139CP 35
CP139CP 36
CP139CP 37
CP139CP 38
COMPCOM 117
COMPCOM 118
COMPCOM 119
COMPCOM 120
COMPCOM 121
COMPCOM 122
COMPCOM 123
COMPCOM 124
COMPCOM 125
CPSA216 5
CPSA216 6
COMPCOM 128
COMPCOM 129
COMPCOM 130
CP139CP 40
CP139CP 41
COMPCOM 142
COMPCOM 143
COMPCOM 144
COMPCOM 145
COMPCOM 146
COMPCOM 147
COMPCOM 148
COMPCOM 149
COMPCOM 150
COMPCOM 151
COMPCOM 152
COMPCOM 153
COMPCOM 154
COMPCOM 155
COMPCOM 156
COMPCOM 157

** THE ABSOLUTE ADDRESS CP.BASE MUST EQUAL 114B IF
* 54-TABLES ARE USED, ELSE 104B.

114 CP.BASE BSS 0 BASE ADDRESS OF COMMUNICATION REGION

** EXIT FROM COMPASS TO THE CALLING COMPILER.

114 0400000310 CP.STOP EQ =XSTOP

** ABORT FLAG. SPECIFIES WHETHER PROCESSOR SHOULD ABORT JOB
* AFTER COMPILATION/ASSEMBLY ERRORS, OR WAIT UNTIL THE USER
* ATTEMPTS TO EXECUTE THE BAD PROGRAM.
* 0 = NO ABORT.
* 1 = ABORT TO EXIT(S) CARD IF SOURCE PROGRAM ERRORS.

114 CP.ABORT EQU *
0000 - VFD 1/"CP.ABORT",11/0

** COMPILER CALL FLAG. INDICATES WHICH COMPILER CALLED COMPASS.
* THE VALUE OF THE COMPASS SPECIAL SYMBOL *F IS THE MAGNITUDE
* OF (CP.BATCH). ASSIGNED VALUES ARE --
* 0 COMPASS.
* -1 RUN 2.3.
* -2 FTN4 AND FTN(TS).
* -3 FTN5.

* VALUES -4 TO -99 ARE RESERVED TO CDC.

114 CP.BATCH EQU *
00000 - VFD *P/"CP.F="

** BATCH ERROR COUNT. FORMAT --
* VFD 1/D, 59/COUNT
* D = 1 TO FORCE BINARY OUTPUT REGARDLESS OF ASSEMBLY ERRORS.

115 00000000000000000000 CP.ERRCT CON 0

** LONG LISTING FLAG.
* 0 = NO LONG LISTING (ERROR LINES ONLY).
* 1 = NORMAL LONG LISTING.

116 00000000000000000001 CP.LISTF CON "CP.LISTF"

COMPCOM	158
COMPCOM	159
COMPCOM	160
COMPCOM	161
CPS236	6
CPS236	7
CPS236	8
COMPCOM	164
COMPCOM	165
CPSA142	5
CPSA142	6
CPSA142	7
CPSA142	8
CPS236	9
CPS236	10
CPS236	11
CPSA142	11
CPSA142	12
CP139CP	42
CP139CP	43
CP139CP	44
CP139CP	45
CP139CP	46
CP139CP	47
CP139CP	48
CP139CP	49
CP139CP	50
CP139CP	51
CP139CP	52
CP139CP	53
CP139CP	54
CP139CP	55
CP139CP	56
CP139CP	57
CP139CP	58
CP139CP	59
CP139CP	60
CP139CP	61
CP139CP	62
CP139CP	63
CP139CP	64
CP139CP	65
CP139CP	66
CP139CP	67
CP139CP	68
CP139CP	69
CP139CP	70
CP139CP	71
CP139CP	72
CP139CP	73
CP139CP	74
CP139CP	75
CP139CP	76
CP139CP	77
CP139CP	78
COMPCOM	166
COMPCOM	167

** LISTING PAGE NUMBER PROPAGATION CONTROL.
* IF BIT 59 IS SET - DO NOT PROPAGATE AND DO NOT CHANGE.
* IF BIT 59 IS NOT SET - CURRENT PAGE NUMBER IS IN BITS 0-29.
* IF BIT 58 IS SET - LISTING FILE HAS BEEN WRITTEN TO (OPEN).

117 40000000000000000000 CP.PAGE CON "CP.PAGE"

** ERROR LISTING PAGE NUMBER PROPAGATION CONTROL
* IF BIT 59 IS SET - DO NOT PROPAGATE AND DO NOT CHANGE.
* IF BIT 59 IS NOT SET - CURRENT PAGE NUMBER IS IN BITS 0-29.
* IF BIT 58 IS SET - ERROR FILE HAS BEEN WRITTEN TO (OPEN).

120 40000000000000000000 CP.EPAG CON "CP.PAGE"

** BIG (BURSTABLE) LISTING FLAG.
* 0 = NO UNNECESSARY PAGE EJECTS.
* 1S59 = PAGE EJECTS BETWEEN PORTIONS OF LISTING.

121 00000000000000000000 CP.BLF CON "CP.BLF"

** PRINT DENSITY (LINES PER INCH).
* PD = 3 (CP.PD) = 1LS+1S17
* PD = 4 (CP.PD) = 1LT+1S17
* PD = 6 (CP.PD) = 1LS
* PD = 8 (CP.PD) = 1LT
* OMITTED (CP.PD) = 0

122 00000000000000000000 CP.PD CON 0

** PAGE SIZE (LINES PER PAGE).

123 00000000000000000000 CP.PS CON 0

** PAGE WIDTH (CHARACTERS PER LINE).
* IF *PW* SPECIFIED, (CP.PW) = 30/REMAINDER, 30/QUOTIENT
* OF *PW* VALUE DIVIDED BY 10.
* OTHERWISE, ASSUME PW = 72 IF PRINT FILE IS A TERMINAL
* OR PW = IP.PW IF IT IS NOT.
* HOWEVER, (CP.PW) = 0 WHEN PW .GE. 126 IS SPECIFIED OR
* ASSUMED.

124 00000000000000000000 CP.PW CON 0

1412THE

** CYBER 70/ MODEL NUMBER ON WHICH PROCESSOR IS EXECUTING.

COMPCOM 168
COMPCOM 169
COMPCOM 170

125 43364000000000000000 CP.CPU CON 0L"MODEL"

S3143CP 5
COMPCOM 172
COMPCOM 173

** STORAGE USED FOR CURRENT BATCH OF COMPILATIONS/ASSEMBLIES.

COMPCOM 174
COMPCOM 175
COMPCOM 176

126 000000000000000035346 CP.MAXFL CON =XMIN.FL

COMPCOM 177
COMPCOM 178
COMPCOM 179

** FILE NAME FOR *XTEXT* CARDS WITH BLANK LOCATION FIELD.

COMPCOM 180
COMPCOM 181
COMPCOM 182

127 17140420140000000000 CP.XNAME CON 0LOLDPL

COMPCOM 183
COMPCOM 184
COMPCOM 185

** SOURCE INPUT FILE FORMAT.
* 0 = NORMAL INPUT.

COMPCOM 186
COMPCOM 187
COMPCOM 188

* 1 = MODIFY COMPRESSED COMPILE FILE (63 CHAR SET).
* 2 = UPDATE COMPRESSED COMPILE FILE (64 CHAR SET).
* 3 = MODIFY COMPRESSED COMPILE FILE (64 CHAR SET).
* 1S59 = END OF INPUT SECTION.

CP114 5
CP114 6
CP114 7

130 00000000000000000000 CP.IFORM CON 0

CP139CP 79
COMPCOM 191
COMPCOM 192

** THIS SPACE FOR RENT (RESERVED TO USER).

COMPCOM 193
COMPCOM 194
COMPCOM 195

131 00000000000000000000 CP.USER CON 0

CP139CP 80
COMPCOM 197

132 00000000000000000000 CON 0

CP139CP 81
CP139CP 82
COMPCOM 199

** THIS SPACE FOR RENT (RESERVED TO CDC).

COMPCOM 200
COMPCOM 201
CP139CP 83

133 00000000000000000000 CP.CDC CON 0

COMPCOM 203
CP139CP 84

134 00000000000000000000 CON 0

CP139CP 85
COMPCOM 205

** FOUR WORDS PRECEDING SOURCE INPUT CARD AREA.
* MAY BE USED AS BEGINNING OF PRINT LINE AREA.

COMPCOM 206
COMPCOM 207
COMPCOM 208

135 55555555555555555555 CP.LINE DIS 4,

COMPCOM 209
COMPCOM 210
COMPCOM 211

** SOURCE INPUT CARD AREA. HOLDS NEXT CARD TO BE PROCESSED.
* (CP.CARD) = 0 AT END OF SECTION ON SOURCE INPUT FILE.

COMPCOM 212
COMPCOM 213
COMPCOM 214

141 55031716242217145504 CP.CARD DATA H* CONTROL DATA PROPRIETARY PRODUCT.*
145 55031720312211071024 DATA H* COPYRIGHT CONTROL DATA CORP. 1971, 1972, 1973, 1974,
, 1975, 1976,, 1977, 1978, 1979, 1980, 1981, 1982.*

COMPCOM 215
COMPCOM 216
COMPCOM 217
CPSCPRT 4
CPSCPRT 5
CPS*82 4

160 55555555555555555555

DIS 16-**CP.CARD,

CPSCPRT 7

COMPCOM 221

COMPCOM 222

COMPCOM 223

COMPCOM 224

COMPCOM 225

COMPCOM 226

COMPCOM 227

COMPCOM 228

COMPCOM 229

COMPCOM 230

COMPCOM 231

COMPCOM 232

COMPCOM 233

COMPCOM 234

COMPCOM 235

COMPCOM 236

COMPCOM 237

COMPCOM 238

COMPCOM 239

COMPCOM 240

COMPCOM 241

COMPCOM 242

COMPCOM 243

COMPCOM 244

COMPCOM 245

COMPCOM 246

COMPCOM 247

COMPCOM 248

COMPCOM 249

COMPCOM 250

COMPCOM 251

COMPCOM 252

COMPCOM 253

COMPCOM 254

COMPCOM 255

COMPCOM 256

COMPCOM 257

COMPCOM 258

COMPCOM 259

COMPCOM 260

COMPCOM 261

COMPCOM 262

COMPCOM 263

COMPCOM 264

COMPCOM 265

COMPCOM 266

COMPCOM 267

COMPCOM 268

COMPCOM 269

COMPCOM 270

COMPCOM 271

COMPCOM 272

COMPCOM 273

COMPCOM 274

COMPCOM 275

COMPCOM 276

** SYSTEM TEXT OVERLAY NAMES.
* (CP.STEXT) = NUMBER OF SYSTEM TEXTS (UP TO 7).
* SUBSEQUENT WORDS HAVE THE FOLLOWING FORMAT --
* VFD 42/NAME, 17/0, 1/G
* G = 0 FOR SYSTEM TEXT FROM A LIBRARY.
* G = 1 FOR SYSTEM TEXT FROM A NON-LIBRARY FILE.
* NAME MAY BE NULL IF G = 1.

161 00000000000000000000 CP.STEXT CON 0
162 23312324053024000000 CON 0LSYSTEXT DEFAULT SYSTEM TEXT
163 6 BSSZ 6

** SYSTEM TEXT LIBRARY/FILE NAMES.
* (CP.LIB) = 0 IF *S=0* SPECIFIED ON CONTROL CARD.
* = 1 OTHERWISE.
* SUBSEQUENT WORDS CONTAIN LIBRARY NAME OR NULL IF G = 0 IN
* CORRESPONDING WORD OF CP.STEXT, OR FILE NAME IF G = 1.

171 000000000000000000001 CP.LIB CON 1
172 7 BSSZ 7

** SCM FIELD LENGTHS, ACTUAL AND NOMINAL.
* (CP.AFLS) = CURRENT ACTUAL FIELD LENGTH.
* (CP.NFLS) = AMOUNT OF SPACE AVAILABLE TO COMPASS.
* IF THEY ARE NOT EQUAL, COMPASS DOES NOT DESTROY THE AREA
* ABOVE NOMINAL FIELD LENGTH. BEFORE RETURNING TO CALLING
* COMPILER, COMPASS RESTORES THESE WORDS, AND THE ACTUAL
* FIELD LENGTH, TO THE VALUES THEY HAD UPON ENTRY.

201 00000000000000000000 CP.AFLS CON 0
202 00000000000000000000 CP.NFLS CON 0

** LCM FIELD LENGTHS, ACTUAL AND NOMINAL.
* USAGE IS SIMILAR TO THE ABOVE TWO WORDS.

203 00000000000000000000 CP.AFLL CON 0
204 00000000000000000000 CP.NFLL CON 0

** VALUE OF COMPASS BUILT-IN MICRO *MODLEVEL*.
* UP TO 9 CHARACTERS, LEFT JUSTIFIED WITH 00 FILL.
* IF (CP.MODL) = 0, COMPASS USES "JDATE".

205 00000000000000000000 CP.MODL CON 0

** VALUE OF COMPASS BUILT-IN MICRO *PCOMMENT*.
* UP TO 30 CHARACTERS WITH BLANK FILL.

COMPCOM 277
COMPCOM 278
COMPCOM 279

206 55555555555555555555 CP.PCOM DIS 3,

COMPCOM 280
COMPCOM 281
COMPCOM 288

COMPCOM 289
COMPCOM 290
COMPCOM 291

RM IFNE CP#RM,0
FET SPACE 4,8

COMPCOM 292
COMPCOM 293
COMPCOM 294

** FET - FILE ENVIRONMENT TABLE DEFINITION.

COMPCOM 295

*
* LOCSYM FET LFN,FIRST,LEN

COMPCOM 296
COMPCOM 297

* (LFN) = FILENAME.
* (FIRST) = FWA OF CIRCULAR BUFFER.
* (LEN) = LENGTH OF CIRCULAR BUFFER.

COMPCOM 298
COMPCOM 299
COMPCOM 300

FET MACRO LFN,FIRST,LEN

COMPCOM 301
COMPCOM 302
COMPCOM 303

CON 0L_LFN+1
CON FIRST+3S18
CON FIRST
CON FIRST
CON FIRST+LEN
BSSZ 3

COMPCOM 304
CP139CP 86
COMPCOM 306
COMPCOM 307
COMPCOM 308
CP139CP 87

ENDM

COMPCOM 310

RM ENDIF

COMPCOM 311
COMPCOM 312
COMPCOM 313

** FET/FIT FOR SOURCE INPUT FILE.

COMPCOM 315

211 11162025240000000000 CP.IFET FET INPUT,IBUF,IBUFL
221 BSSZ CP.IFET+8-*

COMPCOM 316
COMPCOM 317
COMPCOM 318
CP139CP 88

RM IFNE CP#RM,0
IFEQ CP#RM,6,1
CP.IFIT FILE LFN=INPUT,FO=SQ,BT=C,RT=Z,MRL=100,CM=YES,LT=UL,WSA=CP.C
,ARD,FET=CP.IFET,FWB=IBUF,BFS=IBUFL,ERL=1
IFEQ CP#RM,7,1
CP.IFIT FILE LFN=INPUT,FO=SQ,BT=,RT=W,MRL=5120,WSA=CP.CARD,OF=N,CF=N
,,PD=INPUT
BSSZ CP.IFIT+16-*

COMPCOM 320
COMPCOM 321
CPS028 15
COMPCOM 323
CPS028 16
CPS028 17
COMPCOM 326
COMPCOM 327
CP139CP 89

RM ENDIF

COMPCOM 329

** FET/FIT FOR LISTING OUTPUT FILE.

COMPCOM 331
COMPCOM 332
COMPCOM 333

221	17252420252400000000	CP.OFET	FET	OUTPUT, OBUF, OBUFL	COMPCOM	334
231			BSSZ	CP.OFET+8-*	CP139CP	90
					COMPCOM	336
		RM	IFNE	CP#RM, 0	COMPCOM	337
			IFEQ	CP#RM, 6, 1	CPS028	18
		CP.OFIT	FILE	LFN=OUTPUT, FO=SQ, BT=C, RT=Z, MRL=137, CM=YES, LT=UL, FET=CP.	COMPCOM	339
				, OFET, FWB=OBUF, BFS=OBUFL, ERL=1	CPS028	19
			IFEQ	CP#RM, 7, 1	CPS028	20
		CP.OFIT	FILE	LFN=OUTPUT, FO=SQ, BT=, RT=W, MRL=137, OF=N, CF=N, PD=OUTPUT	COMPCOM	342
			BSSZ	CP.OFIT+16-*	CP139CP	91
		RM	ENDIF		COMPCOM	344
		**		FET/FIT FOR ERROR LISTING FILE	CPSA142	14
					CPSA142	15
					CPSA142	16
231	17252420252400000005	CP.EFET	FET	OUTPUT, , EBUFL, 5	CPSA142	17
241			BSSZ	CP.EFET+8-*	CPSA142	18
					CPSA142	19
		RM	IFNE	CP#RM, 0	CPSA142	20
			IFEQ	CP#RM, 6, 1	CPSA142	21
		CP.EFIT	FILE	LFN=OUTPUT, FO=SQ, BT=C, RT=Z, MRL=137, CM=YES, LT=UL, FET=ERL	CPSA142	22
				, , BFS=EBUFL, ERL=1	CPSA142	23
			IFEQ	CP#RM, 7, 1	CPSA142	24
		CP.EFIT	FILE	LFN=OUTPUT, FO=SQ, BT=, RT=W, MRL=137, OF=N, CF=N, PD=OUTPUT	CPSA142	25
			BSSZ	CP.EFIT+16-*	CPSA142	26
		RM	ENDIF		CPSA142	27
		**		FET/FIT FOR BINARY OUTPUT FILE.	COMPCOM	346
					COMPCOM	347
					COMPCOM	348
241	14071700000000000000	CP.BFET	FET	LGO, OBUF, OBUFL	COMPCOM	349
251			BSSZ	CP.BFET+8-*	CP139CP	92
					COMPCOM	351
		RM	IFNE	CP#RM, 0	COMPCOM	352
			IFEQ	CP#RM, 6, 1	CPS028	21
		CP.BFIT	FILE	LFN=LGO, FO=SQ, BT=C, RT=S, CM=NO, LT=UL, FET=CP.BFET, FWB=OBU	COMPCOM	354
				, F, BFS=OBUFL, ERL=1	CPS028	22
			IFEQ	CP#RM, 7, 1	CPS028	23
		CP.BFIT	FILE	LFN=LGO, FO=SQ, BT=, RT=W, CM=NO, OF=N, CF=N, PD=OUTPUT	COMPCOM	357
			BSSZ	CP.BFIT+16-*	CP139CP	93
		RM	ENDIF		COMPCOM	359
		**		JUMP TABLE FOR LINKING TO RECORD MANAGER ROUTINES.	COMPCOM	361
					COMPCOM	362
					COMPCOM	363
		RM	IFEQ	CP#RM, 6	CPS028	24
		CHEK.RM	JP	/6RM/CHEK.RM	COMPCOM	366
					CPS028	25

CLS.F.RM JP /6RM/CLS.F.RM
END.F.SQ JP /6RM/END.F.SQ
GET.RM JP /6RM/GET.RM
OPEN.RM JP /6RM/OPEN.RM
PUT.RM JP /6RM/PUT.RM
REW.RM JP /6RM/REW.RM
SKBL.RM JP /6RM/SKBL.RM
WEOR.SQ JP /6RM/WEOR.SQ

CPS028 26
CPS028 27
CPS028 28
CPS028 29
CPS028 30
CPS028 31
CPS028 32
CPS028 33
COMPCOM 377
COMPCOM 378

RM ENDIF

** END OF COMMUNICATION AREA.

COMPCOM 380
COMPCOM 381
COMPCOM 382
CPS028 34
CP139CP 94
COMPCOM 384

251

135 CP.LCOM EQU *-CP.BASE LENGTH OF COMMUNICATION REGION
USE * LEAVE COMMON BLOCK IF ANY

** SYSTEM COMMUNICATION ROUTINES.

COMPCOM 386
COMPCOM 387
COMPCOM 388
COMPCOM 389
COMPCOM 390
CPS028 35

LIST -F

RM IFNE CP#RM,7

1412THE

251

COMCSYS CTEXT PROCESS SYSTEM REQUEST.

COMPCOM 393

COMPCOM 394

COMPCOM 395

COMPCOM 396

COMPCOM 397

COMPCOM 398

COMPCOM 399

COMPCOM 400

COMPCOM 401

COMPCOM 402

COMPCOM 403

COMPCOM 404

COMPCOM 405

COMPCOM 406

*** COMCSYS CONTAINS ROUTINES FOR PROCESSING CERTAIN
* SYSTEM REQUESTS.
** G. R. MANSFIELD. 70/09/12.
* R. H. GOODELL. 71/04/01.
*IF -DEF,QUAL\$,1
QUAL COMCSYS
BASE D

D_D

*** SYS - PROCESS SYSTEM REQUEST.

* ENTRY (X6) = SYSTEM REQUEST.
** EXIT REQUEST PROCESSED.
** USES A1, A6, X1.
** CALLS NONE.
*

251 54110 SYSA SA1 A1 WAIT (RA.MTR) CLEAR IF AUTO RECALL

20123

LX1 59-40
MI X1,SYS1

0331000252

252 0400000256

SYS1

EQ SYS2 FIRST ENTRY

253 0400400253

SYS=

EQ **1S17 ENTRY/EXIT

254 5110000001

+

SA1 RA.MTR WAIT (RA.MTR) CLEAR
NZ X1,*

0311000254

255 54610

SA6 A1 ENTER REQUEST
EQ SYS1

0400000252

* INITIAL ENTRY TO SET TYPE OF CALL.

256 5110000066

SYS2

SA1 RA.CEJ TEST FOR CENTRAL EXCHANGE JUMP SUPPORT
MI X1,SYS3

0331000260

257 5110000251

SA1 SYSA NO, USE WAIT LOOP
EQ SYS4

0400000261

260 7110000130

SYS3

SX1 0130B YES, USE XJ INSTRUCTION
LX1 48

20160

261 13616

SYS4

BX6 X1-X6 SWAP REGISTERS

13116

13616

BX1 X1-X6
BX6 X1-X6

262 5160000252

SA6 SYS1 SET MONITOR CALL

10611

BX6 X1 RESTORE (X6)

263 5110000001

SA1 RA.MTR RESET (A1)

0100000251

RJ SYSA CLEAR STACK

***	RCL - PLACE PROGRAM ON RECALL.	COMPCOM	448
*		COMPCOM	449
*	ENTRY NONE.	COMPCOM	450
*		COMPCOM	451
*	EXIT REQUEST PROCESSED.	COMPCOM	452
*		COMPCOM	453
*	USES A1, X1, X6.	COMPCOM	454
*		COMPCOM	455
*	CALLS SYS=.	COMPCOM	456
		COMPCOM	457
		COMPCOM	458
264 20652	RCL1 LX6 42 PROCESS REQUEST	COMPCOM	459
0100000253	RJ =XSYS=	COMPCOM	460
265 5110000001	+ SA1 RA.MTR WAIT (RA.MTR) CLEAR	COMPCOM	461
0311000265	NZ X1,*	COMPCOM	462
		COMPCOM	463
266 0400400266	RCL= EQ **1S17 ENTRY/EXIT	COMPCOM	464
		COMPCOM	465
267 5110000001	SA1 RA.MTR	COMPCOM	466
0311000266	NZ X1,RCL= RETURN IF (RA.MTR) NOT CLEAR	COMPCOM	467
270 7160220314	SX6 3RRCL FORM RECALL REQUEST	COMPCOM	468
0400000264	EQ RCL1	COMPCOM	469
***	WNB - WAIT NOT BUSY.	COMPCOM	471
*		COMPCOM	472
*	WAIT FOR STATUS WORD BIT 0 TO BE SET.	COMPCOM	473
*	IF WORD IS INITIALLY 0, RETURN.	COMPCOM	474
*		COMPCOM	475
*	ENTRY (X2) = ADDRESS OF STATUS WORD.	COMPCOM	476
*		COMPCOM	477
*	EXIT RETURN WHEN BIT 0 OF STATUS WORD IS SET.	COMPCOM	478
*		COMPCOM	479
*	USES A1, X1, X6.	COMPCOM	480
*		COMPCOM	481
*	CALLS SYS=.	COMPCOM	482
		COMPCOM	483
		COMPCOM	484
271 20150	WNB2 LX1 40 SET AUTO RECALL FLAG	COMPCOM	485
36661	IX6 X6+X1	COMPCOM	486
0100000253	RJ =XSYS= PROCESS REQUEST	COMPCOM	487
		COMPCOM	488
272 0400400272	WNB= EQ **1S17 ENTRY/EXIT	COMPCOM	489
		COMPCOM	490
273 7160220314	SX6 3RRCL FORM RECALL REQUEST	COMPCOM	491
20652	LX6 42	COMPCOM	492
36662	IX6 X6+X2	COMPCOM	493
274 53160	WNB1 SA1 X6 CHECK STATUS WORD	COMPCOM	494
20173	LX1 59	COMPCOM	495
0331000272	MI X1,WNB= RETURN IF COMPLETE BIT SET	COMPCOM	496
275 0301000272	ZR X1,WNB= RETURN IF BLANK STATUS	COMPCOM	497
5110000001	SA1 RA.MTR WAIT (RA.MTR) CLEAR	COMPCOM	498
276 0311000274	NZ X1,WNB1	COMPCOM	499
7110000001	SX1 1 CONTINUE RECALL	COMPCOM	500
277 0400000271	EQ WNB2	COMPCOM	501

*** MSG - SEND MESSAGE.

*

* ENTRY (X1) = ADDRESS OF MESSAGE.

* (X6) = MESSAGE OPTION(S).

* BIT 16 = AUTO RECALL.

* BITS 11 - 0 = MESSAGE OPTION CODE.

*

* EXIT RETURN WHEN OPERATION COMPLETE.

*

* USES A1, A6, X1, X6.

*

* CALLS SYS=.

*

COMPCOM 503

COMPCOM 504

COMPCOM 505

COMPCOM 506

F7820CP 44

F7820CP 45

COMPCOM 509

COMPCOM 510

COMPCOM 511

COMPCOM 512

COMPCOM 513

COMPCOM 514

COMPCOM 515

COMPCOM 516

COMPCOM 517

COMPCOM 518

COMPCOM 519

COMPCOM 520

COMPCOM 521

COMPCOM 522

COMPCOM 523

F7820CP 46

COMPCOM 525

COMPCOM 526

COMPCOM 527

COMPCOM 528

COMPCOM 529

COMPCOM 530

COMPCOM 531

COMPCOM 532

COMPCOM 533

COMPCOM 534

COMPCOM 535

COMPCOM 536

COMPCOM 537

COMPCOM 538

300 7160324616 MSG1 SX6 3RMSG*2 FORM MESSAGE REQUEST

12661

20651

BX6

X6+X1

LX6

40-59

301 0100000253

RJ

=XSYS=

PROCESS REQUEST

302 0400400302

MSG=

EQ

*+1S17

ENTRY/EXIT

303 20630

LX6

24

MERGE OPTION(S) AND ADDRESS

12161

BX1

X6+X1

73610

SX6

X1

20123

LX1

59-40

304 0321000300

PL

X1,MSG1

IF NO AUTO RECALL

20151

LX1

40-59

13116

BX1

X1-X6

REMOVE MESSAGE ADDRESS

305 20636

LX6

30

5160000307

SA6

MSGA

STORE STATUS WORD

74660

SX6

A6

306 36116

IX1

X1+X6

SET INDIRECT ADDRESS

20123

LX1

59-40

0400000300

EQ

MSG1

307 00000000000000000000 MSGA VFD 30/**,30/0 STATUS WORD FOR MESSAGE WITH AUTO RECALL

D_D

QUAL\$

BASE

*

COMPCOM 540

IF

-DEF,QUAL\$

COMPCOM 541

QUAL

*

COMPCOM 542

253

SYS=

EQU

/COMCSYS/SYS=

COMPCOM 543

266

RCL=

EQU

/COMCSYS/RCL=

COMPCOM 544

272

WNB=

EQU

/COMCSYS/WNB=

COMPCOM 545

302

MSG=

EQU

/COMCSYS/MSG=

COMPCOM 546

QUAL\$

ENDIF

COMPCOM 547

COMPCOM 548

COMPCOM 549

COMCSYS

ENDX

COMPCOM 550

RM

ENDIF

COMPCOM 551

COMPCOM 552

COMPCOM 553

LIST

*

COMPCOM 554

** RECORD MANAGER ROUTINES.

COMPCOM	556
COMPCOM	557
COMPCOM	558
CPS028	36
COMPCOM	561
COMPCOM	562
COMPCOM	563
COMPCOM	564
COMPCOM	565
COMPCOM	566
CPS028	37
COMPCOM	568
COMPCOM	569
COMPCOM	570
CPS028	38
CPS028	39
CPS028	40
CPS028	41
CPS028	42
CPS028	43
CPS028	44
CPS028	45
CPS028	46
CPS028	47
COMPCOM	574
COMPCOM	575
CPS028	48
CPS028	49
CPS028	50
CPS028	51
CPS028	52
CPS028	53
CPS028	54
CPS028	55
CPS028	56
CPS028	57
CPS028	58
COMPCOM	577
CPS028	59
CPS028	60
CPS028	61
COMPCOM	583
COMPCOM	584
COMPCOM	586
COMPCOM	587
CPS028	62
CPS028	63
COMPCOM	598
COMPCOM	599
COMPCOM	600
CPS028	64
CPS028	65
CPS028	66
CPS028	67
CPS028	68
CPS028	69
CPS028	70

RM	IFEQ	CP#RM,6	
#PL6RM#	MICRO	1,9,*"#PLRM#"	*
	LIST	"LISTRM"X	
"#PLRM#"	XTEXT	C6RMITXT	
"#PLRM#"	XTEXT	C6RMCIOR	
	QUAL	6RM	
	SEL.RM	F0=(SQ,WA),BT=(C,I),RT=(S,U,W,Z)	
"#PLRM#"	XTEXT	C6RMMCTR	
"#PLRM#"	XTEXT	C6RMCHKR	
"#PLRM#"	XTEXT	C6RMCHWS	
"#PLRM#"	XTEXT	C6RMCLSR	
"#PLRM#"	XTEXT	C6RMCLSS	
"#PLRM#"	XTEXT	C6RMCLSW	
"#PLRM#"	XTEXT	C6RMENDS	
"#PLRM#"	XTEXT	C6RMERRM	
"#PLRM#"	XTEXT	C6RMGETR	
"#PLRM#"	XTEXT	C6RMGETS	
"#PLRM#"	XTEXT	C6RMBTRS	MUST FOLLOW C6RMGETS
"#PLRM#"	XTEXT	C6RMFSUS	MUST FOLLOW C6RMGETS
"#PLRM#"	XTEXT	C6RMWS	MUST FOLLOW C6RMGETS
"#PLRM#"	XTEXT	C6RMZS	MUST FOLLOW C6RMGETS
"#PLRM#"	XTEXT	C6RMGETW	
"#PLRM#"	XTEXT	C6RMMOVR	
"#PLRM#"	XTEXT	C6RMOPER	
"#PLRM#"	XTEXT	C6RMOPES	
"#PLRM#"	XTEXT	C6RMOPEW	
"#PLRM#"	XTEXT	C6RMOSUB	
"#PLRM#"	XTEXT	C6RMPDFR	
"#PLRM#"	XTEXT	C6RMPUTR	
"#PLRM#"	XTEXT	C6RMRLEQ	MUST PRECEDE C6RMPUTS
"#PLRM#"	XTEXT	C6RMPUTS	
"#PLRM#"	XTEXT	C6RMPUTW	
"#PLRM#"	XTEXT	C6RMREWR	
"#PLRM#"	XTEXT	C6RMREWS	
"#PLRM#"	XTEXT	C6RMSKBR	
"#PLRM#"	XTEXT	C6RMSKBS	
"#PLRM#"	XTEXT	C6RMWARS	
"#PLRM#"	XTEXT	C6RMWERS	
	QUAL		
A0B	EQU	/6RM/A0B	
AMAC.SQ	EQU	/6RM/AMAC.SQ	
CHWR.SQ	EQU	/6RM/CHWR.SQ	
CLSV.SQ	JP	*+400000B	
COMM.WA	EQU	/6RM/COMM.WA	
DXIT.SQ	EQU	/6RM/DXIT.SQ	
ERR.RM	EQU	/6RM/ERR.RM	

FLSH.SQ EQU /6RM/FLSH.SQ
FLSH.WA EQU /6RM/FLSH.WA
GXIT.SQ EQU /6RM/GXIT.SQ
MCT.RM EQU /6RM/MCT.RM
MOVE.RM EQU /6RM/MOVE.RM
OPEX.SQ JP **400000B
OSUB.RM EQU /6RM/OSUB.RM
PUT.SQ EQU /6RM/PUT.SQ
RLEQ.RM EQU /6RM/RLEQ.RM
RMU.SQ EQU /6RM/RMU.SQ
RMU0.SQ EQU /6RM/RMU0.SQ
RMU1.SQ EQU /6RM/RMU1.SQ
RSPT.SQ EQU /6RM/RSPT.SQ
SKGT.SQ EQU /6RM/SKGT.SQ
WAR.SQ EQU /6RM/WAR.SQ

LIST *

RM ENDIF

** END OF COMPCOM.

CPS028 71
CPS028 72
CPS028 73
CPS028 74
CPS028 75
CPS028 76
CPS028 77
CPS028 78
CPS028 79
CPS028 80
CPS028 81
CPS028 82
CPS028 83
CPS028 84
CPS028 85
COMPCOM 616
COMPCOM 617
COMPCOM 618
COMPCOM 619
COMPCOM 620
COMPCOM 621
COMPCOM 622
CMP30 351
CMP30 352

1412THE

***** DEFINITIONS DEPENDENT ON COMPILER/COMPASS COMMON DECK.

CMP30	354
CMP30	355
CMP30	356
CMP30	357
CMP30	358
CMP30	359
CMP30	360
CMP30	361
CMP30	362
CPS064	3
CMP30	363
CMP30	364
CMP30	365
CPS064	4
CPS064	5
CPS064	6
CPS064	7
CPS064	8
CPS064	9
CMP30	366
CMP30	367
CMP30	368
CMP30	369

** BUFFER SIZES.

1001	BBUFL	EQU	"BUFL"	BINARY BUFFER LENGTH
0	DBUFL	EQU	"BUFL"*DEBUG	SNAPPER BUFFER LENGTH
1001	EBUFL	EQU	"BUFL"	ERROR LISTING BUFFER LENGTH
2002	GBUFL	EQU	"BUFL"*2	SYSTEM TEXT FILE BUFFER LENGTH
1001	IBUFL	EQU	"BUFL"	SOURCE INPUT BUFFER LENGTH
1001	RBUFL	EQU	"BUFL"	CROSS-REFERENCE BUFFER LENGTH
2002	SBUFL	EQU	"BUFL"*2	INTERMEDIATE BUFFER LENGTH

** SECONDARY OVERLAY NAMES.

OVLA MICRO 1,, "CP.NAME"A PASS 1 AND PASS 2 ROUTINES

** STOP - END OF JOB PROCESSING.

COMPASS 295
COMPASS 296
COMPASS 297

1	310	5110000126	STOP	SA1	CP.MAXFL	MAX SCM USED DURING RUN	CMP30	371	1
2		7120000112		SX2	100B+10D		CMP042	2	2
3	311	43066		MX0	-6	ADD THE TEN UNUSED WORDS AND	CMP042	3	3
4		36312		IX3	X1+X2	INCREASE TO NEXT MULTIPLE OF 100B	CMP042	4	4
5		11103		BX1	X0*X3		CMP042	5	5
6		43600		MX6	0		CPS0343	8	6
7	312	5160003116		SA6	PPTYPE	CLEAR PPTYPE SO OCTAL WILL REALLY BE USED	CPS0343	9	7
8		0100005302		RJ	CONOCT	CONVERT TO OCTAL	CMP042	6	8
9	313	20622		LX6	18		CMP042	7	9
10							CPS028	129	10
11				IF	DEF,MODL76		CPSA134	49	11
12				SX1	3RB S	ASSEMBLED IF MODEL 76 ASSEMBLY (SCM)	CPSA134	50	12
13				ELSE	1		CPSA134	51	13
14		7110025555		SX1	3RB	ASSEMBLED IF NOT MODEL 76 ASSEMBLY (CM)	CPSA134	52	14
15							CPS028	133	15
16		43052		MX0	-18		CMP042	9	16
17	314	11606		BX6	X0*X6		CMP042	10	17
18		12661		BX6	X6+X1		CMP042	11	18
19		5160000350		SA6	STPA+2	STORE IN MESSAGES	CMP042	12	19
20	315	5160000354		SA6	STPB+2		CMP042	13	20
21		5110003044		SA1	BLCM	MAX ECS/LCM USED DURING RUN	CPS028	134	21
22	316	0301000325		ZR	X1,STP0	IF NONE	CPS028	135	22
23		7120000112		SX2	100B+10D		CPS028	136	23
24	317	43066		MX0	-6	ADD THE TEN UNUSED WORDS AND	CPS028	137	24
25		36312		IX3	X1+X2	INCREASE TO NEXT MULTIPLE OF 100B	CPS028	138	25
26		11103		BX1	X0*X3		CPS028	139	26
27	320	0100005302		RJ	CONOCT	CONVERT TO OCTAL	CPS028	140	27
28	321	5110000363		SA1	STPD+1		CPS028	141	28
29		54211		SA2	A1+B1		CPS028	142	29
30		54321		SA3	A2+B1		CPS028	143	30
31	322	43052		MX0	-18	STORE IN MESSAGE	CPS028	144	31
32		10711		BX7	X1		CPS028	145	32
33		20622		LX6	18		CPS028	146	33
34		11606		BX6	X0*X6		CPS028	147	34
35	323	15220		BX2	-X0*X2		CPS028	148	35
36		12662		BX6	X6+X2		CPS028	149	36
37		5170000357		SA7	STPC+1		CPS028	150	37
38	324	54671		SA6	A7+B1		CPS028	151	38
39		10733		BX7	X3		CPS028	152	39
40		54761		SA7	A6+B1		CPS028	153	40
41	325	6170003076	STP0	SB7	BTIME	CONVERT BATCH ASSEMBLY TIME	CPS028	154	41
42		0100005317		RJ	CPTIME		CMP30	375	42
43	326	5160000356		SA6	STPC	STORE IN MESSAGE	CMP30	376	43
44							CMP30	377	44
45		5110000115		SA1	CP.ERRCT		CMP30	378	45
46	327	0301000340		ZR	X1,STP1	IF NO ERRORS	CMP30	379	46
47		0331000340		MI	X1,STP1	IF *D* MODE SET	CMP30	380	47
48	330	7110000352		MESSAGE	STPB,,R	*ASSEMBLY ERRORS.*	CMP30	381	48
49	332	7110000356		MESSAGE	STPC,,R	*ASSEMBLY TIME.*	CMP30	384	49
50							CMP30	385	50
51	334	5110000114		SA1	CP.ABORT		CMP30	386	51
52		20136		LX1	59-29		CP139CP	140	52
53	335	0321000344		PL	X1,STP2	IF ABORT NOT SET	CP139CP	141	53
54		7160041121		ABORT	,NODUMP,S		CPS191	5	54

CMP30	389
CMP30	390
CMP30	393
CMP30	394
CMP30	395
CMP30	396
CMP30	397
CMP30	398
CMP30	399
CMP30	400
CMP30	401
CMP30	402
CMP30	403
CMP30	404
CMP30	405
CMP30	406
CMP30	407
CMP30	408
CMP30	409
CMP30	410
CMP30	411
CMP30	412
CMP30	413
CMP30	414
CMP30	415
CMP30	416
CMP30	417
CMP30	418
COMPASS	320
CMP042	15
CMP042	16
CMP30	419
CMP30	421
CPSA134	53
CPSA134	54
CPS028	157
CPSA134	55
CPS028	159

** COMPASS INITIALIZATION.

COMPASS	342
COMPASS	343
COMPASS	344
CP139CP	142
CMP30	434
CMP30	435
CMP30	436
CMP30	437
CMP30	438
CMP30	439
CMP30	440
CMP30	441
CMP30	442
CMP30	444
CMP30	445
CMP30	446
CMP30	447
CMP30	448
CMP30	449
CMP30	450
F4810A	22
CPS258	5
COMPASS	353
CMP30	451
COMPASS	354
CP139CP	143
CMP30	453
CMP30	454
CMP30	455
CMP30	456
CMP30	457
CMP30	458
CMP30	459
CMP30	460
CMP30	461
CMP30	462
CMP30	463
CMP30	464
CMP30	465
CMP30	466
CMP30	467
CMP30	468
CMP30	469
CPS144	5
CPS144	6
CPS144	7
CPS144	8
CPS144	9
CPS144	10
CPS144	11
CPS144	12
CPS144	13
CPS144	14

366	6110000001	COMPASS	SB1	1	SET (B1) = 1		
	74600		SX6	A0			
	10700		BX7	X0			
367	5160000202		SA6	CP.NFLS	SAVE FIELD LENGTHS		
	5170000204		SA7	CP.NFLL			
370	5160000201		SA6	CP.AFLS			
	5170000203		SA7	CP.AFLL			
371	76600		SX6	B0	CLEAR SOURCE CARD IMAGE		
	5160000141		SA6	CP.CARD			
372	0100000762		RJ	TFL	TEST FIELD LENGTH, START LOADING OVERLAY		
			IFNE	SPY,0,1			
			RJ	SSP	START *SPY*		
			IFNE	OVERLAY,0,1			
373	0100000716		RJ	LOV	LOAD OVERLAY		
374	0100000402		RJ	ARG	GET ARGUMENTS FROM CONTROL STATEMENT		
375	0100011630		RJ	DMF	DIAGNOSE MISUSED FILES (B=A,I=A)		
376	0100000665		RJ	IFP	INITIALIZE FILE PARAMETERS		
377	0100000734		RJ	SFV	SET *F VALUE		
400	0100011310		RJ	SLF	SET LIST FLAGS		
401	0400010400		EQ	CMP	GO TO CONTROL OVERLAY		
		**	ARG	-	PROCESS ARGUMENTS FROM CONTROL STATEMENT.		
		*	ENTRY		FIRST CARD OF CONTROL STATEMENT IN RA.CCD ET SEQ.		
		*	EXIT		ARGUMENTS PROCESSED.		
		*	USES		ALL.		
		*	CALLS		GAC, GAV.		
402	0000000000	ARG	PS		RETURN EXIT		
403	7160241115		JDATE	CP.MODL			
406	5150000205		SA5	CP.MODL			
	5100000012		SA0	10			
407	10655		BX6	X5	SET JULIAN DATE AS DEFAULT		
	20636		LX6	30	VALUE OF *MODLEVEL* MICRO		
	54650		SA6	A5			
410	5160011563		SA6	OPTML			
	43066		MX0	-6			
	66500		SB5	B0			
411	66310	ARG1	SB3	B1	SKIP BLANKS, KCL PREFIXES \$ AND /		
	0100000577		RJ	GAC	GET NEXT CHARACTER.		
412	6274777732		SB7	X4-1R+			
	0670000411		PL	B7,ARG1	IF CHARACTER IS NOT ALPHANUMERIC SKIP IT.		
413	6274777744		SB7	X4-1R0	ELSE		
	0770000417		LT	B7,ARG1B	IF ALPHA, GO PROCESS VERB.		
414	66310	ARG1A	SB3	B1	ELSE SKIP KCL LABEL.		
	0100000577		RJ	GAC	GET NEXT CHARACTER.		
415	63740		SB7	X4	SET SHIFT COUNT TO OCTAL VALUE OF CHARACTER		
	5140001012		SA4	=33320200B	MASK FOR SEPARATORS + - " / = , (\$		

22474	LX4	B7		CPS144	15	
416 0334000411	MI	X4,ARG1	IF SEPARATOR CHECK NEXT FIELD.	CPS144	16	
0400000414	EQ	ARG1A	ELSE CONTINUE SKIPPING KCL LABEL.	CPS144	17	
				CPS144	18	
417 43600	ARG1B	MX6	0	CPS144	19	
420 20606	ARG2	LX6	6	SCAN VERB	CPS061	2
6130000000		SB3	0		CPS061	3
12664		BX6	X6+X4		CPS061	4
				CPSA134	56	
		IF	-DEF,SCOPE1,1	CPSA134	57	
		IF	DEF,NOS,1	CPSA134	58	
421	ARG2B	BSS	0	ASSEMBLED FOR NOS ASSEMBLY ONLY	CPSA134	59
				CPSA134	60	
421 0100000577		RJ	GAC	CMP30	475	
422 6274777732		SB7	X4-1R9-1	CMP30	476	
0770000420		MI	B7,ARG2	CMP30	477	
				CPSA134	61	
		IF	-DEF,SCOPE1,1	CPSA134	62	
		IF	DEF,NOS,2	CPSA134	63	
423 6274777722		SB7	X4-1R	ASSEMBLED ON NOS ASSEMBLY ONLY	CPSA134	64
0470000421		ZR	B7,ARG2B	IF SPACE ENCOUNTERED	CPSA134	65
				CPSA134	66	
424 6274777720		SB7	X4-1R.	RETURN IF TERMINATOR	CMP30	478
6264777725		SB6	X4-1R)		CMP30	479
425 0470000402		ZR	B7,ARG		CMP30	480
0460000402		ZR	B6,ARG		CMP30	481
426 67301		SB3	-B1		CMP30	482
0561000427		NE	B6,B1,ARG2A	IF NOT \$	CPS061	5
66300		SB3	B0		CMP30	484
427 5140011612	ARG2A	SA4	ARGQ	CHECK VERB	CPS061	6
13664		BX6	X6-X4		CPS061	7
430 0316000431		NZ	X6,ARG3	IF NOT *EXECUTE*	CPS061	8
0100000644		RJ	GAV	SKIP FIRST ARGUMENT	CPS061	9
				CMP30	485	
	*		PROCESS NEXT KEYWORD.	CMP30	486	
				CMP30	487	
431 0740000402	ARG3	MI	B4,ARG	RETURN IF TERMINATOR	CMP30	488
0100000644		RJ	GAV	GET ARGUMENT VALUE	CMP30	489
432 0306000431		ZR	X6,ARG3	IGNORE EMPTY ARGUMENT	CMP30	490
5120011526		SA2	OPT		CMP30	491
433 43314		MX3	12		CMP30	492
6170000023		SB7	LOPT		CMP30	493
434 5160011605		SA6	ARGM+3		CMP30	494
435 11432	ARG4	BX4	X3*X2	SEARCH KEYWORD LIST	CMP30	495
6177777776		SB7	B7-1		CMP30	496
13746		BX7	X4-X6		CMP30	497
436 0307000440		ZR	X7,ARG5	IF FOUND	CMP30	498
5022000001		SA2	A2+1		CMP30	499
437 0570000435		NZ	B7,ARG4	LOOP	CMP30	500
0400000572		EQ	ARGE		CMP30	501
440 63720	ARG5	SB7	X2		CMP30	502
10722		BX7	X2		CPS214	4
20736		LX7	59-29		CPS214	5
441 0337000444		MI	X7,ARG5A	IF MULTIPLE OCCURRANCES OK	CPS214	6
20701		LX7	29-28		CPS214	7
442 0337000572		MI	X7,ARGE	IF NOT FIRST OCCUR.	CPS214	8
43401		MX4	1		CPS214	9

12747	BX7	X4+X7		CPS214	10
443 20735	LX7	28+1	RESTORE AND SET *OCCURRED*	CPS214	11
54720	SA7	A2		CPS214	12
				CPS214	13
444 21236	ARG5A	AX2	30	CPS214	14
63620	SB6	X2		CMP30	504
0660000446	PL	B6,ARG6	IF = ALLOWED	CMP30	505
445 77206	SX2	-B6		CMP30	506
446 53220	ARG6	SA2	GET DEFAULT VALUE	CMP30	507
10722	BX7	X2		CMP30	508
0770000456	MI	B7,ARG7	IF SPECIAL ARGUMENT	CMP30	509
447	ARG6A	BSS	0	CPSA142	28
447 7124777774	SX2	B4-3		CMP30	510
56770	SA7	B7	STORE DEFAULT VALUE	CMP30	511
450 0312000431	NZ	X2,ARG3	IF NO =	CMP30	512
0760000572	MI	B6,ARGE	IF = NOT ALLOWED	CMP30	513
451 66260	SB2	B6	SAVE LOC. OF DEFAULT OF ARG.	CPS151	6
0100000644	RJ	GAV	GET ARGUMENT VALUE	CMP30	514
452 56670	SA6	B7		CMP30	515
6170011560	SB7	OPTI	TEST FOR ILLEGAL ARGUMENT *I=0*.	CPS151	7
453 0527000454	NE	B2,B7,TXARG	IF *ARG"I* TEST FOR *ARG=X*.	CPS151	8
0306000572	ZR	X6,ARGE	ELSE IF *I=0* PRINT ERROR MESSAGE AND ABORT	CPS151	9
454 6170011571	TXARG	SB7	OPTX	CPS151	10
0527000431	NE	B2,B7,ARG3	IF *ARG"X* CONTINUE PROCESSING.	CPS151	11
455 0316000431	NZ	X6,ARG3	ELSE IF *X"0* CONTINUE PROCESSING.	CPS151	12
0400000572	EQ	ARGE	ELSE PRINT ERROR MESSAGE AND ABORT.	CPS151	13
456 67707	ARG7	SB7	-B7	CMP30	517
0277000000	JP	B7	PROCESS SPECIAL ARGUMENT	CMP30	518
				CMP30	519
*			PROCESS *E* AND *O* ARGUMENTS	CPSA142	29
				CPSA142	30
457 5110011574	ARG7A	SA1	ERFFLG	CPSA142	31
0311000572	NZ,X1	ARGE	IF BOTH E AND O ARE SPECIFIED, ERROR	CPSA142	32
460 76610	SX6	B1		CPSA142	33
54610	SA6	A1	SET FLAG TO INDICATE E OR O SPECIFIED	CPSA142	34
6170011573	SB7	ELFN	CELL TO STORE DEFAULT IN	CPSA142	35
461 0400000447	EQ	ARG6A		CPSA142	36
				CPSA142	37
*			PROCESS *G* ARGUMENT - G, G=0, G=LFN, OR G=LFN/OVL.	CMP30	520
				CMP30	521
462 6174777774	ARG8	SB7	B4-3	CMP30	522
43600	MX6	0	LFN = *SYSTEXT*	CMP30	523
			OVL = NO NAME	CMP30	524
463 0570000466	NZ	B7,ARG9	IF NO =	CMP30	525
0100000644	RJ	GAV	GET FILE NAME	CMP30	526
464 6174777775	SB7	B4-2		CMP30	527
10766	BX7	X6		CMP30	528
43600	MX6	0		CMP30	529
465 0570000466	NZ	B7,ARG9	IF NO /	CMP30	530
0100000644	RJ	GAV	GET OVERLAY NAME	CMP30	531
466 0307000431	ARG9	ZR	X7,ARG3	CMP30	532
76210	SX2	B1	IF *G=0*, IGNORE IT	CMP30	533
12662	BX6	X6+X2	SET *G* FLAG	CMP30	534
467 0400000476	EQ	ARG12		CMP30	535
				CMP30	536
*			PROCESS *S* ARGUMENT - S, S=0, S=OVL, OR S=LIB/OVL.	CMP30	537
				CMP30	538
470 6174777774	ARG10	SB7	B4-3		

		10677		BX6	X7	OVL = *SYSTEXT*	CMP30	539
		43700		MX7	0	LIB = NO NAME	CMP30	540
471	0570000474			NZ	B7,ARG11	IF NO =	CMP30	541
		0100000644		RJ	GAV	GET LIB OR OVL	CMP30	542
472	6174777775			SB7	B4-2		CMP30	543
		0570000474		NZ	B7,ARG11	IF NO /	CMP30	544
473	10766			BX7	X6	SET LIBRARY NAME	CMP30	545
		0100000644		RJ	GAV	GET OVERLAY NAME	CMP30	546
474	0316000476		ARG11	NZ	X6,ARG12	IF NOT *S=0*	CMP30	547
		5160000171		SA6	CP.LIB	SET *S=0* FLAG	CMP30	548
475	0400000431			EQ	ARG3		CMP30	549
476	5120000161		ARG12	SA2	CP.STEXT	GET SYSTEM TEXT COUNTER	CMP30	550
		6262777770		SB6	X2-7		CMP30	551
477	63721			SB7	X2+B1		CMP30	552
		0460000502		ZR	B6,ARG13	IF HAVE 7 ALREADY	CMP30	553
		54627		SA6	A2+B7	STORE OVERLAY NAME	CMP30	554
500	5177000171			SA7	CP.LIB+B7	STORE FILE OR LIBRARY NAME	CMP30	555
		76670		SX6	B7		CMP30	556
		54620		SA6	A2	STORE UPDATED COUNT	CMP30	557
501	0400000431			EQ	ARG3		CMP30	558
502	7110011606		ARG13	MESSAGE	ARGN,,R	*MORE THAN 7 SYSTEM TEXTS SPECIFIED.*	CMP30	559
504	7160041121			ABORT	,NODUMP		CMP30	560
							CMP30	561
			*		PROCESS *ML* ARGUMENT.		CMP30	562
							CMP30	563
507	6170000205		ARG14	SB7	CP.MODL		CMP30	564
		0400000511		EQ	ARG16		CMP30	565
							CMP30	566
			*		PROCESS *LO* ARGUMENT.		CMP30	567
							CMP30	568
510	6170011627		ARG15	SB7	SLFA		CMP30	569
511	6164777774		ARG16	SB6	B4-3		CMP30	570
		43600		MX6	0		CMP30	571
		56770		SA7	B7	STORE DEFAULT VALUE	CMP30	572
512	0560000431			NZ	B6,ARG3	IF NO =	CMP30	573
		6160000066		SB6	54		CMP30	574
513	0100000577		ARG17	RJ	GAC	GET ARGUMENT CHARACTER	CMP30	575
514	0540000517			NZ	B4,ARG18	IF SEPARATOR	CMP30	576
		22464		LX4	B6		CMP30	577
		12664		BX6	X6+X4		CMP30	578
515	6166777771			SB6	B6-6		CMP30	579
		0660000513		PL	B6,ARG17	IF NOT MORE THAN 9 CHARACTERS	CMP30	580
516	0400000572			EQ	ARGE		CMP30	581
517	56670		ARG18	SA6	B7	STORE ARGUMENT	CMP30	582
		0400000431		EQ	ARG3		CMP30	583
							CMP30	584
			*		PROCESS *PC* ARGUMENT.		CMP30	585
							CMP30	586
520	6170000003		ARG19	SB7	3		CMP30	587
		6160000066		SB6	54		CMP30	588
521	0547000431			NE	B4,B7,ARG3	IF NO =	CMP30	589
		67707		SB7	-B7		CMP30	590
		43600		MX6	0		CMP30	591
522	0100000577		ARG20	RJ	GAC	GET ARGUMENT CHARACTER	CMP30	592
523	0540000530			NZ	B4,ARG22	IF SEPARATOR	CMP30	593
		22464		LX4	B6		CMP30	594
		12664		BX6	X6+X4		CMP30	595

524	6166777771		SB6	B6-6		CMP30	596
		0660000522	PL	B6,ARG20	IF WORD NOT FULL	CMP30	597
525	0670000526		PL	B7,ARG21	IF ALREADY HAVE 30 CHARACTERS	CMP30	598
		5167000211	SA6	CP.PCOM+3+B7		CMP30	599
526	66771	ARG21	SB7	B7+B1	COUNT WORDS	CMP30	600
		6160000066	SB6	54		CMP30	601
		43600	MX6	0		CMP30	602
527	0400000522		EQ	ARG20		CMP30	603
530	0670000431	ARG22	PL	B7,ARG3	IF 30 CHARACTERS ALREADY STORED	CMP30	604
		5120011601	SA2	ARGL		CPS010	12
531	6166777717		SB6	B6-48		CMP30	606
		6120000006	SB2	6		CMP30	607
532	43300		MX3	0		CMP30	608
		0462000534	EQ	B6,B2,ARG23	IF WORD IS EMPTY	CMP30	609
		43306	MX3	6		CMP30	610
533	22363		LX3	B6		CMP30	611
534	15723	ARG23	BX7	-X3*X2	BLANK FILL LAST WORD	CMP30	612
		12667	BX6	X6+X7		CMP30	613
		5167000211	SA6	CP.PCOM+3+B7		CMP30	614
535	0400000431		EQ	ARG3		CMP30	615
						CMP30	616
		*		PROCESS *PD* ARGUMENT.		F4810A	23
						F4810A	24
536	6174777774	ARG24	SB7	B4-3	CHECK IF =	F4810A	25
		7120000010	SX2	8	SECOND DEFAULT	F4810A	26
537	0570000544		NZ	B7,ARG25	IF NO = , GO SET CP.PD TO SECOND DEFAULT	F4810A	27
		0100000644	RJ	GAV	GET PRINT DENSITY	F4810A	28
540	0100000655		RJ	CDB	CONVERT DISPLAY CODE TO BINARY EQUIVALENT	F4810A	29
541	0332000431		MI	X2,ARG3	IF ERROR, RETURN (CP.PD=DEFAULT)	F4810A	30
		7212777767	SX1	X2-8		F4810A	31
542	0301000544		ZR	X1,ARG25	IF 8 LINES/INCH	F4810A	32
		7212777771	SX1	X2-6		F4810A	33
543	0311000431		NZ	X1,ARG3	IF NOT 6 OR 8 LINES/INCH CP.PD=DEFAULT	F4810A	34
544	10722	ARG25	BX7	X2	ELSE	F4810A	35
		5170000122	SA7	CP.PD	SET PRINT DENSITY	F4810A	36
545	5110000123		SA1	CP.PS	IF PS ARG WAS SPECIFIED, RETURN	CPSA265	8
		0311000431	NZ	X1,ARG3		CPSA265	9
546	7110011415		GETPAGE	SPFA	ELSE CALC. PAGE SIZE USING	CPSA265	10
550	5110000122		SA1	CP.PD	DEFAULT VALUES TO RATIO	CPSA265	11
		10211	BX2	X1		CPSA282	7
551	5110011415		SA1	SPFA		CPSA265	13
		43373	MX3	59	CLEAR COMPLETION BIT	CPSA282	8
		11731	BX7	X3*X1		CPSA282	9
552	54710		SA7	A1		CPSA282	10
		43364	MX3	-8	*PS* FIELD SIZE	CPSA265	14
		10722	BX7	X2		CPSA282	11
		21124	AX1	20	POSITION FOR *PS*	CPSA265	15
553	15213		BX2	-X3*X1	EXTRACT DEFAULT *PS*	CPSA265	16
		21110	AX1	8	POSITION FOR *PD*	CPSA265	17
		43370	MX3	-4	*PS* FIELD SIZE	CPSA265	18
		15113	BX1	-X3*X1	EXTRACT DEFAULT *PD*	CPSA265	19
554	42772		IX7	X7*X2		F4810A	41
		27707	IX7	X7/X1		F4810A	42
556	5170000123		SA7	CP.PS	STORE CALCULATED PAGE SIZE	F4810A	43
		0400000431	EQ	ARG3	RETURN	F4810A	44
						F4810A	45
		*		PROCESS *PS* ARGUMENT.		F4810A	46

557	6174777774	ARG26	SB7	B4-3	CHECK IF =	F4810A	47
	0570000431		NZ	B7,ARG3	IF NO = , RETURN JOB DEFAULT	F4810A	48
560	0100000644		RJ	GAV	GET PAGE SIZE VALUE	CPSA265	20
561	0100000655		RJ	CDB	CONVERT DISPLAY CODE TO BINARY EQUIVALENT	CPSA265	21
562	0332000431		MI	X2,ARG3	IF ERROR, USE JOB DEFAULT	CPSA265	22
	7170000143		SX7	99D	PRESET MAX =99D	CPSA265	23
563	37172		IX1	X7-X2		CPSA265	24
	0331000567		NG	X1,ARG27	IF .GT. MAX, USE JOB MAX = 99D	CPSA265	25
564	7170000004		SX7	4D	PRESET MIN = 4	CPSA265	26
	37127		IX1	X2-X7		CPSA265	27
565	0331000567		NG	X1,ARG27	IF .LT. MIN, USE MIN = 4	CPSA265	28
	10722		BX7	X2		CPSA265	29
566	5170000123		SA7	CP.PS	SET PAGE SIZE	CPSA265	30
	0400000431		EQ	ARG3	RETURN	CPSA265	31
567	5170000123	ARG27	SA7	CP.PS	STORE ADJUSTED PAGE SIZE	CPSA265	32
	7110011576		MESSAGE	ARGA,,R	DIAGNOSE INCORRECT PAGE SIZE	CPSA265	33
571	0400000431		EQ	ARG3	RETURN	CPSA265	34
		*		ERROR EXIT.		F4810A	35
						CMP30	617
572	7110011602	ARGE	MESSAGE	ARGM,,R		CMP30	618
574	7160041121		ABORT	,NODUMP		CMP30	619
						CMP30	620
		**	GAC	- GET ARGUMENT CHARACTER.		CMP30	625
		*	ENTRY	(X0) = MASK -6.		CMP30	626
		*		(X5) = CURRENT WORD OF CARD IMAGE.		CMP30	627
		*		(A0) = 10.		CMP30	628
		*		(A5) = ADDRESS OF (X5).		CMP30	629
		*		(B3) = \$ MODE, -1 = NORMAL, 0 = STRING MODE.		CMP30	630
		*		(B5) = NUMBER OF CHARACTERS REMAINING IN (X5).		CMP30	631
		*	EXIT	(X4) = CHARACTER.		CMP30	632
		*		(B4) = CHARACTER TYPE, -1 = TERMINATOR, 0 = ALPHANUM,		CMP30	633
		*		+1 = SEPARATOR, +2 = /, +3 = =.		CMP30	634
		*		(X5, A5, B3, B5) UPDATED.		CMP30	635
		*	USES	X1-X4, A1-A3, A6.		CMP30	636
		*	CALLS	CONTRLC, MESSAGE.		CMP30	637
						CMP30	638
577	0000000000	GAC	PS		RETURN EXIT	CMP30	639
600	0450000614	GAC1	ZR	B5,GAC5	IF (X5) IS EMPTY	CMP30	640
	20506		LX5	6		CMP30	641
	67551		SB5	B5-B1	EXTRACT NEXT CHARACTER	CMP30	642
601	15450		BX4	-X0*X5		CMP30	643
	6244777724		SB4	X4-1R\$		CMP30	644
602	0440000612		ZR	B4,GAC3	IF \$	CMP30	645
	0430000613		ZR	B3,GAC4	IF IN STRING MODE	CMP30	646
603	66400		SB4	B0		CMP30	647
	0730000604		MI	B3,GAC2	IF NOT LEAVING STRING MODE	CMP30	648
	67301		SB3	-B1		CMP30	649
604	7224777732	GAC2	SX2	X4-1R9-1	CLASSIFY CHARACTER	CMP30	650
	7234777717		SX3	X4-1R.-1		CMP30	651
605	0332000577		MI	X2,GAC	IF ALPHANUMERIC, RETURN	CMP30	652

		66410		SB4	B1			CMP30	654
		20202		LX2	2			CMP30	655
	606	0323000577		PL	X3,GAC	IF NON-DISPLAY, RETURN		CMP30	656
1		5130011613		SA3	GACA			CMP30	657
2	607	63420		SB4	X2			CMP30	658
3		22243		LX2	X3,B4	GET CHARACTER TYPE CODE		CMP30	659
4		21270		AX2	56			CMP30	660
5		63420		SB4	X2			CMP30	661
6	610	0312000577		NZ	X2,GAC	IF NOT BLANK, RETURN		CMP30	662
7		0322000577		PL	X2,GAC			CMP30	663
8	611	0400000600		EQ	GAC1	IGNORE BLANK		CMP30	664
9	612	66331	GAC3	SB3	B3+B1			CMP30	665
10		0613000600		LE	B3,B1,GAC1	IF NOT SECOND \$ OF A PAIR IN STRING MODE		CMP30	666
11		66300		SB3	B0			CMP30	667
12	613	66400	GAC4	SB4	B0	STRING MODE, RETURN WITH CHARACTER TYPE = 0		CMP30	668
13		0400000577		EQ	GAC			CMP30	669
14	614	5110011615	GAC5	SA1	GACC			CMP30	670
15		64500		SB5	A0			CMP30	671
16		54551		SA5	A5+B1			CMP30	672
17	615	0301000627		ZR	X1,GAC7	IF INITIAL ENTRY		CMP30	673
18		0315000600		NZ	X5,GAC1	IF NOT END OF CARD		CMP30	674
19	616	0335000600		MI	X5,GAC1			CMP30	675
20		5160011614		SA6	GACB	SAVE (X6)		CMP30	676
21	617	5130000064		SA3	RA.PGN	SAVE FILE NAME FROM RA+64		CPSA291	9
22				IF	DEF,NOS,2			CPSA291	10
23		7160041425		CONTRLC	GACC,,CRACK	READ NEXT CONTROL STATEMENT		CPSA291	11
24				ELSE	1			CPSA291	12
25				CONTRLC	GACC	READ NEXT CARD		CMP30	677
26	623	10633		BX6	X3	RESTORE FILE NAME		CPSA291	13
27		54630		SA6	A3			CPSA291	14
28		5110000070		SA1	RA.CCD			CMP30	678
29	624	0311000625		NZ	X1,GAC6			CMP30	679
30		0321000640		PL	X1,GAC9	IF END OF CONTROL CARDS		CMP30	680
31	625	7110000070	GAC6	MESSAGE	RA.CCD,,R			CMP30	681
32	627	7160000010	GAC7	SX6	10B	SET *READ* REQUEST FOR NEXT CONTROL CARD		CMP30	682
33		6140000067		SB4	55			CMP30	683
34	630	5160011615		SA6	GACC			CMP30	684
35		5120011622		SA2	GACF			CPS057	1
36	631	43600		MX6	0	STORE ZERO WORD AFTER CARD IMAGE		CMP30	686
37		5160000100		SA6	RA.CCD+8			CMP30	687
38		10622		BX6	X2			CMP30	688
39	632	55561	GAC8	SA5	A6-B1	BLANK FILL CARD IMAGE		CMP30	689
40		54650		SA6	A5			CMP30	690
41		0305000632		ZR	X5,GAC8			CMP30	691
42	633	43173		MX1	-1			CMP30	692
43		36451		IX4	X5+X1			CMP30	693
44		5120011616		SA2	GACD			CMP30	694
45	634	15145		BX1	-X5*X4			CMP30	695
46		11412		BX4	X1*X2			CMP30	696
47		22144		LX1	X4,B4			CMP30	697
48		37241		IX2	X4-X1			CMP30	698
49	635	12142		BX1	X4+X2			CMP30	699
50		11216		BX2	X1*X6			CMP30	700
51		36652		IX6	X5+X2			CMP30	701
52		54660		SA6	A6			CMP30	702
53	636	5110011614		SA1	GACB			CMP30	703
54		10611		BX6	X1	RESTORE (X6)		CMP30	704
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**	CDB - CONVERTS DECIMAL DISPLAY CODE TO BINARY	F4810A	66
*		F4810A	67
*	ENTRY (X6) = PARAMETER LEFT JUSTIFIED ZERO FILL.	F4810A	68
*	EXIT (X2) = BINARY EQUIVALENT, MINUS IF ERROR.	F4810A	69
*	USES X - 1,2,3,4,6.	F4810A	70
*	B - 2.	F4810A	71
*	A - NONE.	F4810A	72
*		F4810A	73
*	CALLS NONE.	F4810A	74
		F4810A	75
		F4810A	76
655	0000000000 CDB PS 0 ENTRY/EXIT	F4810A	77
656	43152 MX1 42 MASK FOR UPPER 7 CHARACTERS OF PARAMETER	F4810A	78
	66211 SB2 B1+B1 (B2) = 2	F4810A	79
	11416 BX4 X1*X6 EXTRACT UPPER SEVEN CHARACTERS	F4810A	80
	76200 SX2 B0 CLEAR ACCUMULATOR	F4810A	81
657	43166 CDB1 MX1 -6 MASK FOR LOWER 6 BITS	F4810A	82
	20406 LX4 6 POSITION NEXT CHARACTER	F4810A	83
	15641 BX6 -X1*X4 GET CHARACTER	F4810A	84
660	0306000655 ZR X6,CDB IF NO MORE DIGITS	F4810A	85
	7236777732 SX3 X6-1R9-1 CHECK IF ALPHANUMERIC	F4810A	86
661	0323000664 PL X3,CDB2 IF NOT ALPHANUMERIC	F4810A	87
	7236777744 SX3 X6-1R0 CONVERT NEW DIGIT TO BINARY	F4810A	88
662	0333000664 MI X3,CDB2 IF NOT A NUMBER	F4810A	89
	22622 LX6 X2,B2 MULTIPLY BY FOUR	F4810A	90
	36226 IX2 X2+X6 ADD IN NUMBER	F4810A	91
663	20201 LX2 1 MULTIPLY BY TWO	F4810A	92
	36223 IX2 X2+X3 ADD IN NEW DIGIT	F4810A	93
	0400000657 EQ CDB1 LOOP FOR NEXT DIGIT	F4810A	94
		F4810A	95
664	77201 CDB2 SX2 -B1	F4810A	96
	0400000655 EQ CDB RETURN	F4810A	97
		COMPASS	361
		COMPASS	362
665	0000000000 IFP PS RETURN EXIT	COMPASS	363
666	5110011573 SA1 ELFN	CMP30	756
	10611 BX6 X1	CMP30	757
667	5160000231 SA6 E SET ERROR FILE NAME	CMP30	758
		CMP30	759
	RM IFEQ CP#RM,0	CMP30	760
		CMP30	761
	43052 MX0 42 SET INPUT FET	COMPASS	364
670	5110000211 SA1 I	CMP30	762
	76510 SX5 B1	COMPASS	366
	11201 BX2 X0*X1	COMPASS	367
671	36625 IX6 X2+X5	COMPASS	368
	54610 SA6 A1	CMP30	763
	5110000241 SA1 B SET BINARY FET	CMP30	764
672	7170000007 SX7 7	CMP30	765
	11201 BX2 X0*X1	COMPASS	371
	36627 IX6 X2+X7	CMP30	766
673	0302000674 ZR X2,IFP1 IF *B=0*	CMP30	767
	54610 SA6 A1	CMP30	768

674	5110000221	IFP1	SA1	0	SET OUTPUT FET	CMP30	769
	7150000005		SX5	5		CMP30	770
675	66711		SB7	B1+B1		CMP30	771
	11201		BX2	X0*X1		CMP30	772
	74310		SX3	A1		CMP30	773
	36625		IX6	X2+X5		COMPASS	372
676	0302000700		ZR	X2,IFP2	IF *L=0*	CMP30	774
	12723		BX7	X2+X3		CMP30	775
	54610		SA6	A1		COMPASS	375
677	56770		SA7	B7	STORE LIST POINTER	CMP30	776
	66771		SB7	B7+B1		CMP30	777
	0400000703		EQ	IFP3		CMP30	778
700	43700	IFP2	MX7	0		CMP30	779
	5170000116		SA7	CP.LISTF	CLEAR LIST FLAG	CMP30	780
701	7170000506		SX7	OBUF+120B		CMP30	781
	5170000225		SA7	0+4	SET INPUT TO LARGE BUFFER AND OUTPUT SMALL	CMP30	782
702	5170000212		SA7	I+1		CMP30	783
	54771		SA7	A7+B1		COMPASS	382
	54771		SA7	A7+B1		COMPASS	383
703	5110000231	IFP3	SA1	E	SET ERROR FILE	CMP30	784
	11301		BX3	X0*X1		CMP30	785
	74410		SX4	A1		CMP30	786
704	0303000715		ZR	X3,IFP5	IF *0=0*	CMP30	787
	13723		BX7	X2-X3		CMP30	788
	36635		IX6	X3+X5		CMP30	789
705	0317000707		NZ	X7,IFP4	IF NOT SAME FILE AS NORMAL LISTING	CMP30	790
	54710		SA7	A1	CLEAR ERROR FILE	CMP30	791
706	0400000715		EQ	IFP5		CMP30	792
707	12734	IFP4	BX7	X3+X4		CMP30	793
	54610		SA6	A1		CMP30	794
	56770		SA7	B7	STORE LIST POINTER	CMP30	795
	66771		SB7	B7+B1		CMP30	796
710	5110000221		SA1	0		CMP30	797
	0311000715		NZ	X1,IFP5	IF NORMAL OUTPUT FILE	CMP029	11
711	54211		SA2	A1+B1	USE NORMAL OUTPUT BUFFER FOR ERROR FILE	COMPASS	420
	54321		SA3	A2+B1		COMPASS	421
	10622		BX6	X2		COMPASS	422
	22703		LX7	X3		COMPASS	423
712	5160000232		SA6	E+1		COMPASS	424
	54761		SA7	A6+B1		COMPASS	425
	54771		SA7	A7+B1		COMPASS	426
713	5120000225		SA2	0+4		COMPASS	427
	10622		BX6	X2		COMPASS	428
714	5160000235		SA6	E+4		COMPASS	429
715	43700	IFP5	MX7	0	TERMINATE LIST POINTER LIST	CMP30	798
	56770		SA7	B7		CMP30	799
	0400000665		EQ	IFP	RETURN	CMP30	800
						CMP30	801
		RM	ELSE			CMP30	802
						CMP30	803
			SA1	0		CMP30	804
			ZR	X1,IFP1	IF *L=0*	CMP30	805
			SA1	E	CHECK OUTPUT FILE NAMES	CMP30	807
			SA2	0		CMP30	808
			BX7	X1-X2		CMP30	809
			NZ	X7,IFP	IF NOT SAME FILE	CMP30	810
			SA7	A1	SUPPRESS ERROR LISTING	CMP30	811

			IFP1	EQ MX7	IFP 0			CMP30	812
				SA7	CP.LISTF	CLEAR LIST FLAG		CMP30	813
				EQ	IFP	RETURN		CMP30	814
			RM	ENDIF				CMP30	830
								CMP30	831
								CMP30	832
			**	LOV	- LOAD OVERLAY.			CMP30	834
								CMP30	835
			LOV	IFNE	OVERLAY,0			CMP30	836
								CMP30	837
								CMP30	838
	716	0000000000	LOV	PS	RETURN EXIT			CMP30	839
				IF	-DEF,SCOPE2,3			CMP30	840
								CPSA134	67
	717	0100000266	LOV1	RECALL				CMP30	843
	720	5140000067		SA4	RA.LDR	WAIT UNTIL LOADER IS FINISHED		CMP30	844
		0304000717		ZR	X4,LOV1			CMP30	845
								CMP30	847
	721	5140000730		SA4	LOVA+1			CMP30	848
		20427		LX4	59-36			CMP30	849
	722	0324000716		PL	X4,LOV	IF LOADED		CMP30	850
		7110000732		MESSAGE	LOVB,,R			CMP30	851
	724	7160041121		ABORT	,NODUMP			CMP30	852
								CMP30	853
			LIB	IFC	EQ, "CP.OVLIB"			CPS028	160
	727	03171520365300000000	LOVA	DATA	0L"CP.NAME"	LOAD OVERLAY FROM GLOBAL LIBRARY SET		CMP30	855
	730	01000140026437002777		VFD	12/0100B,12/0140B,18/ENDA+1,18/CP.ORG			F4810B	25
			LIB	ELSE				CMP30	857
			LOVA	DATA	0L"CP.OVLIB"	LOAD OVERLAY FROM SPECIFIED LIBRARY		CPS028	161
				VFD	12/0100B,12/2140B,18/ENDA+1,18/CP.ORG			F4810B	26
								F4810B	27
			LIB	ENDIF				CPS064	10
	731	03171520365300000000		DATA	0L"CP.NAME"			CMP30	860
								CMP30	862
	732	55030116245514170104	LOVB	DATA	C* CANT LOAD "CP.NAME"*			CMP30	863
								CMP30	864
			LOV	ENDIF				CMP30	865
			**	SFV	- SET *F VALUE.			CMP30	867
			*	EXIT	TO ARGV ON BAD *F* ARGUMENT.			CMP30	868
								CMP30	869
								CMP30	870
	734	0000000000	SFV	PS	RETURN EXIT			CMP30	871
	735	5110011575		SA1	FVAL			CP139CP	144
		0301000734		ZR	X1,SFV	IF *F=0*		CMP30	878
	736	20106		LX1	6			CMP15	8
		7261777744		SX6	X1-1R0			CMP15	9
	737	0326000746		PL	X6,SFV2	IF *F=NUMBER*		CMP30	879
		7160000004		SX6	NFNAME			CMP15	11
	740	20166		LX1	-6			CMP15	12

741	5226011622	SFV1	SA2	FNAME-1+X6	SEARCH TABLE OF PERMITTED *F=NAME* OPTIONS	CMP30	880
	7266777776		SX6	X6-1		CMP15	14
742	13212		BX2	X1-X2		CMP15	15
	0302000746		ZR	X2,SFV2	IF FOUND	CMP30	881
743	0316000741		NZ	X6,SFV1	IF NOT END OF TALBE	CMP30	882
	7160000006		SX6	1RF		CMP30	883
744	20666		LX6	-6		CMP30	884
	5160011605		SA6	ARGM+3	*BAD CONTROL CARD ARGUMENT - F*	CMP30	885
745	0400000572		EQ	ARGE		CMP30	886
746	5110000114	SFV2	SA1	CP.BATCH	STORE VALUE OF *F SPECIAL SYMBOL	CP139CP	145
	12616		BX6	X1+X6		CP139CP	146
	54610		SA6	A1		CP139CP	147
747	0400000734		EQ	SFV	RETURN	CMP30	888
		**	SSP	- START *SPY*.		CMP30	917
		*		EXIT TO ARGE ON BAD *W* ARGUMENT.		CMP30	918
						CMP30	919
						CMP30	920
		SPY	IFNE	SPY,0		CMP30	921
						CMP30	922
		SSP	PS		RETURN EXIT	CMP30	923
			SA1	SPYPAR		CMP30	924
			MX0	-6		CMP30	925
			BX7	X7-X7		CMP30	926
			ZR	X1,SSP	IF NO *W* ARGUMENT	CMP30	927
			SB7	7		CMP30	928
		SSP1	LX1	6	CONVERT OCTAL TO BINARY	CMP30	929
			BX3	-X0*X1		CMP30	930
			SB6	X3-1R0		CMP30	931
			MI	B6,SSP2	IF CHARACTER LESS THAN *0*	CMP30	932
			GT	B6,B7,SSP4	IF GREATER THAN *7*	CMP30	933
			LX7	3		CMP30	934
			SX2	B6		CMP30	935
			BX1	X1-X3		CMP30	936
			IX7	X7+X2		CMP30	937
			EQ	SSP1	LOOP	CMP30	938
		SSP2	NZ	X1,SSP4	IF NOT END OF ARGUMENT	CMP30	939
			SB6	20B		CMP30	940
			SB7	X7		CMP30	941
			EQ	B7,B6,SSP3	IF *W=20*	CMP30	942
			SB6	B6+B6		CMP30	943
			EQ	B7,B6,SSP3	IF *W=40*	CMP30	944
			SX7	100B	ASSUME *W=100*	CMP30	945
		SSP3	SX6	B1		CMP30	946
			SX1	ENDB+77B	FORM *SPY* PARAMETERS -	CMP30	947
			LX7	24		CMP30	948
			AX1	6	12/ BINWIDTH,	CMP30	949
			BX6	X7+X6	12/ 0,	CMP30	950
			LX6	12	12/ FIRST/100B,	CMP30	951
			BX7	X6+X1	12/ LIMIT/100B,	CMP30	952
			LX7	12	12/ 0	CMP30	953
			SA7	A1		CMP30	954
			SYSTEM	SPY,RCL,A7		CMP30	955
			EQ	SSP		CMP30	956
						CMP30	957
		SSP4	SX6	1RW	ERROR EXIT	CMP30	958
			LX6	-6		CMP30	959
			SA6	ARGM+3	*BAD CONTROL CARD ARGUMENT - W*	CMP30	960

EQ ARGE
SPY ENDIFCMP30 961
CMP30 962
CMP30 963

** TFL - TEST FIELD LENGTH AND START LOADING OVERLAY.

CMP30 965
CMP30 966
CMP30 967
CMP30 968
CMP30 969

750 TFL2 BSS 0

OVL IFNE OVERLAY,0

CPS064 11

750 5110000065 SA1 RA.LWP

CPS064 12

20151 LX1 59-18

CPS064 13

751 0331000756 MI X1,TFL3 IF LOADED FROM A LIBRARY

CPS064 14

5110000064 SA1 RA.PGN

CPS064 15

752 43052 MX0 42

CPS064 16

11601 BX6 X0*X1

CPS064 17

5160000727 SA6 LOVA STORE FILE NAME IN LOADER CALL

CPS064 18

753 54161 SA1 A6+B1

CPS064 19

43014 MX0 12

CPS064 20

7120002040 SX2 2040B THREE-WORD CALL, LOAD OVERLAY FROM FILE

CPS064 21

754 20060 LX0 47-59

CPS064 22

20244 LX2 36

CPS064 23

15610 BX6 -X0*X1

CPS064 24

12662 BX6 X6+X2

CPS064 25

755 54610 SA6 A1

CPS064 26

756 43700 TFL3 MX7 0 CLEAR LOADER REPLY WORD

CPS064 27

5170000067 SA7 RA.LDR

CMP30 972

757 7160140426 LOADREQ LOVA START LOADING OVERLAY

CMP30 973

OVL ENDIF

CPS064 28

CMP30 974

DEBUG IFNE DEBUG

CMP30 975

CMP30 976

MEMORY ECS,TFLB,R FIND OUT WHAT IS ECS/LCM FIELD LENGTH

CMP30 977

SA1 TFLB

CMP30 978

AX1 30

CMP30 979

BX7 X1

CMP30 980

SA7 CP.AFLL SET LCM FIELD LENGTH WORDS

CMP30 981

SA7 CP.NFLL

CMP30 982

EQ TFL RETURN

CMP30 983

CMP30 984

TFLB DATA 0

CMP30 985

CMP30 986

DEBUG ENDIF

CMP30 987

CMP30 988

762 0000000000 TFL PS RETURN EXIT

CMP30 989

763 5110000202 SA1 CP.NFLS TEST FIELD LENGTH

CMP30 990

7261742431 SX6 X1-MIN.FL

CMP30 991

764 0326000750 PL X6,TFL2 IF ENOUGH TO LOAD OVERLAY

CPS028 162

7160150515 MEMORY CM,TFLBB,RECALL,,NABORT REQUEST MIN.FL

CPSA132 5

770 5120001011 SA2 TFLBB GET RETURNED FL FROM REQUEST/REPLY WORD

CPSA132 6

21236 AX2 30-0

F4810B 31

771 7232742431 SX3 X2-MIN.FL

F4810B 32

10622 BX6 X2

F4810B 33

772 5160000202 SA6 CP.NFLS RESET FIELD LENGTHS

F4810B 34

		5160000201		SA6	CP.AFLS		F4810B	35
773	0323000750			PL	X3,TFL2	IF ENOUGH FL NOW, GO START LOADING OVL	F4810B	36
		7120035445		SX2	MIN.FL+77B	ELSE, SEND ERROR MESSAGE AND ABORT	F4810B	37
774	5110001007			SA1	TFLA+2		CPSA234	8
		10611		BX6	X1	WORD OF MESSAGE WHICH WILL CONTAIN FL	CPSA234	9
		43066		MX0	-6		CMP30	995
775	11302			BX3	X0*X2	ROUND UP TO A MULTIPLE OF 100B	CMP30	996
	66700			SB7	B0		CMP30	997
		43071		MX0	-3		CMP30	998
776	15430		TFL1	BX4	-X0*X3	CONVERT TO OCTAL	CMP30	1000
	22574			LX5	X4,B7		CMP30	1001
		6177000006		SB7	B7+6		CMP30	1002
777	21303			AX3	3		CMP30	1003
	36665			IX6	X6+X5	OR IN DIGIT	CPSA234	10
		0313000776		NZ	X3,TFL1		CMP30	1005
1000	5160001007			SA6	TFLA+2	STORE IN MESSAGE	F4810B	39
		7110001005		MESSAGE	TFLA,,R		CMP30	1007
1002	7160041121			ABORT	,NODUMP		CMP30	1008
							CMP30	1009
1005	55550317152001232355		TFLA	DIS	,* COMPASS NEEDS AT LEAST 00000B SCM.*		CMP30	1010
1011	00000353460000000000		TFLBB	VFD	30/MIN.FL,30/0 MEMORY REQUEST/REPLY WORD		CPSA132	7
							CPS028	178
			RM	ENDIF			CPS028	179
			**	END OF	(0,0) OVERLAY.		CMP30	1034
							CMP30	1035
							CMP30	1036
		1765	R	ERRMI	CP.ORG-*	INITIALIZATION CODE IS TOO LARGE	CMP30	1037

1412THE

IFEQ OVERLAY,0 SEGMENT CONTROL

COMPASS 594

ORG CP.ORG+1

CMP30 1038

CMP30 1039

IDENT MAIN PROGRAM.

COMPASS 596

CMP30 1040

ELSE

CMP30 1041

IDENT "CP.NAME",CP.ORG+1,CMP MAIN PROGRAM

CMP30 1042

CP139CP 157

COMMENT CYBER 70/ MODEL "MODEL"

CMP30 1044

COMMENT COMPREHENSIVE ASSEMBLER PROGRAM VERSION "VERSION".

CMP30 1045

3000

ORG CP.ORG+1

CMP30 1046

CMP30 1047

ENDIF

CMP30 1048

CMP30 1049

IFNE DEBUG,0,1 PATCH SPACE

CMP14 12

BSSZ 100B

CMP14 13

1412THE

** FET/FIT EQUATES FOR INPUT/OUTPUT/LGO FILES.

CMP30 1050
COMPASS 602
COMPASS 603

```
1 RM IFEQ CP#RM,0
2
3      211 I EQU CP.IFET
4      221 O EQU CP.OFET
5      241 B EQU CP.BFET
6      231 E EQU CP.EFET
7
8 RM ELSE
9
10 I EQU CP.IFIT
11 O EQU CP.OFIT
12 B EQU CP.BFIT
13 E EQU CP.EFIT
14
15 RM ENDIF
```

CMP30 1051
CMP30 1052
CMP30 1053
CMP30 1054
CMP30 1055
CPSA142 38
CMP30 1056
CMP30 1057
CMP30 1058
CMP30 1059
CMP30 1060
CMP30 1061
CPSA142 39
CMP30 1062
CMP30 1063

** FET/FIT FOR SCRATCH FILE.

CMP30 1065
CMP30 1066

```
3000 32323232322214000007 SCR FET ZZZZRL,,SBUFL,7
      3000 RM IFEQ CP#RM,0
          S EQU SCR
          RM ELSE
          S FILE LFN=ZZZZRL,FO=SQ,BT=,RT=U,MRL=2550,CM=NO
          BSSZ SCR+40B-*
          RM ENDIF
```

COMPASS 607
CMP30 1067
CMP30 1068
CMP30 1069
CMP30 1070
CMP30 1071
CMP30 1076
CMP30 1077
CMP30 1078

** FET/FIT FOR XTEXT FILES.

CMP30 1080
CMP30 1081

```
3010 000000000000000000003 XTF FET ,,BBUFL,3,4000B
      3010 RM IFEQ CP#RM,0
          X EQU XTF
          RM ELSE
          X FILE FO=SQ,BT=,RT=W,MRL=5120,CM=NO,WSA=VALUES,PD=INPUT
          BSSZ XTF+40B-*
          RM ENDIF
```

COMPASS 610
CMP30 1082
CMP30 1083
CMP30 1084
CMP30 1085
CMP30 1086
CMP30 1091
CMP30 1092
CMP30 1093

** FET/FIT FOR CROSS-REFERENCE SCRATCH FILE.

CMP30 1110
CMP30 1111

```
3020 32323232322215000007 REF FET ZZZZRM,,RBUFL,7
```

COMPASS 616
CMP30 1112
CMP30 1113

	3020	RM	IFEQ	CP#RM,0		CMP30	1114
		R	EQU	REF		CMP30	1115
		RM	ELSE			CMP30	1116
1		R	FILE	LFN=ZZZZZRM,FO=SQ,BT=C,RT=S,CM=NO		CMP30	1121
2			BSSZ	REF+40B-*		CMP30	1122
3		RM	ENDIF			CMP30	1123
4						COMPASS	619
5			IFEQ	CP#RM,0,1		CMP30	1124
6	3030	T	FET	ZZZZZRM,TBUF,RBUFL,7		CMP30	1125
7						COMPASS	622
8			IFEQ	OVERLAY,0,2		CPS064	29
9			IFEQ	CP#RM,0,1		CMP30	1126
10		C	FET	ZZZZZRM,CBUF,BUCKET-CBUF,7		CMP30	1127
11							
12							
13							
14							
15		**		FET/FIT FOR DEBUG OUTPUT FILE.		CMP30	1129
16						CMP30	1130
17						CMP14	14
18		DEBUG	IFNE	DEBUG		CMP14	15
19						CMP14	16
20		DBG	FET	SNAPPER,,DBUFL,5		CMP30	1131
21						CMP30	1132
22		RM	IFEQ	CP#RM,0		CMP30	1133
23		D	EQU	DBG		CMP30	1134
24		RM	ELSE			CMP30	1135
25		D	FILE	LFN=SNAPPER,FO=SQ,BT=,RT=W,MRL=137,OF=N,CF=N,PD=OUTPUT		CMP30	1140
26			BSSZ	DBG+40B-*		CMP30	1141
27		RM	ENDIF			CMP30	1142
28						CMP14	19
29		DEBUG	ENDIF			CMP14	20
30							
31							
32							
33							
34		**		ASSEMBLER CONTROL FLAGS.		COMPASS	626
35						COMPASS	627
36						COMPASS	628
37	3040	00000000000000000000	LSYSMAC	DATA	0	LENGTH OF SYSTEMS MACROS	COMPASS 629
38	3041	0000000000000000035736	LOCORE	VFD	60/BUCKET	FWA AVAILABLE STORAGE	COMPASS 630
39	3042	00000000000000000000	SIZCORE	DATA	0	SIZE OF AVAILABLE CORE	COMPASS 631
40	3043	0000000000000000035346	MAXCORE	CON	MIN.FL	MAXIMUM SCM USED DURING CURRENT ASSEMBLY	CMP30 1143
41	3044	00000000000000000000	BLCM	DATA	0	BATCH MAXIMUM ECS/LCM USED	CPS028 195
42	3045	000000000000000000001	FLLF	DATA	1	FIXED ECS/LCM FIELD LENGTH FLAG	CPS028 196
43	3046	00000000000000000000	LCMMIC	DATA	0	LCM SYSMIC POINTER	CMP30 1144
44	3047	00000000000000000000	LCMSYM	DATA	0	LCM SSYMS POINTER	CMP30 1145
45	3050	00000000000000000000	LCMOPC	DATA	0	LCM OPTAB POINTER	CMP30 1146
46	3051	00000000000000000000	LCMMAC	DATA	0	LCM MACDEF POINTER	CMP30 1147
47	3052	000000000000000000200	LCMSYS	DATA	200B	LWA+1 OF SYSTEM MACROS IN LCM	CPS028 197
48	3053	000000000000000000200	LCMPGM	DATA	200B	LWA+1 OF PROGRAM MACROS IN LCM	CP096A 54
49	3054	000000000000000000200	LCMEND	DATA	200B	LCM AVAILABLE SPACE POINTER	CMP30 1148
50	3055	00000000000000000000	LSTTHOU	DATA	0	=1 USE LAST 1000B WORDS (SET IN RFL,DFL)	CPSA125 7
51	3056	77777777760000000000	MAXFL	VFD	30/-1,30/0	MAXIMUM FL AVAILABLE TO JOB	F4810B 41
52	3057	000000000000000060000	MIDFLN	CON	MIDFL	FL AT WHICH TABLES DUMPED TO FILES	F4810B 42
53						CP096A	55
54			RM	IFEQ	CP#RM,7	CP096A	56
55							
56							
57							
58							
59							
60							

			O.SYMTAB	DATA	0	LCM SYMBOL TABLE ORIGIN	CP096A	57
			L.SYMTAB	DATA	0	LCM SYMBOL TABLE LENGTH	CP096A	58
			LCMB	BSSZ	100B	LCM MOVE/CLEAR BUFFER	CP096A	59
1			RM	ELSE			CP096A	60
2	3060		LCMB	BSS	0		CP096A	61
3			RM	ENDIF			CP096A	62
4							CP096A	63
5	3060	00000000000000000000	EOFINP	DATA	0	FLAG FOR END OF RECORD ON INPUT	COMPASS	634
6	3061	00000000000000000000	FMODE	DATA	0	*F VALUE (COMPASS = 0, RUN = 1, FTN = 2)	CMP30	1149
7	3062	00000000000000000000	XLIST	DATA	0	EXTERNAL LIST CONTROL	COMPASS	638
8	3063	2	FTNE	BSSZ	2	FIRST WORD OF EFET AND BUFFER LENGTH FROM F	CPSA184	5
9	3065	46000000000000000000	SHORTEJ	DATA	1L-	SHORT EJECT CARRIAGE CONTROL CHARACTER	CPSA142	40
10	3066	34000000000000000000	LONGEJ	DATA	1L1	LONG EJECT CARRIAGE CONTROL CHARACTER	CPSA142	41
11	3067	00000000000000000000	COMPPD	DATA	0	SAVES COMPILER VALUE OF CP.PD	F4810A	99
12	3070	00000000000000000000	COMPPS	DATA	0	SAVES COMPILER VALUE OF CP.PS	F4810A	100
13	3071	00000000000000000000	COMPPW	DATA	0	SAVES COMPILER VALUE OF CP.PW	CPSA265	37
14	3072	00000000000000000005	NEJF	CON	5	SET TO ZERO IF *N* ARGUMENT SPECIFIED	F4810A	101
15	3073	00000000000000000000	PSIZE	DATA	0	EJECT PAGE SIZE CP.PS+5(0 IF *BL* NOT SPEC)	CPSA181	7
16	3074	00000000000000000000	FRSTLIN	DATA	0	0 PRINT DENSITY NOT TO BE CHANGED	F4810A	103
17			*			NZ CHAR. TO BE PRINTED TO CHANGE PRINT DEN	F4810A	104
18	3075	23555555555555555555	LASTLIN	DATA	1HS	STORES CHAR. TO RESET PRINTER TO SIX.	CPS236	12
19	3076	00000000000000000000	BTIME	DATA	0	BATCH CPU TIME	CMP30	1150
20	3077	55030403552431200555	TLINE	DATA	H* CDC TYPE	CPU ASSEMBLY*	CPS240	5
21								
22								
23								
24								
25			**	COMMON CELLS AND FLAGS.			COMPASS	643
26							COMPASS	644
27							COMPASS	645
28	3102		CLP1	BSS	0		COMPASS	646
29	3102	00000000000000000000	LOCSYM	DATA	0	LOCATION SYMBOL	COMPASS	647
30	3103	00000000000000000000	IOP	DATA	0	OP CODE SYMBOL (MUST FOLLOW LOCSYM)	COMPASS	648
31	3104	00000000000000000000	ORGCTR	DATA	0,0	ORIGIN AND RELOCATION	COMPASS	649
32	3106	00000000000000000000	LOCCTR	DATA	0,0	LOCATION COUNTER AND RELOCATION	COMPASS	650
33	3110	00000000000000000000	POSCTR	DATA	0	INTERNAL POSITION COUNTER	COMPASS	651
34	3111	00000000000000000000	CLF	DATA	0	CONDITIONAL LOAD FLAG (BIT 59)	CMP30	1152
35	3112	00000000000000000000	QVAL	DATA	0,0	SYMBOL QUAL VALUE	COMPASS	652
36	3114	00000000000000000000	MACHINE	DATA	0	0 FOR CP, 1 FOR PP	COMPASS	653
37	3115	00000000000000000000	MTYPE	DATA	0	OBJECT PROCESSOR TYPE (0=ANY,1=6000,2=7000)	CMP30	1153
38	3116	00000000000000000000	PPTYPE	DATA	0	TYPE OF PP ASSEMBLY -	CPSA281	8
39						-3 IF 180 PPU	CPSA281	9
40						-2 IF MCU	CPSA281	10
41						-1 IF BCU	CPSA281	11
42						0 IF 6XXX	CPSA281	12
43						1 IF 7600	CPSA281	13
44	3117	00000000000000000000	RMODE	DATA	0	REVERSED ADDRESS MODE FOR INTEL 8080	F4820A	4
45	3120	00000000000000000000	IDNAM	DATA	0	NAME FROM IDENT CARD	COMPASS	655
46	3121	00000000000000000000	SYNAME	DATA	0	SYSTEXT GENERATION NAME	COMPASS	656
47	3122	00007071333333333333	INVENT	DATA	0R'?000000	8-CHAR INVENTED SYMBOL NAME	COMPASS	657
48	3123	00000000000000000000	LWORD	DATA	0	WORD LENGTH -	CPSA281	14
49						8 FOR MCU	CPSA281	15
50						12 FOR PPU (6XXX OR 7600)	CPSA281	16
51						16 FOR BCU OR 180	CPSA281	17
52						60 FOR CPU	CPSA281	18
53	3124	00000000000000000000	VWORD	DATA	0	VFD AND CON ASSEMBLY MODE -	CPSA288	10
54						0 - NORMAL ASSEMBLY	CPSA288	11

4 - FOR 180 PPU ASSEMBLIES ONLY, USE ONLY					CPSA288	12
THE LOWER 12 BITS FOR *CON* AND *VFD*					CPSA288	13
USED BY *CON* AND *VFD*					CPSA288	14
MEMORY SIZE FOR PP ASSEMBLIES (FIELD SIZE)					CPSA281	19
NUMBER OF CHARACTERS PER WORD (2 OR 10)					COMPASS	659
ABSOLUTE ASSEMBLY FLAG					COMPASS	660
PP JUMP FLAG					COMPASS	662
NO LABEL FLAG					COMPASS	664
RADIX FOR UNSPECIFIED CONSTANTS					COMPASS	665
RADIX FOR SPECIAL CONSTANTS					COMPASS	666
BASE TYPE					CMP30	1154
FORCE NEXT UPPER					COMPASS	668
FIRST CARD GROUP FLAG					COMPASS	669
TITLE FLAG					COMPASS	670
COMMENT COLUMN					COMPASS	671
COLUMN NUMBERS-1 OFOP, ADDR					COMPASS	672
CURRENT COLUMN NUMBER					COMPASS	673
CURRENT CHARACTER					COMPASS	674
INTERMEDIATE I/O FLAG					COMPASS	675
ASSEMBLY ERROR COUNT					COMPASS	676
WARNING ERROR COUNT					COMPASS	677
CHARACTER TYPE					CMP30	1155
USETAB INDEX					CMP30	1156
LITAB INDEX					COMPASS	681
EPTAB INDEX					COMPASS	682
DEFAULT SYMBOL INDEX					CMP17	1
SEGTAB INDEX					COMPASS	683
LCM LENGTH					COMPASS	684
LOCAL LCM BLOCK RELOCATION (BITS 32-24)					CMP30	1157
COUNT OF COMMON BLOCKS					COMPASS	685
STATEMENT COUNT					COMPASS	686
SYMBOL COUNT					COMPASS	687
MAX ECS/LCM USED DURING CURRENT ASSEMBLY					CPS028	198
ASSEMBLY TIME					COMPASS	688
R= SWITCH					COMPASS	689
NUMBER OF SYSTEM SYMBOLS DEFINED					CMP25	2
XREF TYPE (-1=PAGE/LINE, 0=ADDRESS, 1=BOTH)					CPS010	19
RECURSION LIMIT EXCEEDED FLAG					CPS004	1
IF DEF/EXT/REG FLAG - TO AVOID U-ERRORS					CMP146	1
*-CLP1					COMPASS	691
					COMPASS	692
					COMPASS	693
TEXT OF TITLE					COMPASS	694
					COMPASS	695
TITBUFL					COMPASS	696
2,COMPASS "VERSION".					CPS028	199
					COMPASS	698
					COMPASS	699
4APAGE					COMPASS	700
					COMPASS	701
PAGE COUNT IN CODED FORM					COMPASS	702
ERROR FILE PAGE COUNT					CPSA142	42
					CMP30	1159
20H ASSEMBLY ABORTED -					CMP30	1160
12CPASS 1 TABLE					CMP30	1161
10H OVERFLOW					CMP30	1162
20CASSEMBLING XXXXXXXX					CMP30	1163

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		ERRLETS	RMT			COMPASS	729
			CON	1R;A		COMPASS	730
			RMT			COMPASS	731
1		ERDIR	RMT			COMPASS	732
2			DIS	5,;B		COMPASS	733
3			RMT			COMPASS	734
4			ENDM			COMPASS	735
5							
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9		**		STATEMENT FLAGS SAVED ON INTERMEDIATE.		COMPASS	737
10						COMPASS	738
11						COMPASS	739
12	3303	00000000000000000000	OPTYPE	DATA 0	OP CODE TABLE ENTRY	COMPASS	740
13	3304	00000000000000000000	FLAG	DATA 0	A GENERAL 60-BIT NUMBER	COMPASS	741
14	3305	00000000000000000000	IND	DATA 0	INDICATOR WORD FOR INTERMEDIATE FILE	COMPASS	742
15	3306	00000000000000000000	CCT	DATA 0	CARD COUNT FOR THIS STATEMENT	COMPASS	743
16	3307	00000000000000000000	NOAS	DATA 0	NO-ASSEMBLY FLAG	COMPASS	744
17	3310	00000000000000000000	TXTFLG	DATA 0	TEXT DEFINITION FLAG	COMPASS	745
18	3311	00000000000000000000	MICFLG	DATA 0	MICRO/CONCATENATION SUBSTITUTION FLAG	COMPASS	746
19	3312	00000000000000000000	MACHFLG	DATA 0	0 ERROR INDICATED *MACHINE* VIOLATION	CPSA140	6
20						COMPASS	747
21		*		MODE INDICATORS.		COMPASS	748
22						COMPASS	749
23	3313	00000000000000000000	SYSFLG	DATA 0	SYSTEMS MACRO FLAG	COMPASS	750
24	3314	00000000000000000000	MACFLG	DATA 0	PROGRAMMER MACRO FLAG	COMPASS	751
25	3315	00000000000000000000	ECHFLG	DATA 0	DUPLICATION FLAG	COMPASS	752
26	3316	00000000000000000000	RMTFLG	DATA 0	REMOTE GENERATED FLAG	COMPASS	753
27	3317	00000000000000000000	LIBFLG	DATA 0	LIBRARY SOURCE FLAG	COMPASS	754
28		5	LFLG	EQU *-SYSFLG		COMPASS	755
29						COMPASS	756
30		*		ERROR FLAGS.		COMPASS	757
31						COMPASS	758
32	3320		ERFLAGS	BSS 0		COMPASS	759
33	3320	00000000000000000000	L	ERROR	(LOCATION FIELD BAD.)	COMPASS	760
34	3321	00000000000000000000	O	ERROR	(OPERATION FIELD BAD.)	COMPASS	761
35	3322	00000000000000000000	A	ERROR	(ADDRESS FIELD BAD.)	COMPASS	762
36	3323	00000000000000000000	D	ERROR	(DOUBLY DEFINED SYMBOL. THE FIRST DEFINITION HOLDS.)	COMPASS	763
37	3324	00000000000000000000	E	ERROR	(ECHO, DUP, RMT, OR MACRO ILLEGALLY NESTED.)	COMPASS	764
38	3325	00000000000000000000	R	ERROR	(DATA ORIGIN OUTSIDE BLOCK OR IN BLANK COMMON.)	COMPASS	765
39	3326	00000000000000000000	F	ERROR	(NUMBER OF ENTRIES EXCEEDS PERMISSIBLE AMOUNT.)	COMPASS	766
40	3327	00000000000000000000	U	ERROR	(UNDEFINED SYMBOL. VALUE ASSUMED 0.)	COMPASS	767
41	3330	00000000000000000000	V	ERROR	(BIT COUNT ERROR ON VFD (MUST BE 0@COUNT@60).)	COMPASS	768
42	3331	00000000000000000000	P	ERROR	(CONSULT LISTINGS FOR REASON BEHIND P-ERROR.)	COMPASS	769
43	3332	00000000000000000000	N	ERROR	(NEGATIVE RELOCATION ON ENTRY POINT.)	COMPASS	770
44		13	NFERS	EQU *-ERFLAGS	COUNT OF FATAL ERROR FLAGS	COMPASS	771
45						COMPASS	772
46		*		NON-FATAL ERROR FLAGS.		COMPASS	773
47						COMPASS	774
48	3333	00000000000000000000	1	ERROR	(LOCATION SYMBOL BAD. SYMBOL NOT DEFINED.)	COMPASS	775
49	3334	00000000000000000000	2	ERROR	(ADDRESS ERROR ON SYMBOL DEFINITION.)	COMPASS	776
50	3335	00000000000000000000	3	ERROR	(DUPLICATE MACRO DEFINITION. NEW ONE OVERRIDES.)	COMPASS	777
51	3336	00000000000000000000	4	ERROR	(BAD FORMAL PARAMETER NAME IGNORED.)	COMPASS	778
52	3337	00000000000000000000	5	ERROR	(CPU OPERATION SYNTAX INCORRECTLY SPECIFIED.)	COMPASS	779
53	3340	00000000000000000000	6	ERROR	(LOCATION FIELD MEANINGLESS.)	COMPASS	780
54	3341	00000000000000000000	7	ERROR	(ADDRESS VALUE EXCEEDS FIELD SIZE, RESULT TRUNCATED.)	COMPASS	781
55							
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3342	00000000000000000000	8	ERROR	(MISSING OR EXTRA ADDRESS SUBFIELD.)	COMPASS	782
3343	00000000000000000000	9	ERROR	(MICRO SUBSTITUTION ERROR. NO SUBSTITUTION.)	COMPASS	783
3344		WD45ERR	BSS	0	CPSA297	19
3344	00000000000000000000	+	ERROR	(STORE AT NEXT INSTR+1 FOR PIPELINED SYSTEM.)	CPSA297	20
	25	LEFLG	EQU	*-ERFLAGS COUNT OF FATAL AND NON-FATAL FLAGS	COMPASS	784
		*		TOTAL ERROR FLAG.	COMPASS	785
					COMPASS	786
					COMPASS	787
3345	00000000000000000000	EFLG	DATA	0 TOTAL ERROR FLAG	COMPASS	788
	26	LERFLAGS	EQU	*-ERFLAGS TOTAL COUNT OF ERROR FLAGS	COMPASS	789
		*		LIST CONTROL FLAGS.	COMPASS	791
					COMPASS	792
					COMPASS	793
			MACRO	LISTOP,LET,VALUE	COMPASS	794
		LET	VFD	12/2R_LET+2000B-1LL,48/VALUE	COMPASS	795
			VFD	60/VALUE	COMPASS	796
		LIST.	SET	LIST.*2	CMP30	1182
			IFNE	VALUE,,1	CMP30	1183
		LIST.	SET	LIST.+1	CMP30	1184
			ENDM		COMPASS	797
					COMPASS	798
					COMPASS	799
	0	LIST.	SET	0	CMP30	1185
3346		LISTOPS	BSS	0	COMPASS	800
3346	20010000000000000000	LA	LISTOP	0 SUBSTITUTED MICRO/CONCAT LINES	COMPASS	801
3350	20020000000000000001	LB	LISTOP	1 BINARY CONTROL CARDS	COMPASS	802
3352	20030000000000000000	LC	LISTOP	0 CONTROL CARDS	COMPASS	803
3354	20040000000000000000	LD	LISTOP	0 DETAIL OF GENERATED CODE	COMPASS	804
3356	20050000000000000000	LE	LISTOP	0 DUPLICATIONS	COMPASS	805
3360	20060000000000000000	LF	LISTOP	0 IF-SKIPPED LINES	COMPASS	806
3362	20070000000000000000	LG	LISTOP	0 GENERATED CODE	COMPASS	807
3364	20140000000000000001	LL	LISTOP	1 MASTER LIST CONTROL	COMPASS	808
3366	20150000000000000000	LM	LISTOP	0 MACRO EXPANSIONS	COMPASS	809
3370	20160000000000000001	LN	LISTOP	1 UNREFERENCED NON-SST SYMBOLS	CMP19	4
3372	20220000000000000001	LR	LISTOP	1 ACCUMULATE AND LIST REFERENCES	COMPASS	810
3374	20230000000000000000	LS	LISTOP	0 SYSTEM MACRO EXPANSIONS	COMPASS	811
3376	20240000000000000000	LT	LISTOP	0 UNREFERENCED SST SYMBOLS	CMP19	5
3400	20300000000000000000	LX	LISTOP	0 XTEXT SOURCE CARDS	COMPASS	812
	34	LLISTOPS	EQU	*-LISTOPS	COMPASS	813
	16	NLISTOPS	EQU	LLISTOPS/2	CMP30	1186

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**	MANAGED TABLES ARE USED TO CONTAIN ALL VARIABLE COMPASS DATA.				COMPASS	815
*	THE TABLES ARE CONTROLLED BY 2 POINTERS, O.TNAM AND L.TNAM.				COMPASS	816
*	(O.TNAM) = ORIGIN OF TABLE *TNAM*.				COMPASS	817
*	(L.TNAM) = LENGTH OF TABLE *TNAM*.				COMPASS	818
*	THE TABLES ARE MANAGED BY ROUTINE *ALC*.				COMPASS	819
					COMPASS	820
ORIGINS	BSS	0	TABLE OF ORIGIN ADDRESSES		COMPASS	821
					COMPASS	822
**	INTER - INTERMEDIATE FILE.				COMPASS	824
*	INTER IS USED TO CONTAIN THE INTERMEDIATE FILE IF IT				COMPASS	825
*	WILL FIT IN CORE.				COMPASS	826
					COMPASS	827
*	ENTRY = 3 WORDS, SEQUENCE NUMBERS, AND COMPRESSED TEXT.				COMPASS	828
*					COMPASS	829
*	WORD 1.				COMPASS	830
*					COMPASS	831
*	BITS	59-48	A COPY OF BITS 59-48 OF OPTYPE. THIS		COMPASS	832
*			IS THE SAME AS THE OPERATION CODE TABLE		COMPASS	833
*			ENTRY.		COMPASS	834
*	BIT	47	UNUSED AND ZERO.		CMP24	7
*	BITS	46-45	SEQ FLAG. IF THIS IS 00, THEN THE SEQUENCE		CMP24	8
*			FIELDS OF THIS STATEMENT ARE BLANK AND ARE		CMP24	9
*			NOT RECORDED ON THE INTERMEDIATE FILE.		CMP24	10
*			IF THIS IS 01, THE SEQUENCE FIELDS ARE IN		CMP24	11
*			MODIFY FORMAT, ONE WORD PER CARD IMAGE.		CMP24	12
*			IF THIS IS 10, THE SEQUENCE FIELD IS TWO		CMP24	13
*			WORDS AND IS THE SAME FOR ALL CARDS IN THE		CMP24	14
*			STATEMENT (E.G. MACRO GENERATED), SO THE		CMP24	15
*			TWO-WORD SEQUENCE FIELD IS RECORDED ONLY		CMP24	16
*			ONCE ON THE INTERMEDIATE FILE.		CMP24	17
*			IF THIS IS 11, THE INTERMEDIATE FILE		CMP24	18
*			CONTAINS A TWO-WORD SEQUENCE FIELD FOR		CMP24	19
*			EACH CARD IN THE STATEMENT.		CMP24	20
*	BIT	44	FLAG FLAG. IF THIS IS 0, THEN THE FLAG		COMPASS	840
*			WORD IS ZERO, AND IS NOT INCLUDED ON		COMPASS	841
*			THE INTERMEDIATE FILE. THE FLAG		COMPASS	842
*			WORD IS NON-ZERO ONLY FOR SOME PSEUDO		COMPASS	843
*			INSTRUCTIONS.		COMPASS	844
*	BIT	43	IND FLAG. IF THIS IS 0, THEN THE IND		COMPASS	845
*			WORD IS ZERO, AND IS NOT INCLUDED ON		COMPASS	846
*			THE INTERMEDIATE FILE. THE IND WORD		COMPASS	847
*			CONTAINS ERROR FLAGS AND OTHER INDICATORS.		COMPASS	848
*	BIT	42	UNUSED.		COMPASS	849
*	BITS	41-34	LENGTH OF INTERMEDIATE RECORD.		COMPASS	850
*	BITS	33-30	CCT - CARD COUNT, I.E., NUMBER OF CARDS		COMPASS	851
*			WHICH COMPRISE THIS STATEMENT.		COMPASS	852
*	BITS	29-00	COPY OF BITS 29-00 OF OPTYPE.		COMPASS	853
					COMPASS	854
					COMPASS	855
*	WORD 2 - PRESENT EXPLICITLY IF THE IND BIT IS 1 IN WORD 1.				COMPASS	856
*	IF IT IS 0, THEN WORD 2 CAN BE ASSUMED TO HAVE A VALUE ZERO.				COMPASS	857
					COMPASS	858
*	BITS	59-30	THESE CONTAIN A RECORD OF THE INDICATORS		COMPASS	859

	*	WHICH WERE SET. A 1-BIT INDICATES	COMPASS	860
	*	THAT THE CORRESPONDING INDICATOR WAS ON.	COMPASS	861
	*	THESE CONTAIN A RECORD OF THE ERROR FLAGS	COMPASS	862
1	*	WHICH WERE SET. A 1-BIT INDICATES THAT	COMPASS	863
2	*	AN ERROR FLAG WAS ON. THE EXACT ORDER	COMPASS	864
3	*	OF THESE ERROR BITS DEPENDS UPON THE	COMPASS	865
4	*	ORDER IN WHICH THE ERROR ARE LISTED	COMPASS	866
5	*	IN THE ERROR LIST.	COMPASS	867
6	*		COMPASS	868
7	*		COMPASS	869
8	*	WORD 3 - PRESENT EXPLICITLY IF FLAG = 1 IN WORD 1. IF	COMPASS	870
9	*	IT IS 0, THEN WORD 3 CAN BE ASSUMED TO BE ZERO.	COMPASS	871
10	*		COMPASS	872
11	*	BITS 59-00 CONTENTS OF FLAG.	COMPASS	873
12	*		COMPASS	874
13	*		COMPASS	875
14	*	WORDS 4-N - SEQUENCE NUMBER FIELD IF SEQ IN WORD 1 IS NOT 00.	CMP24	21
15	*	THE LENGTH OF THIS ENTRY DEPENDS ON THE VALUE OF SEQ AS	CMP24	22
16	*	FOLLOWS.	CMP24	23
17	*	SEQ = 00 0 WORDS.	CMP24	24
18	*	SEQ = 01 (CCT) WORDS.	CMP24	25
19	*	SEQ = 10 2 WORDS.	CMP24	26
20	*	SEQ = 11 2*(CCT) WORDS.	CMP24	27
21	*		CMP24	28
22	*	WORD 4 - IF SEQ = 01 (MODIFY *A* MODE).	CMP24	29
23	*		COMPASS	893
24	*	BITS 59-18 IDENTIFIER NAME LEFT JUSTIFIED WITH	COMPASS	894
25	*	ZERO FILL.	COMPASS	895
26	*	BITS 17-00 SEQUENCE NUMBER IN BINARY.	COMPASS	896
27	*		CMP24	30
28	*	WORD 4 - IF SEQ = 10 OR 11.	CMP24	31
29	*		CMP24	32
30	*	BITS 59-48 ZERO.	CMP24	33
31	*	BITS 47-00 COLUMNS 73-80 OF CARD IMAGE.	CMP24	34
32	*		CMP24	35
33	*	WORD 5 - IF SEQ = 10 OR 11.	CMP24	36
34	*		CMP24	37
35	*	BITS 59-00 COLUMNS 81-90 OF CARD IMAGE.	CMP24	38
36	*		COMPASS	897
37	*		COMPASS	898
38	*	WORDS N-M - COMPRESSED CARD TEXT TERMINATED WITH 12-BITS	COMPASS	899
39	*	OF ZERO.	COMPASS	900
40			COMPASS	901
41			COMPASS	902
42		3402 000000000000000035736 INTER TABLE	COMPASS	903
43				
44				
45				
46				
47	**	OPTAB - OPERATION CODE TABLE.	COMPASS	905
48	*	CONTAINS THE NAME AND INFORMATION ABOUT EVERY OPERATION	COMPASS	906
49	*	CODE.	COMPASS	907
50	*		COMPASS	908
51	*	ENTRY = 2 WORDS.	COMPASS	909
52	*		COMPASS	910
53	*	WORD 1 (PPU, PSEUDO, MACRO, OR MACROE)	COMPASS	911
54	*		COMPASS	912
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*	BITS	59-48	LINK FIELD FOR HASHING.	COMPASS	913
*	BITS	47-00	OPERATION NAME RIGHT JUSTIFIED.	COMPASS	914
*				COMPASS	915
*				COMPASS	916
*		WORD 1 (CENTRAL PROCESSOR OR OPDEF)		CMP10	1
*				COMPASS	918
*	BITS	59-48	LINK FIELD FOR HASHING.	COMPASS	919
*	BITS	47-36	2-CHARACTER MNEMONIC.	COMPASS	920
*	BITS	35-28	N1	COMPASS	921
*	BITS	27-20	N2	COMPASS	922
*	BITS	21-12	N3	COMPASS	923
*	BITS	11-00	0055	COMPASS	924
*				COMPASS	925
*		WHERE N1, N2, AND N3 ARE -		COMPASS	926
*				COMPASS	927
*	BIT	7	LEADING SIGN	COMPASS	928
*			0 - PLUS	COMPASS	929
*			1 - MINUS	COMPASS	930
*	BITS	6-5	REGISTER NAME.	COMPASS	931
*			0 - BLANK	COMPASS	932
*			1 - A	COMPASS	933
*			2 - B	COMPASS	934
*			3 - X	COMPASS	935
*	BITS	4-3	OPERATOR.	COMPASS	936
*			0 - BLANK OR PLUS (+)	COMPASS	937
*			1 - MINUS (-)	COMPASS	938
*			2 - MULITPLY (*)	COMPASS	939
*			3 - DIVIDE (/)	COMPASS	940
*	BITS	2-1	REGISTER NAME.	COMPASS	941
*			0 - BLANK	COMPASS	942
*			1 - A	COMPASS	943
*			2 - B	COMPASS	944
*			3 - X	COMPASS	945
*	BIT	0	CONSTANT (Q-FIELD)	COMPASS	946
*				CMP10	2
*				CMP10	3
*		WORD 2. (CPU)		CMP10	4
*				CMP10	5
*	BITS	59-57	0	CMP10	6
*	BITS	56-48	VALUE - UPPER 9 BITS OF OPCODE.	CMP10	7
*	BIT	47	PROGRAM DEFINED FLAG.	CMP30	1187
*	BITS	46-33	UNUSED.	F4830CP	6
*	BITS	32-30	MACHINE (0=ALL, 1=6000-ONLY, 2=7000-ONLY,	F4830CP	7
*			3=6000/7000, 4=V-ONLY, 5=6000/V,	F4830CP	8
*			6=7000/V)	F4830CP	9
*	BIT	29	FORCE UPPER AFTER INSTRUCTION.	CMP10	9
*	BIT	28	FORCE UPPER BEFORE INSTRUCTION.	CMP10	10
*	BIT	27	30-BIT INSTRUCTION.	CMP10	11
*	BITS	26-24	SOURCE OF I-FIELD.	CMP10	12
*	BITS	23-21	SOURCE OF J-FIELD.	CMP10	13
*	BITS	20-18	SOURCE OF K-FIELD.	CMP10	14
*	BITS	17-00	UNUSED.	CMP10	15
*				CMP10	16
*		THE SOURCE OF A REGISTER NUMBER FIELD IS SPECIFIED BY ONE		CMP10	17
*		OF THE FOLLOWING CODES.		CMP10	18
*				CMP10	19
*		1 OPCODE FIELD.		CMP10	20

*	2	SECOND OR ONLY ADDRESS FIELD REGISTER.		CMP10	21
*	3	FIRST OF TWO ADDRESS FIELD REGISTERS.		CMP10	22
*				COMPASS	947
*				COMPASS	948
*	WORD 2. (PPU)			COMPASS	949
*				COMPASS	950
*	BITS	59-57	1	COMPASS	951
*	BITS	56-48	UNUSED.	COMPASS	952
*	BIT	47	PROGRAM DEFINED FLAG.	CMP30	1190
*	BITS	46-32	UNUSED.	CMP30	1191
*	BITS	31-30	MACHINE (0=BOTH, 1=6000-ONLY, 2=7000-ONLY).	CMP30	1192
*	BITS	29-27	CTL.	COMPASS	955
*				COMPASS	956
*				COMPASS	957
*				COMPASS	958
*				COMPASS	959
*				COMPASS	960
*				COMPASS	961
*				COMPASS	962
*				COMPASS	963
*				COMPASS	964
*				COMPASS	965
*				COMPASS	966
*				COMPASS	967
*				COMPASS	968
*				COMPASS	969
*				COMPASS	970
*	BITS	26-12	UNUSED.	COMPASS	971
*	BITS	11-00	VALUE.	COMPASS	972
*				F4820	5
*				F4820	6
*				F4820	7
*				F4820	8
*	BITS	59-57	1	F4820	9
*	BIT	56	1	F4820	10
*	BITS	55-48	UNUSED.	F4820	11
*	BIT	47	OPDEF.	F4820	12
*	BITS	46-30	UNUSED.	F4820	13
*	BITS	29-27	CTL.	F4820	14
*				F4820	15
*				F4820	16
*				F4820	17
*				F4820	18
*				F4820	19
*				F4820	20
*				F4820	21
*				F4820	22
*				F4820	23
*	BITS	26-16	UNUSED.	F4820	24
*	BITS	15-00	VALUE.	F4820	25
*				F4820	26
*				F4820	27
*				F4820	28
*				F4820	29
*	BITS	59-57	1	F4820	30
*	BIT	56	1	F4820	31
*	BITS	55-48	UNUSED.	F4820	32

	*	BIT	47	OPDEF.	F4820	33
	*	BITS	46-30	UNUSED.	F4820	34
	*	BITS	29-27	CTL.	F4820	35
1	*			0 - NO ADDRESS. (INX)	F4820	36
2	*			1 - 8-BIT ADDRESS. (LDAAI)	F4820	37
3	*			2 - 16-BIT ADDRESS. (LDAAE)	F4820	38
4	*			3 - 8-BIT RELATIVE ADDRESS. (BRA)	F4820	39
5	*	BITS	26-08	UNUSED.	F4820	40
6	*	BITS	07-00	VALUE.	F4820	41
7	*				COMPASS	973
8	*				COMPASS	974
9	*		WORD 2. (PSEUDO)		COMPASS	975
10	*				COMPASS	976
11	*	BITS	59-57	PSEUDO OPERATION TYPE.	COMPASS	977
12	*			2 - CAN NOT OCCUR IN FIRST CARD GROUP.	COMPASS	978
13	*			3 - PROCESS WHILE IF SKIPPING.	COMPASS	979
14	*			4 - CAN OCCUR ANYWHERE.	COMPASS	980
15	*			5 - FIRST CARD GROUP ONLY.	COMPASS	981
16	*	BITS	56-48	UNUSED.	COMPASS	982
17	*	BIT	47	PROGRAM DEFINED FLAG.	CMP30	1193
18	*	BITS	46-36	UNUSED.	COMPASS	984
19	*	BITS	35-18	PASS 1 PSEUDO ADDRESS.	COMPASS	985
20	*	BITS	17-00	PASS 2 PSEUDO ADDRESS.	COMPASS	986
21	*				COMPASS	987
22	*				COMPASS	988
23	*		WORD 2. (MACRO, MACROE, OPDEF)		COMPASS	989
24	*				COMPASS	990
25	*	BITS	59-57	MACRO OPERATION TYPE.	COMPASS	991
26	*			6 - SYSTEXT MACRO.	COMPASS	992
27	*			7 - PROGRAMMER MACRO.	COMPASS	993
28	*	BITS	56-39	WORD COUNT OF TEXT IN MACDEF.	CMP64G	1
29	*	BIT	38	FLAG SET/USED BY *GSM*.	CMP043	1
30	*	BIT	37	1 IF MACRO DEF TEXT IS IN ECS/LCM.	CPS028	203
31	*	BITS	36-32	UNUSED.	CPS028	204
32	*	BIT	31	MACROE FLAG.	COMPASS	997
33	*	BITS	30-25	COUNT OF PARAMETERS IN MACRO.	COMPASS	998
34	*	BITS	24-19	COUNT OF SUBSTITUTABLE ARGUMENTS.	COMPASS	999
35	*	BIT	18	LOCATION ARGUMENT FLAG.	COMPASS	1000
36	*	BITS	17-00	INDEX IN MACDEF OF START OF MACRO.	COMPASS	1001
37					COMPASS	1002
38					COMPASS	1003
39	3403	000000000000000035736	OPTAB	TABLE	COMPASS	1004
40						
41						
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44	**		MACDEF - MACRO DEFINITION TABLE.		COMPASS	1006
45	*		STORES THE DEFINITIONS OF THE MACROS AND OPDEFS FROM		COMPASS	1007
46	*		SYSTEXT AND PROGRAMMER SOURCES.		COMPASS	1008
47					COMPASS	1009
48					COMPASS	1010
49	3404	000000000000000035736	MACDEF	TABLE	COMPASS	1011
50						
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54	**		SSYMS - SYSTEM SYMBOLS.		COMPASS	1013
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* * *	STORES THE SYMBOLS DEFINED BY THE *SST* PSEUDO OPERATION. SYMBOLS COME FROM SYSTEXT.	COMPASS 1014 COMPASS 1015 COMPASS 1016
* * *	ENTRY = 2 WORDS.	COMPASS 1017 COMPASS 1018
* * *	WORD 1.	CMP30 1194 CMP30 1195
* * *	BITS 59-48 UNUSED. BITS 47-00 SYMBOL RIGHT-JUSTIFIED WITH ZERO FILL.	CMP30 1196 CMP30 1197
* * *	WORD 2.	COMPASS 1020 CMP30 1198 CMP30 1199
* * *	BITS 59-39 UNUSED. BITS 38-36 SYSTEM TEXT ORDINAL. BITS 35-21 UNUSED.	CMP30 1200 CMP30 1201 CMP30 1202
* * *	BITS 20-00 SYMBOL VALUE.	CMP30 1203 COMPASS 1022 COMPASS 1023
3405 000000000000000035736 SSYMS	TABLE	COMPASS 1024
** * * *	SYSMIC - SYSTEM MICROS. STORES THE PORTION OF THE MICRO TABLE DEFINED BY SYSTEXT. ENTRY = N WORDS (N = 1 IF MICRO VALUE IS NULL).	COMPASS 1026 COMPASS 1027 COMPASS 1028
* * * *	WORDS 1-(N-1) - VALUE OF MICRO - CHARACTER STRING PACKED TEN CHARACTERS PER WORD. IN LAST WORD (WORD N-1), BITS 59-6 CONTAIN 0-9 CHARACTERS LEFT ADJUSTED WITH ZERO FILL AND BITS 5-0 CONTAIN CHARACTER COUNT FOR THIS WORD.	CMP18 1 COMPASS 1030 CMP18 2 CMP18 3 CMP18 4 CMP18 5 COMPASS 1032
* * * *	WORD N. BITS 59-48 2000B + N BITS 47-00 MICRO NAME RIGHT ADJUSTED WITH ZERO FILL.	CMP18 6 CMP18 7 CMP18 8 CMP18 9 COMPASS 1035 COMPASS 1036
3406 000000000000000035736 SYSMIC	TABLE	COMPASS 1037
** * * * *	CMPTAB - COMPILER TABLE. USED TO HOLD CP.NFLS, CP.AFLS AND THE CONTENTS OF CORE INCLUDED BETWEEN THE ADDRESSES CONTAINED IN THESE CELLS WHEN COMPASS IS CALLED BY A COMPILER.	F4810B 44 F4810B 45 F4810B 46 F4810B 47 F4810B 48
* * * *	ENTRY = N WORDS.	F4810B 49 F4810B 50
* * * *	WORD 1.	F4810B 51 F4810B 52
* * * *	BITS 59-30 CP.NFLS FL AVAILABLE TO COMPASS BITS 29-00 CP.AFLS ACTUAL FL	F4810B 53 F4810B 54 F4810B 55
* * * *	WORDS 2-N. CONTENTS OF CORE INCLUDED BETWEEN ABOVE	F4810B 56

3407 000000000000000035736 CMPTAB TABLE

F4810B 57
F4810B 58
F4810B 59

** TABLES BELOW HERE ARE CLEARED AT THE END OF PASS 2. COMPASS 1039

** SYMTAB - SYMBOL TABLE. COMPASS 1041
* SYMBOLS DEFINED DURING AN ASSEMBLY. COMPASS 1042
* COMPASS 1043

* ENTRY = 2 WORDS. COMPASS 1044
* COMPASS 1045
* WORD 1. COMPASS 1046

* COMPASS 1047
* BITS 59-48 QUALIFIER INDEX. COMPASS 1048
* BITS 47-00 SYMBOL NAME, RIGHT JUSTIFIED WITH COMPASS 1049
* LEADING ZEROS. COMPASS 1050

* COMPASS 1051
* WORD 2. COMPASS 1052

* COMPASS 1053
* BITS 59-42 LINK FIELD FOR HASHING. COMPASS 1054
* BITS 41-39 UNUSED. CMP30 1204

* BITS 38-36 SYSTEXT ORDINAL. CMP30 1205
* BIT 35 NO REFERENCE FLAG. COMPASS 1056
* BIT 34 XTEXT FLAG. COMPASS 1057

* BIT 33 REDEFINITION FLAG. COMPASS 1058
* BIT 32 SST FLAG. COMPASS 1059
* BIT 31 EXTERNAL FLAG. COMPASS 1060

* BIT 30 DEFINED FLAG. COMPASS 1061
* BITS 29-21 RELOCATION OR EXTERNAL NUMBER. COMPASS 1062
* BITS 20-00 VALUE OF SYMBOL. COMPASS 1063

COMPASS 1064
COMPASS 1065
COMPASS 1066

3410 000000000000000035736 SYMTAB TABLE

** USETAB - PROGRAM BLOCK TABLE. COMPASS 1068
* COUNTERS FOR PROGRAM BLOCKS. COMPASS 1069

* COMPASS 1070
* ENTRY = 4 WORDS. CMP30 1206
* COMPASS 1072

* WORD 1. COMPASS 1073
* COMPASS 1074
* BITS 59-00 BLOCK NAME RIGHT JUSTIFIED WITH ZERO FILL. COMPASS 1075

* SPECIAL BLOCK NAMES - COMPASS 1076
* LCM BLOCK - COMPLEMENTED NAME. COMPASS 1077
* PASS 1 PASS 2 COMPASS 1078

* BLOCK 1 - ABSOLUTE* PROGRAM* COMPASS 1079
* OR COMPASS 1080
* BLOCK 1 - ABSOLUTE* ABSOLUTE* COMPASS 1081

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* BLOCK 2 - (ONE BLANK)	PROGRAM*	COMPASS	1082
* BLOCK 3 - LITERALS*	LITERAL*	COMPASS	1083
* WORD 2.		COMPASS	1084
* BIT 59	CONDITIONAL LOAD FLAG (PASS 1 ONLY).	CMP30	1207
* BITS 58-42	CURRENT RELTAB HALFWORD INDEX (BINREL).	CMP30	1208
* BITS 41-30	UNUSED.	CMP30	1209
* BITS 29-24	CURRENT VALUE OF POSITION COUNTER.	COMPASS	1089
* BIT 23	VALUE OF NFOUP FLAG.	COMPASS	1090
* BITS 22-21	UNUSED.	COMPASS	1091
* BITS 20-00	VALUE OF ORIGIN COUNTER.	COMPASS	1092
* WORD 3. (PASS 1)		COMPASS	1093
* BITS 59-01	UNUSED.	COMPASS	1094
* BIT 00	COMMON FLAG.	COMPASS	1095
* WORD 3. (PASS 2)		COMPASS	1096
* BITS 59-54	UNUSED.	COMPASS	1097
* BITS 53-33	MAXIMUM ORIGIN OF BLOCK.	CMP30	1210
* BITS 32-24	RELOCATION OF BLOCK.	CMP30	1211
* BITS 23-21	UNUSED.	COMPASS	1104
* BITS 20-00	ORIGIN OF BLOCK.	COMPASS	1105
* WORD 4. (PASS 1)		COMPASS	1106
* BITS 59-21	UNUSED.	COMPASS	1107
* BITS 20-00	MAXIMUM ORIGIN OF BLOCK.	COMPASS	1108
* WORD 4. (PASS 2)		COMPASS	1109
* BITS 59-00	PARTIAL BINARY WORD (BINWORD)	COMPASS	1110
3411 00000000000000035736 USETAB TABLE		COMPASS	1111
		COMPASS	1112
		COMPASS	1113
** QVTAB - QUALIFIER NAME TABLE.		COMPASS	1114
* NAMES OF QUALIFIERS AS THEY OCCUR.		COMPASS	1115
* ENTRY = 1 WORD.		COMPASS	1116
* BIT 59	NO REFERENCE FLAG.	CMP19	6
* BITS 58-48	UNUSED AND ZERO.	CMP19	7
* BITS 47-00	QUALIFIER NAME RIGHT ADJUSTED WITH 00 FILL.	CMP19	8
3412 00000000000000035736 QVTAB TABLE		COMPASS	9
		COMPASS	1137
		COMPASS	1138
		COMPASS	1139

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** SLITS - SYMBOL LITERALS. COMPASS 1141
* NAMES OF SYMBOL LITERALS. COMPASS 1142
* COMPASS 1143
* ENTRY = 1 WORD. COMPASS 1144
* COMPASS 1145
* BIT 59 SET TO 1 IF DEFINED BY COMPASS. COMPASS 1146
* BITS 58-57 TYPE. CMP19 10
* 0 - =Y TYPE SYMBOL. CP154 5
* 1 - =S TYPE SYMBOL. COMPASS 1148
* 2 - =X TYPE SYMBOL. COMPASS 1149
* 3 - =S AND =X TYPE SYMBOL. COMPASS 1150
* BITS 56-48 CURRENT QUALIFIER INDEX. CMP19 11
* BITS 47-00 SYMBOL NAME RIGHT JUSTIFIED WITH LEADING ZEROS. CMP19 12
* COMPASS 1152
COMPASS 1153

3413 000000000000000035736 SLITS TABLE

COMPASS 1154
COMPASS 1155

** LITAB - LITERAL TABLE. COMPASS 1181
* LITERALS DEFINED DURING PASS 1. COMPASS 1182
COMPASS 1183

3414 000000000000000035736 LITAB TABLE

COMPASS 1184
COMPASS 1185

** EPTAB - ENTRY POINT TABLE. COMPASS 1187
* NAMES OF ENTRY POINTS DECLARED BY *ENTRY* AND *ENTRYC* CMP30 1212
* PSEUDO INSTRUCTIONS. CMP30 1213

* ENTRY = 1 WORD. COMPASS 1190
* COMPASS 1191
* COMPASS 1192
* BIT 59 CONDITIONAL (ENTRYC) FLAG. CMP30 1214
* BITS 58-00 SYMBOL RIGHT JUSTIFIED WITH 00 FILL. CMP30 1215
COMPASS 1194

3415 000000000000000035736 EPTAB TABLE

COMPASS 1195
COMPASS 1196

** RVTAB - RELOCATION VECTOR. CPS2672 12
* RELOCATION VALUES FOR EACH BLOCK. CPS2672 13
* LENGTH IS EQUAL TO THE NUMBER OF BLOCKS DEFINED. CPS2672 14

* ENTRY = 1 WORD. CPS2672 15
* CPS2672 16
* CPS2672 17
* BITS 59-00 RELOCATION. CPS2672 18

3416 000000000000000035736 RVTAB TABLE

CPS2672 19
CPS2672 20
CPS2672 21

**	EXTAB - EXTERNAL TABLE.	COMPASS	1198
*	RECORDS EACH EXTERNAL SYMBOL.	COMPASS	1199
*		COMPASS	1200
*	ENTRY = 1 WORD.	COMPASS	1201
*		COMPASS	1202
*	(PASS 1)	CP154	6
*	BIT 59 SET IF WEAK EXTERNAL (=Y TYPE).	CP154	7
*	BITS 58-00 SYMBOL NAME RIGHT JUSTIFIED WITH 00 FILL.	CP154	8
*		CP154	9
*	(PASS 2)	CP154	10
*	BITS 59-01 SYMBOL NAME LEFT JUSTIFIED WITH 00 FILL.	CP154	11
*	BIT 00 SET IF WEAK EXTERNAL.	CP154	12
		COMPASS	1204
		COMPASS	1205
3417 000000000000000035736	EXTAB TABLE	COMPASS	1206
**	SEGTAB - SEGMENT TABLE.	COMPASS	1208
*	RECORDS ALL RELEVANT INFORMATION ABOUT EACH SEGMENT OR	COMPASS	1209
*	PARTIAL SEGMENT.	COMPASS	1210
*		COMPASS	1211
*	ENTRY = 4 WORDS.	COMPASS	1212
*		COMPASS	1213
*	WORD 1.	COMPASS	1214
*		COMPASS	1215
*	BITS 59-30 UNUSED.	COMPASS	1216
*	BITS 29-21 RELOCATION OF LWA OF SEGMENT.	COMPASS	1217
*	BITS 20-00 RELATIVE LWA OF SEGMENT.	COMPASS	1218
*		COMPASS	1219
*		COMPASS	1220
*	WORD 2.	COMPASS	1221
*		COMPASS	1222
*	BITS 59-36 UNUSED.	COMPASS	1223
*	BITS 35-18 USE TABLE INDEX.	COMPASS	1224
*	BITS 17-00 IDTAB INDEX.	COMPASS	1225
*		COMPASS	1226
*		COMPASS	1227
*	WORD 3. (PASS 1)	COMPASS	1228
*		COMPASS	1229
*	BITS 59-54 UNUSED.	CMP17	2
*	BITS 53-36 SLITS INDEX.	CMP17	3
*	BITS 35-18 EPTAB INDEX.	COMPASS	1231
*	BITS 17-00 LITAB INDEX.	COMPASS	1232
*		COMPASS	1233
*		COMPASS	1234
*	WORD 3. (PASS 2)	COMPASS	1235
*		COMPASS	1236
*	BITS 59-54 UNUSED.	CMP17	4
*	BITS 53-36 SLITS FWA INDEX.	CMP17	5
*	BITS 35-18 EPTAB FWA INDEX.	COMPASS	1238
*	BITS 17-00 LITAB FWA INDEX.	COMPASS	1239
*		COMPASS	1240
*		COMPASS	1241
*	WORD 4. (PASS 2)	COMPASS	1242
*		COMPASS	1243

	*	BITS	59-54	UNUSED.	CMP17	6
	*	BITS	53-36	SLITS LWA INDEX.	CMP17	7
	*	BITS	35-18	EPTAB LWA INDEX.	COMPASS	1245
1	*	BITS	17-00	LITAB LWA INDEX.	COMPASS	1246
2					COMPASS	1247
3					COMPASS	1248
4	3420	000000000000000035736	SEGTAB	TABLE	COMPASS	1249
5						
6						
7						
8						
9	**		IDTAB - IDENT CARD TABLE.		COMPASS	1251
10	*		USED TO HOLD THE TEXT OF BINARY CONTROL CARDS FOR LISTING		COMPASS	1252
11	*		AT THE START OF PASS 2.		COMPASS	1253
12	*				COMPASS	1254
13	*		ENTRY = M WORDS.		COMPASS	1255
14	*				COMPASS	1256
15	*		WORD 1.		COMPASS	1257
16	*				COMPASS	1258
17	*	BITS	59-48	QUALIFIER INDEX.	COMPASS	1259
18	*	BITS	47-18	UNUSED.	COMPASS	1260
19	*	BITS	17-00	NUMBER BASE IN EFFECT (NBASE)	COMPASS	1261
20	*				COMPASS	1262
21	*				COMPASS	1263
22	*		WORDS 2-N - COMPRESSED TEXT OF BINARY CONTROL CARD.		COMPASS	1264
23	*		WORDS N-M - TEXT OF COMMENT CARDS.		COMPASS	1265
24					COMPASS	1266
25					COMPASS	1267
26	3421	000000000000000035736	IDTAB	TABLE	COMPASS	1268
27						
28						
29						
30						
31	**		TLDS - LDSET TABLE.		CP147	6
32	*		HOLDS LOADER OBJECT DIRECTIVES CREATED IN PASS 1 FOR		CP147	7
33	*		DUMPING TO THE BINARY FILE AT THE BEGINNING OF PASS 2.		CP147	8
34	*				CP147	9
35	*		ENTRY = N WORDS. (SEE LOADER REF. MANUAL FOR DETAILS)		CP147	10
36					CP147	11
37					CP147	12
38	3422	000000000000000035736	TLDS	TABLE	CP147	13
39						
40						
41						
42						
43	**		TABLES BELOW HERE CLEARED AT END OF PASS 1.		COMPASS	1270
44						
45						
46						
47						
48	**		STACK - RECURSION STACK.		COMPASS	1272
49	*		CONTROL OF ASSEMBLER INPUT SOURCES.		COMPASS	1273
50	*				COMPASS	1274
51	*		ENTRY = 4 WORDS.		COMPASS	1275
52	*				COMPASS	1276
53	*		WORD 1.		COMPASS	1277
54	*				COMPASS	1278
55						
56						
57						
58						
59						
60						

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	*	BITS	59-54	PERIOD IN DISPLAY CODE.	CMP20	32
	*	BITS	53-18	RECURSION LEVEL IN DECIMAL, LEFT	CMP20	33
	*			JUSTIFIED WITH BLANK FILL.	CMP20	34
1	*	BITS	17-00	RELATIVE ADDRESS OF NEXT CARD TO	COMPASS	1280
2	*			BE UNPACKED.	COMPASS	1281
3	*				COMPASS	1282
4	*				COMPASS	1283
5	*		WORD 2.		COMPASS	1284
6	*				COMPASS	1285
7	*	BITS	59-56	TYPE OF STACK ENTRY.	COMPASS	1286
8	*			1 - MACRO EXPANSION.	COMPASS	1287
9	*			2 - DUPLICATION EXPANSION.	COMPASS	1288
10	*			3 - REMOTE EXPANSION.	COMPASS	1289
11	*			4 - XTEXT EXPANSION.	COMPASS	1290
12	*			5 - ECHO EXPANSION.	COMPASS	1291
13	*	BITS	55-36	A RECORD OF INDICATORS SET WHEN	COMPASS	1292
14	*			STACK WAS PUSHED DOWN.	COMPASS	1293
15	*	BITS	35-18	LENGTH OF MARGS AT START OF EXPANSION.	COMPASS	1294
16	*	BITS	17-00	LENGTH OF MARDIS AT START OF EXPANSION.	COMPASS	1295
17	*				COMPASS	1296
18	*				COMPASS	1297
19	*		WORD 3.		COMPASS	1298
20	*				COMPASS	1299
21	*	BITS	59-36	UNUSED.	COMPASS	1300
22	*	BITS	35-18	DUP - ITERATION COUNT.	COMPASS	1301
23	*			XTEXT - LENGTH OF LASTAB.	COMPASS	1302
24	*			ECHO - LENGTH OF ECHTAB.	COMPASS	1303
25	*	BITS	17-00	DUP - LENGTH OF DUPTAB.	COMPASS	1304
26	*				COMPASS	1305
27	*				COMPASS	1306
28	*		WORD 4.		COMPASS	1307
29	*				COMPASS	1308
30	*	BITS	59-48	UNUSED.	COMPASS	1309
31	*	BITS	47-00	NAME OF MACRO, OR WORDS *DUP*, *RMT*,	COMPASS	1310
32	*			OR *ECHO*, OR FILE NAME FOR XTEXT.	COMPASS	1311
33					COMPASS	1312
34					COMPASS	1313
35		3423	000000000000000035736	STACK TABLE	COMPASS	1314
36						
37						
38						
39						
40	**			RMTAB - REMOTE CODE TABLE.	COMPASS	1316
41	*			USED TO HOLD REMOTE CODE COMPRESSED TEXT.	COMPASS	1317
42					COMPASS	1318
43					COMPASS	1319
44		3424	000000000000000035736	RMTAB TABLE	COMPASS	1320
45						
46						
47						
48						
49	**			LRMTAB - LABELED REMOTE TABLE.	COMPASS	1322
50	*			USED TO HOLD LABELED REMOTE NAMES AND COMPRESSED TEXT.	COMPASS	1323
51	*				COMPASS	1324
52	*			ENTRY = N WORDS.	COMPASS	1325
53	*				COMPASS	1326
54	*			WORD 1 - REMOTE NAME, RIGHT JUSTIFIED WITH ZERO FILL.	COMPASS	1327
55						
56						
57						
58						
59						
60						

*
* WORDS 2-N - COMPRESSED TEXT.

COMPASS 1328
COMPASS 1329
COMPASS 1330
COMPASS 1331
COMPASS 1332

3425 000000000000000035736 LRMTAB TABLE

** RASTAB - REMOTE ASSEMBLY TABLE.
* USED TO HOLD REMOTE COMPRESSED TEXT DURING ASSEMBLY.

COMPASS 1334
COMPASS 1335
COMPASS 1336
COMPASS 1337
COMPASS 1338

3426 000000000000000035736 RASTAB TABLE

** LASTAB - LIBRARY ASSEMBLY TABLE.
* USED TO HOLD XTEXT COMPRESSED TEXT DURING ASSEMBLY.

COMPASS 1340
COMPASS 1341
COMPASS 1342
COMPASS 1343
COMPASS 1344

3427 000000000000000035736 LASTAB TABLE

** DUPTAB - DUPLICATION TABLE.
* USED TO HOLD DUP COMPRESSED TEXT DURING ASSEMBLY.

COMPASS 1346
COMPASS 1347
COMPASS 1348
COMPASS 1349
COMPASS 1350

3430 000000000000000035736 DUPTAB TABLE

** TEMTAB - TEMPORARY TABLE.
* TEMPORARY TABLE USED TO HOLD COMPRESSED TEXT DURING
* DEFINITION OPERATIONS.

COMPASS 1352
COMPASS 1353
COMPASS 1354
COMPASS 1355
COMPASS 1356
COMPASS 1357

3431 000000000000000035736 TEMTAB TABLE

** ECHTAB - ECHO TABLE.
* USED TO HOLD ECHO COMPRESSED TEXT DURING ASSEMBLY.

COMPASS 1359
COMPASS 1360
COMPASS 1361
COMPASS 1362
COMPASS 1363

3432 000000000000000035736 ECHTAB TABLE

** MARDIS - MACRO ARGUMENT DISCRIPTORS.
* CONTAINS POINTERS INTO MARGS FOR THE ACTUAL PARAMETERS

COMPASS 1365
COMPASS 1366

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	*	OF A MACRO EXPANSION.			COMPASS	1367
	*				COMPASS	1368
	*	ENTRY = 1 WORD.			COMPASS	1369
1	*				COMPASS	1370
2	*	NON-ITERATIVE FORM.			COMPASS	1371
3	*				COMPASS	1372
4	*	BITS	59-48	2000B + CHARACTER COUNT OF ARGUMENT.	CMP165	1
5	*	BITS	47-18	ZERO.	CMP165	2
6	*	BITS	17-00	FWA OF ARGUMENT IN MARGS TABLE.	CMP165	3
7	*				COMPASS	1375
8	*	ITERATIVE FORM.			COMPASS	1376
9	*				COMPASS	1377
10	*	BITS	59-48	1777B - CHARACTER COUNT OF ARGUMENT.	CMP165	4
11	*	BITS	47-42	54 - BIT POSITION FOR START OF CURRENT	CMP165	5
12	*	SUBARGUMENT.			CMP165	6
13	*	BITS	41-30	2000B + COUNT OF CHARACTERS PRECEDING	CMP165	7
14	*	CURRENT SUBARGUMENT.			CMP165	8
15	*	BITS	29-18	2000B + FWA OF CURRENT SUBARGUMENT IN MARGS	CMP165	9
16	*	TABLE, RELATIVE TO FWA OF ARGUMENT.			CMP165	10
17	*	BITS	17-00	FWA OF ARGUMENT IN MARGS TABLE.	CMP165	11
18					COMPASS	1385
19					COMPASS	1386
20		3433	000000000000000035736	MARDIS TABLE	COMPASS	1387
21						
22						
23						
24						
25	**	MARGS - MACRO ARGUMENTS.			COMPASS	1389
26	*	USED TO HOLD THE CHARACTER STRINGS OF MACRO ARGUMENTS.			COMPASS	1390
27	*	EACH CHARACTER STRING STARTS IN A NEW WORD.			CMP165	12
28					COMPASS	1393
29					COMPASS	1394
30		3434	000000000000000035736	MARGS TABLE	COMPASS	1395
31						
32						
33						
34						
35	**	MICTAB - MICRO TABLE.			COMPASS	1397
36	*	RECORDS THE NAMES AND CURRENT DEFINITION OF MICROS.			COMPASS	1398
37	*	IF TABLE IS NON-EMPTY, FIRST WORD IS USED AS SCRATCH			CMP18	10
38	*	DURING TABLE LOOKUP.			CMP18	11
39	*				COMPASS	1399
40	*	ENTRY = N WORDS (N = 1 IF MICRO VALUE IS NULL).			CMP18	12
41	*				COMPASS	1401
42	*	WORDS 1-(N-1) - VALUE OF MICRO - CHARACTER STRING PACKED			CMP18	13
43	*	TEN CHARACTERS PER WORD. IN LAST WORD (WORD N-1), BITS			CMP18	14
44	*	59-6 CONTAIN 0-9 CHARACTERS LEFT ADJUSTED WITH ZERO FILL			CMP18	15
45	*	AND BITS 5-0 CONTAIN CHARACTER COUNT FOR THIS WORD.			CMP18	16
46	*				COMPASS	1403
47	*	WORD N.			CMP18	17
48	*				CMP18	18
49	*	BITS	59-48	2000B + N	CMP18	19
50	*	BITS	47-00	MICRO NAME RIGHT ADJUSTED WITH ZERO FILL.	CMP18	20
51					COMPASS	1406
52					COMPASS	1407
53		3435	000000000000000035736	MICTAB TABLE	COMPASS	1408
54						
55						
56						
57						
58						
59						
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** REFTAB - SYMBOLIC REFERENCE TABLE.
* RECORDS THE INFORMATION REQUIRED FOR GENERATING THE
* REFERENCE TABLE AT THE END OF ASSEMBLY.
*
* ENTRY = 1 WORD.
*
* BITS 59-42 INDEX OF THE SYMBOL IN SYMTAB.
* BITS 41-25 LOCATION COUNTER.
* BITS 24-13 PAGE NUMBER.
* BITS 12-06 LINE NUMBER.
* BITS 05-00 USAGE LETTER.

CMP042 20
CMP042 21
CMP042 22
CMP042 23
CMP042 24
CMP042 25
CMP042 26
CMP042 27
CMP042 28
CMP042 29
CMP042 30
CMP042 31
CMP042 32
CMP042 33

3436 000000000000000035736 REFTAB TABLE SYMBOLIC REFERENCE TABLE

** MEMORY - MEMORY TABLE.
* USED TO HOLD SYSTEXT DURING PASS 0 AND BINARY FOR ABSOLUTE
* PROGRAMS DURING PASS 2.

COMPASS 1410
COMPASS 1411
COMPASS 1412
COMPASS 1413
COMPASS 1414
COMPASS 1415

3437 000000000000000035736 MEMORY TABLE

** ENDTAB - END TABLE.
* DUMMY TABLE USED BY THE TABLE MANAGER.

COMPASS 1417
COMPASS 1418
COMPASS 1419
COMPASS 1420
COMPASS 1421
COMPASS 1422

3440 000000000000000035736 ENDTAB TABLE
37 NTABLES EQU *-ORIGINS

** SHARED TABLES.

COMPASS 1424

** ERRTAB - ERROR DIRECTORY TABLE.
* USED TO RECORD PAGE OCCURRENCES OF ERRORS.

COMPASS 1426
COMPASS 1427
COMPASS 1428
COMPASS 1429
COMPASS 1430
COMPASS 1431
COMPASS 1432
COMPASS 1433
COMPASS 1434
CMP042 34

* ENTRY = 1 WORD.
*
* BITS 59-30 ERROR TYPE (INDEX INTO ERFLAGS)
* BITS 29-00 PAGE NUMBER.

ERRTAB TABLE MICTAB ERROR DIRECTORY

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**      COMTAB - COMMON LINKAGE TABLE.                COMPASS 1437
*      USED IN PASS 2 TO RECORD THE COMMON LINKAGES IN THE COMPASS 1438
*      BINARY OUTPUT.                                COMPASS 1439
*
*      ENTRY = 1 WORD.                                COMPASS 1440
*
*      BASIC FORMAT - FILL (4200B) TABLE.            COMPASS 1441
*
*      BITS    59-48      ZEROS.                      COMPASS 1442
*
*      BITS    47-39      SAME AS BITS 26-18 IF CONDITIONAL COMPASS 1218
*                               LOADING, ZEROS IF UNCONDITIONAL. COMPASS 1219
*      BITS    38-30      COMMON BLOCK NUMBER, STARTING WITH COMPASS 1220
*                               3 FOR INTERNAL BLOCK NUMBER 2.    COMPASS 1221
*      BIT     29         A 1-BIT FOR LATER TABLE CONSTRUCTION. COMPASS 1222
*      BITS    28-27      POSITION INFORMATION.             COMPASS 1223
*
*      2 - UPPER ADDRESS (BITS 47-30)                  COMPASS 1444
*      1 - MIDDLE ADDRESS (BITS 32-15)                  COMPASS 1445
*      0 - LOWER ADDRESS (BITS 17-00)                   COMPASS 1446
*
*      BITS    26-18      RELOCATION OF REFERENCE ADDRESS,    COMPASS 1447
*                               IN LOADER RELOCATION.             COMPASS 1448
*      0 - ABSOLUTE.                                    COMPASS 1449
*
*      1 - PLUS PROGRAM.                                COMPASS 1450
*      3 - FIRST COMMON BLOCK.                          COMPASS 1451
*      4 - SECOND COMMON BLOCK.                         COMPASS 1452
*
*      ETC.                                             COMPASS 1453
*      BITS    17-00      REFERENCE ADDRESS.              COMPASS 1454
*
*      EXTENDED FORMAT - XFILL (4100B) TABLE, UNCONDITIONAL LOADING. COMPASS 1455
*
*      BITS    59-57      ZEROS.                      COMPASS 1456
*
*      BITS    56-48      COMMON BLOCK NUMBER.           COMPASS 1457
*      BITS    47-39      RELOCATION OF REFERENCE ADDRESS.   COMPASS 1224
*      BITS    38-33      ZEROS.                      COMPASS 1225
*
*      BITS    32-12      REFERENCE ADDRESS.             COMPASS 1226
*      BITS    11-06      LOW-ORDER BIT POSITION OF ADDRESS FIELD. COMPASS 1227
*      BITS    05-00      LENGTH, IN BITS, OF ADDRESS FIELD. COMPASS 1228
*
*      EXTENDED FORMAT - XFILL (4100B) TABLE, CONDITIONAL LOADING. COMPASS 1229
*
*      BITS    59-57      001.                         COMPASS 1230
*      BITS    56-48      RELOCATION OF REFERENCE ADDRESS.   COMPASS 1231
*      BITS    47-42      ZEROS.                      COMPASS 1232
*
*      BITS    41-21      REFERENCE ADDRESS.             COMPASS 1233
*      BITS    20-15      LOW-ORDER BIT POSITION OF ADDRESS FIELD. COMPASS 1234
*      BITS    14-09      LENGTH, IN BITS, OF ADDRESS FIELD. COMPASS 1235
*
*      BITS    08-00      COMMON BLOCK NUMBER.           COMPASS 1236
*
*      THE FIRST WORD OF COMTAB IS USED AS SCRATCH BY DLAST. ANY COMPASS 1237
*      OR ALL OF THE ABOVE FORMATS MAY BE INTERMIXED IN COMTAB; COMPASS 1238
*      DLAST SORTS THEM OUT.                           COMPASS 1239

```

COMTAB TABLE RMTAB COMMON LINKAGE TABLE

COMPASS 1458
COMPASS 1459
COMPASS 1460

**	LNKTAB - EXTERNAL LINKAGE TABLE.			COMPASS	1462
*	CONTAINS ALL REFERENCES TO EXTERNAL SYMBOLS IN THE			COMPASS	1463
*	BINARY OUTPUT.			COMPASS	1464
*				COMPASS	1465
*	ENTRY = 1 WORD.			COMPASS	1466
*				COMPASS	1467
*	BASIC FORMAT - LINK (4400B) TABLE.			CMP30	1248
*				CMP30	1249
*	BITS	59-48	ZEROS.	CMP30	1250
*	BITS	47-39	SAME AS BITS 26-18 IF CONDITIONAL	CMP30	1251
*	LOADING, ZEROS IF UNCONDITIONAL.			CMP30	1252
*	BITS	38-30	EXTERNAL SYMBOL ORDINAL (1 FOR THE FIRST).	CMP30	1253
*	BIT	29	A 1-BIT FOR LATER TABLE CONSTRUCTION.	COMPASS	1469
*	BITS	28-27	POSITION OF REFERENCE AS IN COMTAB.	COMPASS	1470
*	BITS	26-18	RELOCATION OF REFERENCE ADDRESS	COMPASS	1471
*	AS IN COMTAB.			COMPASS	1472
*	BITS	17-00	REFERENCE ADDRESS.	COMPASS	1473
*				CMP30	1254
*	EXTENDED FORMAT - XLINK (4500B) TABLE, UNCONDITIONAL LOADING.			CMP30	1255
*				CMP30	1256
*	BITS	59-57	ZEROS.	CMP30	1257
*	BITS	56-48	EXTERNAL SYMBOL ORDINAL.	CMP30	1258
*	BITS	47-39	RELOCATION OF REFERENCE ADDRESS.	CMP30	1259
*	BITS	38-33	ZEROS.	CMP30	1260
*	BITS	32-12	REFERENCE ADDRESS.	CMP30	1261
*	BITS	11-06	LOW-ORDER BIT POSITION OF ADDRESS FIELD.	CMP30	1262
*	BITS	05-00	LENGTH, IN BITS, OF ADDRESS FIELD.	CMP30	1263
*				CMP30	1264
*	EXTENDED FORMAT - XLINK (4500B) TABLE, CONDITIONAL LOADING.			CMP30	1265
*				CMP30	1266
*	BITS	59-57	001.	CMP30	1267
*	BITS	56-48	RELOCATION OF REFERENCE ADDRESS.	CMP30	1268
*	BITS	47-42	ZEROS.	CMP30	1269
*	BITS	41-21	REFERENCE ADDRESS.	CMP30	1270
*	BITS	20-15	LOW-ORDER BIT POSITION OF ADDRESS FIELD.	CMP30	1271
*	BITS	14-09	LENGTH, IN BITS, OF ADDRESS FIELD.	CMP30	1272
*	BITS	08-00	EXTERNAL SYMBOL ORDINAL.	CMP30	1273
*				CMP30	1274
*	THE FIRST (L.EXTAB)+1 WORDS OF LNKTAB ARE USED AS SCRATCH BY			CMP30	1275
*	DLAST. ANY OR ALL OF THE ABOVE FORMATS MAY BE INTERMIXED IN			CMP30	1276
*	LNKTAB; DLAST SORTS THEM OUT.			CMP30	1277
				COMPASS	1474
				COMPASS	1475
LNKTAB	TABLE	RASTAB	EXTERNAL LINKAGE TABLE	COMPASS	1476

**	RELTAB - RELOCATION INDICATOR TABLE.			CMP30	1279
*	FOR A RELOCATABLE ASSEMBLY, RELTAB STORES THE RELOCATION			CMP30	1280
*	INDICATORS FOR THE CURRENT PARTIAL BINARY WORD FOR EACH			CMP30	1281
*	USE BLOCK. RELTAB IS NOT USED FOR AN ABSOLUTE ASSEMBLY.			CMP30	1282
*				CMP30	1283
*	ENTRY = 2 WORDS, COMPRISING FOUR 30-BIT FIELDS.			CMP30	1284
*				CMP30	1285
*	BIT	29	EXTERNAL FLAG.	CMP30	1286
*	BITS	28-12	RELOCATION BASE OR EXTERNAL NUMBER.	CMP30	1287

CMP30	1288
CMP30	1289
CMP30	1290
CMP30	1291
CMP30	1292

CMP30 1292

COMPASS	1507
COMPASS	1508
COMPASS	1509
COMPASS	1510
COMPASS	1511
COMPASS	1512

COMPASS	1510
COMPASS	1511
COMPASS	1512

[illegible]

COMPASS 1513

** A STACK AREA BEGINS WITH A CONTROL WORD OF THE FORM
* VFD 18/VAL,6/UBW,6/BPE,6/POS,6/WDN,18/AVL
* (VAL) = VALUE RETURNED FROM POPPING AN EMPTY STACK,
* MUST BE NON-NEGATIVE AND LESS THAN 2**17.
* (UBW) = NUMBER OF UNUSED BITS AT TOP OF EACH WORD.
* (BPE) = NUMBER OF BITS PER ENTRY.
* (POS) = CURRENT BIT POSITION) POINT TO TOP OF STACK,
* (WDN) = CURRENT WORD NUMBER) INITIALLY ZEROS.
* (AVL) = NUMBER OF AVAILABLE ENTRIES, INITIALLY = (MAX).
* FOLLOWED BY AS MANY WORDS AS NECESSARY TO HOLD (MAX) ENTRIES.
* WHEN STACK OVERFLOWS, BOTTOM-MOST ENTRY IS DISCARDED.

CMP30 1294
CMP30 1295
CMP30 1296
CMP30 1297
CMP30 1298
CMP30 1299
CMP30 1300
CMP30 1301
CMP30 1302
CMP30 1303
CMP30 1304

** BASESTK - PUSH-DOWN STACK FOR *BASE* PSEUDO INSTRUCTIONS.
* ENTRY VALUES - 0 = D, 1 = O, 2 = M.

CMP30 1306
CMP30 1307
CMP30 1308
CMP30 1309
CMP30 1310

3500 00000000020000000062 BASESTK STACK 2,MSTACK,0

** CODESTK - PUSH-DOWN STACK FOR *CODE* PSEUDO INSTRUCTIONS.
* ENTRY VALUES - 0 = D, 1 = E, 2 = I, 3 = A, 4 = O.

CMP30 1312
CPS011 1
CMP30 1314
CMP30 1315
CPS011 2

3503 00000000030000000062 CODESTK STACK 3,MSTACK,0

** LISTSTK - PUSH-DOWN STACK FOR *LIST* PSEUDO INSTRUCTIONS.
* ENTRY VALUE = A FIELD LONG ENOUGH TO HOLD ONE BIT FOR
* EACH LIST OPTION - 0 = OFF, 1 = ON.

CMP30 1318
CMP30 1319
CMP30 1320
CMP30 1321
CMP30 1322
CMP30 1323

3507 01013004160000000062 LISTSTK STACK NLISTOPS,MSTACK,LIST.

** QUALSTK - PUSH-DOWN STACK FOR *QUAL* PSEUDO INSTRUCTIONS.
* ENTRY VALUE = QUALIFIER INDEX.

CMP30 1325
CMP30 1326
CMP30 1327
CMP30 1328
CMP30 1329

3525 00000006110000000062 QUALSTK STACK 9,MSTACK,0

** USESTK - PUSH-DOWN STACK FOR *USE* AND *USELCM* PSEUDOS.
* ENTRY VALUE = BLOCK NUMBER.

CMP30 1331
CMP30 1332
CMP30 1333
CMP30 1334
CMP30 1335

3537 00000004100000000062 USESTK STACK 8,MSTACK,0

** STACK POINTERS USED BY *CPS*.

CMP30 1337
CMP30 1338
CMP30 1339
CMP30 1340
CMP30 1341
CMP30 1342

1	3550	STACKPTR	BSS	0	
2		STACKPTR	HERE		
3	3555	0000000000000000000000	DATA	0	
4					
5					
6					
7					
8					
9					
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							COMPASS	1516	
							COMPASS	1517	
				QUAL	PASS1		COMPASS	1518	
1	3556	00000000000000000000	IFCNT	DATA	0	IF SKIPPING COUNTER	COMPASS	1519	1
2	3557	00000000000000000000	IFNAME	DATA	0	IF SKIPPINB BRACKET NAME	COMPASS	1520	2
3	3560	00000000000000000000	XLEV	DATA	0	XTEXT AND CTEXT/ENDX NESTING LEVEL	CMP036	1	3
4							COMPASS	1521	4
5			*			THE FOLLOWING P1TEMPX CELLS MUST BE IN ORDER.	COMPASS	1522	5
6							COMPASS	1523	6
7	3561	00000000000000000000	P1TEMP	DATA	0	GENERAL TEMPORARY	COMPASS	1524	7
8	3562	00000000000000000000	P1TEMPA	DATA	0	GENERAL TEMPORARY	COMPASS	1525	8
9	3563	00000000000000000000	P1TEMPB	DATA	0	GENERAL TEMPORARY	COMPASS	1526	9
10	3564	00000000000000000000	P1TEMPC	DATA	0	GENERAL TEMPORARY	COMPASS	1527	10
11	3565	00000000000000000000	P1TEMPC	DATA	0	GENERAL TEMPORARY	COMPASS	1528	11
12	3566	00000000000000000000	P1TEMPE	DATA	0	GENERAL TEMPORARY	COMPASS	1529	12
13									13
14									14
15									15
16									16
17							COMPASS	1532	17
18							COMPASS	1533	18
19				QUAL	PASS2		COMPASS	1534	19
20	3567		CLP2	BSS	0		COMPASS	1535	20
21	3567	00000000000000000000	CTYPE	DATA	0	CONTROL CARD TYPE FLAG	COMPASS	1536	21
22	3570	00000000000000000000	MAXORG	DATA	0	UPPER LIMIT FOR BINARY OUTPUT	COMPASS	1537	22
23	3571	00000000000000000000	MINORG	DATA	0	LOWER LIMIT FOR BINARY OUTPUT	COMPASS	1538	23
24	3572	00000000000000000000	ORGBASE	DATA	0	ORIGIN OF CURRENT OVERLAY	COMPASS	1539	24
25	3573	00000000000000000000	SEGEPT	DATA	0	SEGMENT ENTRY POINT FOR ABS-CP CODE	COMPASS	1540	25
26	3574	00000000000000000000	BINWORD	DATA	0	PARTIAL BINARY WORD	COMPASS	1541	26
27	3575	3	BINREL	BSSZ	3	PARTIAL BINARY RELOCATION	CMP30	1344	27
28	3600	00000000000000000000	DKNAM	DATA	0	CURRENT DECK NAME	COMPASS	1543	28
29	3601	00000000000000000000	DKCNT	DATA	0	DECK COUNT FOR ERASING BINARY OUTPUT	COMPASS	1544	29
30	3602	00000000000000000000	LPCNT	DATA	0	LINE COUNT FOR THIS PAGE	COMPASS	1545	30
31	3603	00000000000000000000	LPCX	DATA	0	LINE COUNT -- PRINTED LINES ONLY	CPSA186	6	31
32	3604	00000000000000000000	PGCX	DATA	0	PAGE COUNT -- FOR CORRECT CROSS REFERENCING	CPSA186	7	32
33	3605	00000000000000000000	DETFLG	DATA	0	DETAIL LINE FLAG	COMPASS	1546	33
34	3606	00000000000000000000	LXRF	DATA	0	PERMANENT REFERENCE SUPPRESSION	CPS010	20	34
35	3607	00000000000000000000	SUPREF	DATA	0	TEMPORARY REFERENCE SUPPRESSION	COMPASS	1547	35
36	3610	55555555555555555555	SUBTIT	DATA	1H	TEXT OF SUBTITLE	COMPASS	1548	36
37		6	SUBTITL	EQU	6		COMPASS	1549	37
38	3611	6		BSS	SUBTITL		COMPASS	1550	38
39	3617	55555555555555555555	SBNAME	DATA	1H	SUBROUTINE NAME LEFT ADJUSTED	COMPASS	1551	39
40	3620	55555555555555555555	UNAME	DATA	1H	USE BLOCK NAME	COMPASS	1552	40
41	3621	55555555555555555555	QNAME	DATA	1H	QUALIFIER NAME	COMPASS	1553	41
42		12	SUBL	EQU	*-SUBTIT		COMPASS	1554	42
43	3622	00000000000000000000	SUBNAME	DATA	0	SUBROUTINE NAME	COMPASS	1555	43
44	3623	50	OCTAL	BSS	40	COLUMNS 1-40 OF PRINT LINE	COMPASS	1556	44
45	3673	132	LINE	BSS	9*NCARDS	PRINT LINE	COMPASS	1557	45
46	4025	22	BINREC	BSS	18	BINARY CARD IMAGE	COMPASS	1558	46
47	4047	00000000000000000000	OPVAL	DATA	0	OPERATION CODE VALUE	COMPASS	1559	47
48	4050	2	ORGBSSZ	BSSZ	2	ORIGIN OF LAST BSSZ	COMPASS	1560	48
49	4052	00000000000000000000	CNTBSSZ	DATA	0	COUNT OF ABOVE	COMPASS	1561	49
50	4053	00000000000000000000	LOSTREF	DATA	0	COUNT OF LOST REFERENCES	COMPASS	1562	50
51	4054	00000000000000000000	REFIO	DATA	0	CROSS REFERENCE OVERFLOW FLAG	COMPASS	1563	51
52	4055	00000000000000000000	REFLET	DATA	0	CROSS REFERENCE USAGE LETTER	COMPASS	1564	52
53	4056	00000000000000000000	LCCT	DATA	0	LISTING CARD COUNT	COMPASS	1565	53
54	4057	00000000000000000000	FLIST	DATA	0	FORCED LISTING FLAG (C.F. LISTERF)	COMPASS	1566	54
55									55
56									56
57									57
58									58
59									59
60									60

4060	00000000000000000000	NLFLG	DATA	0	NO LIST FLAG	COMPASS	1567
4061	00000000000000000000	DLFLG	DATA	0	DEFERRED LIST FLAG	COMPASS	1568
4062	00000000000000000000	PLFLG	DATA	0	PRINT LINE READY FLAG	COMPASS	1569
4063	00000000000000000000	ELCNT	DATA	0	ERROR LINE COUNT	COMPASS	1570
4064	00000000000000000000	RIFA	DATA	0	INTERMEDIATE HEADER WORD	COMPASS	1572
	276	LCLP2	EQU	*-CLP2		COMPASS	1573
4065	000000000000000004025	LLINE	VFD	60/LINE+9*NCARDS	LAST PRINT LINE USED	COMPASS	1574
						COMPASS	1575
4066	00000000000000000000	P2TEMP	DATA	0	PASS 2 GENERAL TEMPORARY	COMPASS	1576
4067	00000000000000000000	P2TEMPA	DATA	0	PASS 2 GENERAL TEMPORARY	COMPASS	1577
4070	00000000000000000000	P2TEMPB	DATA	0	PASS 2 GENERAL TEMPORARY	COMPASS	1578
4071	00000000000000000000	P2TEMPC	DATA	0	PASS 2 GENERAL TEMPORARY	COMPASS	1579

* LETTER EQUIVALENTS OF ERROR FLAGS (MUST PARALLEL ERFLAGS)

4072	ERRLETS	BSS	0		COMPASS	1581
	ERRLETS	HERE			COMPASS	1582
					COMPASS	1583
					COMPASS	1584
					COMPASS	1585
	*	DIRECTORY FOR ERROR FLAG COMMENTARY			COMPASS	1586
					COMPASS	1587
4117	ERDIR	BSS	0		COMPASS	1588
	ERDIR	HERE			COMPASS	1589
		QUAL			COMPASS	1590

USE SYSTEM
SEG SYSTEM COMMUNICATION SUBROUTINES.

CMP30 1345
CMP30 1346
CMP30 1347
CMP30 1348
CPS028 205
CMP30 1350
CMP30 1351
CPS028 206
CMP30 1370
CMP30 1371
CMP20 37
CMP20 38
CMP20 39
CMP20 40
CMP20 41
CMP20 42
CMP20 43
COMCCIO 2
CMP30 1372
CMP30 1373
CMP30 1374
CMP30 1375
CMP30 1376
COMCRDC 2
COMCRDW 2
COMCWTH 2
COMCWTW 2
COMCSTF 2
CMP30 1377
CMP30 1378
CMP30 1379
CMP30 1380
CMP30 1381
CMP30 1382
CMP30 1383
CMP30 1384
CMP30 1385
CMP30 1386

LIST "LISTRM"X, -F

RM IFNE CP#RM,7

** COMCCIO - CENTRAL CALLS FOR INPUT/OUTPUT.
* ENTRY (X2) = FET ADDRESS.
* (B6) = FWA OF DATA AREA.
* (B7) = WORD COUNT OF DATA.
* EXIT (X2) = FET ADDRESS.

4342 CIO CTEXT COMCCIO - I/O FUNCTION PROCESSOR.

RM IFEQ CP#RM,0

4356 RDC CTEXT COMCRDC - READ CODED LINE, -C- FORMAT.
4377 RDW CTEXT COMCRDW - READ WORDS TO WORKING BUFFER.
4543 WTH CTEXT COMCWTH - WRITE CODED LINE, -H- FORMAT.
4576 WTW CTEXT COMCWTW - WRITE WORDS FROM WORKING BUFFER.
4711 STF CTEXT COMCSTF - SET TERMINAL FILE.

RM ENDIF

LIST *

USE UTILITY
SEG UTILITY SUBROUTINES.

1412THE

** DEBUGGING FACILITIES.

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A PATCH/SNAP DEBUGGING FACILITY IS INCLUDED IN COMPASS
BY ASSEMBLING IT WITH DEBUG = 1. DURING INITIALIZATION,
THE FILE NAMED *PATCHES* IS REWOUND AND PATCH AND SNAP
DIRECTIVE CARDS ARE READ UNTIL END OF LOGICAL RECORD.

EACH CARD IS COPIED TO THE FILE NAMED *SNAPPER*.

PATCH DIRECTIVES PROVIDE FOR CHANGING CODE IN COMPASS
WITHOUT REASSEMBLING. A PATCH AREA IS PROVIDED STARTING
AT ORGOVER. PATCH DIRECTIVE FORMAT IS AS FOLLOWS.

COLUMNS 1-6 - *PATCH
COLUMNS 7-10 - BLANKS
COLUMNS 11-80 - TWO OCTAL NUMBERS SEPARATED BY

A COMMA (BLANKS ARE IGNORED).

THE FIRST NUMBER IS AN ADDRESS. THE SECOND NUMBER IS THE
VALUE TO BE STORED AT THAT ADDRESS.

EXAMPLE... *PATCH 14106,51100 00173 73617 75001

SNAP DIRECTIVES PROVIDE FOR DUMPING REGISTERS AND MEMORY
AREAS DYNAMICALLY. SNAPSHOTS ARE FORMATTED AND WRITTEN
TO THE FILE NAMED *SNAPPER* DURING COMPASS EXECUTION.

AFTER ASSEMBLY, REWIND SNAPPER AND COPYCF TO A PRINT
FILE. SNAP DIRECTIVE CARD FORMAT IS AS FOLLOWS.

COLUMNS 1-5 - *SNAP
COLUMNS 6-10 - BLANKS
COLUMNS 11-80 - ONE OR MORE OCTAL NUMBERS SEPARATED
BY COMMAS (BLANKS ARE IGNORED).

THE FIRST NUMBER IS AN ADDRESS. THE SNAPSHOT IS TAKEN
WHENEVER THE FIRST INSTRUCTION AT THAT ADDRESS IS ABOUT
TO BE EXECUTED. THE REMAINING NUMBERS (IF ANY) ARE PAIRS
OF VALUES, EACH PAIR GIVING THE FIRST WORD ADDRESS AND
WORD COUNT OF A MEMORY AREA TO BE DUMPED. AN ASTERISK

AFTER A NUMBER CAUSES INDIRECT ADDRESSING - THE VALUE IS
TAKEN FROM BITS 17-0 OF THE SPECIFIED WORD AT SNAP TIME.
A DOLLAR SIGN AFTER A NUMBER SPECIFIES ECS/LCM ADDRESSING.

A TABLE NAME MAY BE USED IN PLACE OF A PAIR OF NUMBERS.

EACH SNAPSHOT IS WRITTEN AS ONE LOGICAL RECORD CONTAINING
A DUMP OF THE FIRST 72 CHARACTERS OF THE CARD AREA, A DUMP
OF ALL REGISTERS, AND DUMPS OF THE SPECIFIED MEMORY AREAS.
IN THE MEMORY DUMPS, ALL-ZERO LINES ARE OMITTED.

EXAMPLE... *SNAP 01774,216*,10
WILL DUMP EIGHT WORDS STARTING AT THE ADDRESS IN THE WORD
AT LOCATION 216B.

SNAPPING SAVES AND RESTORES ALL REGISTERS EXCEPT B1.
IF B1 " 1, A JUMP OUT OF BOUNDS OCCURS. OTHERWISE,
A 1 IS REGENERATED.

CMP14	22
CMP14	23
CMP14	24
CMP14	25
CMP14	26
CMP14	27
CMP14	28
CMP14	29
CMP14	30
CMP14	31
CMP14	32
CMP14	33
CMP14	34
CMP14	35
CMP14	36
CMP14	37
CMP14	38
CMP14	39
CMP14	40
CMP14	41
CMP14	42
CMP14	43
CMP14	44
CMP14	45
CMP14	46
CMP14	47
CMP14	48
CMP14	49
CMP14	50
CMP14	51
CMP14	52
CMP14	53
CMP14	54
CMP14	55
CMP14	56
CMP14	57
CMP14	58
CMP14	59
CP096A	64
CPS028	207
CMP14	60
CMP14	61
CMP14	62
CMP14	63
CMP14	64
CMP14	65
CMP14	66
CMP14	67
CMP14	68
CMP14	69
CMP14	70
CMP14	71
CMP14	72

** SNAPSHOT ROUTINES.
*
* ENTERED WHEN A SNAPSHOT LOCATION IS EXECUTED.

CMP14	74
CMP14	75
CMP14	76
CMP14	77
CMP14	78
CMP14	79
CMP14	80
CMP14	81
CMP14	82
CMP14	83
CMP14	84
CMP14	85
CMP14	86
CMP14	87
CMP14	88
CMP14	89
CMP14	90
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CMP14	117
CMP14	118
CMP14	119
CMP14	120
CMP14	121
CMP14	122
CMP14	123
CMP14	124
CMP14	125
CMP14	126
CMP14	127
CMP14	128
CMP14	129
CMP14	130

DEBUG IFNE DEBUG
 QUAL DEBUG

SNAPBUF BSS 100 SNAP DESCRIPTORS
SNAPPTR BSS 1 ADDRESS OF CURRENT DESCRIPTOR WORD

SNTEMP BSS 1 TEMPORARY STORAGE

SNLINE BSS 14 PRINT LINE IMAGE

SNX BSS 8 X REGISTERS
SNB DATA 0 B REGISTERS
 DATA 1

 BSS 6
SNA BSS 8 A REGISTERS
SNP BSS 1 P REGISTER (LOC OF WORD CONTAINING RJ)

SNINST BSS 1 REPLACED INSTRUCTION WORD

SNAPPER PS
 NG B1,-5 RETURN EXIT
 SB1 B1-1 OUT OF BOUNDS IF B1 " 1

 ZR B1,SNAPPER1
 SB1 B1+1
 EQ -5

SNAPPER1 SB1 A6 SAVE REGISTERS
 SA6 SNX+6
 SX6 B1
 SA6 SNA+6
 SB1 1
 SX6 A7

 SA6 A6+B1
 BX6 X7
 SA6 SNX+7

 BX6 X0
 LX7 X1
 SA6 SNX

 SA7 A6+B1
 BX6 X2
 LX7 X3

 SA6 A7+B1
 SA7 A6+B1
 BX6 X4

 LX7 X5
 SA6 A7+B1
 SA7 A6+B1

 SX6 A0-B0
 SX7 A1
 SA6 SNA

 SA7 A6+B1
 SX6 A2
 SX7 A3

		SA6	A7+B1		CMP14	131	
		SA7	A6+B1		CMP14	132	
		SX6	A4		CMP14	133	
1		SX7	A5		CMP14	134	1
2		SA6	A7+B1		CMP14	135	2
3		SA7	A6+B1		CMP14	136	3
4		SX7	B2-B0		CMP14	137	4
5		SA7	SNB+2		CMP14	138	5
6		SX6	B3-B0		CMP14	139	6
7		SX7	B4-B0		CMP14	140	7
8		SA6	A7+B1		CMP14	141	8
9		SA7	A6+B1		CMP14	142	9
10		SX6	B5-B0		CMP14	143	10
11		SX7	B6-B0		CMP14	144	11
12		SA6	A7+B1		CMP14	145	12
13		SA7	A6+B1		CMP14	146	13
14		SX6	B7-B0		CMP14	147	14
15		SA6	A7+B1		CMP14	148	15
16		SA1	SNAPPER		CMP14	149	16
17		LX1	30		CMP14	150	17
18		SX7	X1-1		CMP14	151	18
19		SA7	SNP		CMP14	152	19
20		SB7	B0	PREPARE SNAP LINES	CMP14	153	20
21		MX0	0		CMP14	154	21
22		SA0	B0		CMP14	155	22
23		SX5	1R0	DOUBLE SPACE BETWEEN RANGES	CMP14	156	23
24		RJ	SNSCH		CMP14	157	24
25		RJ	SNWLIN		CMP14	158	25
26		SX5	1R		CMP14	159	26
27		RJ	SNSCH		CMP14	160	27
28		SA5	STYPE	PRINT STYPE	CMP14	161	28
29		RJ	SNSCH		CMP14	162	29
30		SA1	=8H CARD =		CMP14	163	30
31		SB5	8		CMP14	164	31
32		RJ	SCHAR		CMP14	165	32
33		SB5	-72		CMP14	166	33
34	SNAP1	SA5	CARD+72+B5	PRINT FIRST 72 CHARACTERS OF CARD	CMP14	167	34
35		RJ	SNSCH		CMP14	168	35
36		SB5	B5+B1		CMP14	169	36
37		MI	B5, SNAP1		CMP14	170	37
38		RJ	SNWLIN		CMP14	171	38
39		SA1	=5H0P =	PRINT P	CMP14	172	39
40		SB5	5		CMP14	173	40
41		RJ	SCHAR		CMP14	174	41
42		SA1	SNP		CMP14	175	42
43		LX1	42		CMP14	176	43
44		SB5	6		CMP14	177	44
45		RJ	SNUMB		CMP14	178	45
46		SB4	-6	PRINT B2 THRU B7	CMP14	179	46
47	SNAP2	SA1	=9H	B8 =	CMP14	180	47
48		SX5	B4		CMP14	181	48
49		SB5	9		CMP14	182	49
50		LX5	24		CMP14	183	50
51		IX1	X1+X5		CMP14	184	51
52		RJ	SCHAR		CMP14	185	52
53		SA1	SNB+8+B4		CMP14	186	53
54		SB5	6		CMP14	187	54
55							55
56							56
57							57
58							58
59							59
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		SB4	B4+B1		CMP14	188
		LX1	42		CMP14	189
		RJ	SNUMB		CMP14	190
1		MI	B4, SNAP2		CMP14	191
2		RJ	SNWLIN		CMP14	192
3		SB4	-8	PRINT X, A, (A)	CMP14	193
4		SA1	=6H0X0 =		CMP14	194
5	SNAP3	SB5	6		CMP14	195
6		RJ	SCHAR		CMP14	196
7		SA1	SNX+8+B4	PRINT X IN OCTAL	CMP14	197
8		SB5	20		CMP14	198
9		RJ	SNUMB		CMP14	199
10		SA1	=3H	PRINT 3 BLANKS	CMP14	200
11		SB5	3		CMP14	201
12		RJ	SCHAR		CMP14	202
13		SA1	SNX+8+B4	PRINT X IN DISPLAY CODE	CMP14	203
14		SB5	10		CMP14	204
15		RJ	SCHAR		CMP14	205
16		SA1	=10H	A8 =	CMP14	206
17		SX5	B4		CMP14	207
18		LX5	12		CMP14	208
19		SB5	11		CMP14	209
20		IX1	X1+X5		CMP14	210
21		RJ	SCHAR		CMP14	211
22		SA1	SNA+8+B4	PRINT A IN OCTAL	CMP14	212
23		SB5	6		CMP14	213
24		LX1	42		CMP14	214
25		RJ	SNUMB		CMP14	215
26		SX2	B4+8		CMP14	216
27		ZR	X2, SNAP5	AVOID (A0)	CMP14	217
28		SA1	=8H	(A0	CMP14	218
29		SB5	8		CMP14	219
30		LX2	12		CMP14	220
31		IX1	X1+X2		CMP14	221
32		RJ	SCHAR		CMP14	222
33		SA1	=4H) =		CMP14	223
34		SB5	4		CMP14	224
35		RJ	SCHAR		CMP14	225
36		SA1	SNA+8+B4	PRINT (A) IN OCTAL	CMP14	226
37		SB5	20		CMP14	227
38		SA1	X1		CMP14	228
39		RJ	SNUMB		CMP14	229
40		SA1	=3H	PRINT 3 BLANKS	CMP14	230
41		SB5	3		CMP14	231
42		RJ	SCHAR		CMP14	232
43		SA1	SNA+8+B4	PRINT (A) IN DISPLAY CODE	CMP14	233
44		SB5	10		CMP14	234
45		SA1	X1		CMP14	235
46		RJ	SCHAR		CMP14	236
47	SNAP5	SX6	B4+B1		CMP14	237
48		SA6	SNTMP		CMP14	238
49		RJ	SNWLIN		CMP14	239
50		SA5	SNTMP		CMP14	240
51		SA1	=6H X8 =		CMP14	241
52		SB4	X5		CMP14	242
53		LX5	42		CMP14	243
54		IX1	X1+X5		CMP14	244
55						
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		MI	B4,SNAP3		CMP14	245
		SA1	SNP	START PROCESSING SNAP DESCRIPTORS	CMP14	246
		SA1	X1		CMP14	247
1		SA1	SNAPBUF+X1		CMP14	248
2		SX7	A1		CMP14	249
3		BX6	X1		CMP14	250
4		SA6	SNINST	STORE REPLACED INSTRUCTION WORD	CMP14	251
5	SNAP6	SA1	X7+B1	SNAP DESCRIPTION	CMP14	252
6		SX7	A1		CMP14	253
7		LX1	30		CMP14	254
8		SB6	X1	FWA OF SNAP	CMP14	255
9		PL	B6,SNAP7		CMP14	256
10		SA2	B6-400000B		CMP14	257
11		SB6	X2		CMP14	258
12	SNAP7	LX1	30		CMP14	259
13		SB2	X1	WORD COUNT	CMP14	260
14		PL	B2,SNAP7A		CMP14	261
15		SA2	B2-400000B		CMP14	262
16		SB2	X2		CMP14	263
17	SNAP7A	ZR	B2,SNAP12	IF WORD COUNT IS ZERO	CMP14	264
18		SX5	1R0		CMP14	265
19		SB4	4		CMP14	266
20		SB3	B0		CMP14	267
21		SA7	SNAPPTR		CMP14	268
22		LX1	59-48		CP096A	65
23		SX7	B0		CP096A	66
24		PL	X1,SNAP8	IF NOT ECS/LCM	CP096A	67
25		MX1	42		CP096A	68
26		SX7	B6		CP096A	69
27		BX7	X1+X7		CP096A	70
28	SNAP8	GE	B2,B4,SNAP8A		CMP14	269
29		SB4	B2		CMP14	270
30	SNAP8A	ZR	X7,SNAP8B	IF NOT ECS/LCM	CP096A	71
31		SX0	X7		CP096A	72
32		SA0	SNLCM+1	READ TO CM/SCM WORK AREA	CP096A	73
33		SB6	A0		CP096A	74
34	+	RE	B4		CP096A	75
35	-	NO			CP096A	76
36	SNAP8B	EQ	B4,B2,SNAP9	IF LAST LINE	CP096A	77
37		SA3	B6	DROP LINE IF ALL FOUR WORDS ARE ZERO	CMP14	272
38		SA4	B6+B1		CMP14	273
39		BX3	X3+X4		CMP14	274
40		SA4	A4+B1		CMP14	275
41		BX3	X3+X4		CMP14	276
42		SA4	A4+B1		CMP14	277
43		BX3	X3+X4		CMP14	278
44		NZ	X3,SNAP9		CMP14	279
45		MI	X3,SNAP9		CMP14	280
46		SB6	B6+B4		CMP14	281
47		SB2	B2-B4		CMP029	14
48		ZR	X7,SNAP8	IF NOT ECS/LCM	CP096A	78
49		SX7	X7+B4		CP096A	79
50		EQ	SNAP8		CMP14	283
51	SNAP9	SA7	SNLCM	SAVE ECS/LCM POINTER	CP096A	80
52		MX0	0		CP096A	81
53		SA0	B0	STORE FORMS CONTROL CHARACTER	CP096A	82
54		RJ	SNSCH		CP096A	83
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		SX1	B6	PRINT ADDRESS IN OCTAL	CMP14	285	
		ZR	X7,*+1		CP096A	84	
		SX1	X7		CP096A	85	
1		SB5	6		CMP14	286	1
2		LX1	42		CMP14	287	2
3		RJ	SNUMB		CMP14	288	3
4		SA2	SNLCM		CP096A	86	4
5		SA1	=3H	PRINT 3 BLANKS	CMP14	289	5
6		SB5	3		CMP14	290	6
7		ZR	X2,SNAP9A	IF NOT ECS/LCM	CP096A	87	7
8		SX5	1RL		CP096A	88	8
9		SB5	2	PRINT *L* AND 2 BLANKS	CP096A	89	9
10		RJ	SNSCH		CP096A	90	10
11	SNAP9A	RJ	SCHAR		CP096A	91	11
12	SNAP10	SA1	B6	PRINT UP TO 4 WORDS IN OCTAL	CMP14	292	12
13		SB5	20		CMP14	293	13
14		RJ	SNUMB		CMP14	294	14
15		SX5	1R	PRINT 1 BLANK AFTER EACH WORD	CMP14	295	15
16		RJ	SNSCH		CMP14	296	16
17		SB3	B3+B1		CMP14	297	17
18		SB6	B6+B1		CMP14	298	18
19		LT	B3,B4,SNAP10		CMP14	299	19
20		SX1	2R	PRINT 2 ADDITIONAL BLANKS	CMP14	300	20
21		SB5	B1+B1	AFTER LAST WORD	CMP14	301	21
22		LX1	48		CMP14	302	22
23		RJ	SCHAR		CMP14	303	23
24		SB3	-B4		CMP14	304	24
25		SB6	B6-B4		CMP14	305	25
26		SB3	B3+4		CMP14	306	26
27		ZR	B3,SNAP11	IF 4 WORDS PRINTED	CMP14	307	27
28		SA1	=10H		CMP14	308	28
29	SNAP10A	SB5	21	PRINT 21 BLANKS FOR EACH WORD	CMP14	309	29
30		RJ	SCHAR	NOT PRINTED OF THE 4 POSSIBLE	CMP14	310	30
31		SB3	B3-B1		CMP14	311	31
32		NZ	B3,SNAP10A		CMP14	312	32
33	SNAP11	SA1	B6	PRINT UP TO 4 WORDS IN DISPLAY CODE	CMP14	313	33
34		SB5	10		CMP14	314	34
35		RJ	SCHAR		CMP14	315	35
36		SB3	B3+B1		CMP14	316	36
37		SB6	B6+B1		CMP14	317	37
38		LT	B3,B4,SNAP11		CMP14	318	38
39		SX6	B6		CMP14	319	39
40		SX7	B2-B4		CMP14	320	40
41		LX6	30		CMP14	321	41
42		BX6	X6+X7		CMP14	322	42
43		SA6	SNTEMP		CMP14	323	43
44		RJ	SNWLIN		CMP14	324	44
45		SA1	SNTEMP		CMP14	325	45
46		SA2	SNLCM		CP096A	92	46
47		SB3	B0		CMP14	326	47
48		SB4	4		CMP14	327	48
49		SX5	1R		CMP14	328	49
50		SB2	X1		CMP14	329	50
51		AX1	30		CMP14	330	51
52		SB6	X1		CMP14	331	52
53		BX7	X2		CP096A	93	53
54		ZR	X2,SNAP11A	IF NOT ECS/LCM	CP096A	94	54
55							55
56							56
57							57
58							58
59							59
60							60

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		SNAP11A	SX7 NZ SA1	X2+B4 B2, SNAP8 SNAPPTR	IF WORD COUNT NOT EXHAUSTED	CP096A CP096A CMP14	95 96 333	
1			SA1	X1		CMP14	334	1
2			SX7	A1		CMP14	335	2
3		SNAP12	PL	X1, SNAP6	IF NOT FINAL DESCRIPTOR	CMP14	336	3
4			WEOR	D	FLUSH BUFFER	CMP30	1387	4
5			CHECK	D		CMP30	1388	5
6			MX0	42	RESTORE REGISTERS	CMP14	338	6
7			SB7	-6		CMP14	339	7
8			SB6	B0		CMP14	340	8
9		SNAP13	SX6	610B+B7		CMP14	341	9
10			SX7	X6+B1		CMP14	342	10
11			LX6	30		CMP14	343	11
12			BX6	X7+X6		CMP14	344	12
13			LX6	21		CMP14	345	13
14			SA1	SNB+8+B7		CMP14	346	14
15			SA2	A1+B1		CMP14	347	15
16			BX1	-X0*X1		CMP14	348	16
17			BX2	-X0*X2		CMP14	349	17
18			LX1	30		CMP14	350	18
19			BX1	X1+X2		CMP14	351	19
20			BX6	X6+X1		CMP14	352	20
21			SA6	SNR+B6		CMP14	353	21
22			SB6	B6+B1		CMP14	354	22
23			SB7	B7+2		CMP14	355	23
24			NG	B7, SNAP13		CMP14	356	24
25			SA1	SNA		CMP14	357	25
26			BX2	-X0*X1		CMP14	358	26
27			SA3	SNPROT		CMP14	359	27
28			LX2	30		CMP14	360	28
29			BX6	X3+X2		CMP14	361	29
30			SA6	A6+B1		CMP14	362	30
31			SA1	SNA+6		CMP14	363	31
32			SA2	A1+B1		CMP14	364	32
33			SA1	X1		CMP14	365	33
34			SA2	X2		CMP14	366	34
35			BX6	X1		CMP14	367	35
36			LX7	X2		CMP14	368	36
37			SA6	A1		CMP14	369	37
38			SA7	A2		CMP14	370	38
39			SA1	SNX+6		CMP14	371	39
40			SA2	A1+B1		CMP14	372	40
41			BX6	X1		CMP14	373	41
42			LX7	X2		CMP14	374	42
43			SA2	A1-B1		CMP14	375	43
44			SA1	SNA+5		CMP14	376	44
45			SA5	X1		CMP14	377	45
46			BX5	X2		CMP14	378	46
47			SA1	A1-B1		CMP14	379	47
48			SA2	A2-B1		CMP14	380	48
49			SA4	X1		CMP14	381	49
50			BX4	X2		CMP14	382	50
51			SA1	A1-B1		CMP14	383	51
52			SA2	A2-B1		CMP14	384	52
53			SA3	X1		CMP14	385	53
54			BX3	X2		CMP14	386	54
55								55
56								56
57								57
58								58
59								59
60								60

		SA1	SNX		CMP14	387
		BX0	X1		CMP14	388
		SA2	SNA+2		CMP14	389
1		SA2	X2		CMP14	390
2		SA1	SNX+2		CMP14	391
3		BX2	X1		CMP14	392
4		MX1	60		CMP14	393
5		SA0	X1-0	A0 = 777777B	CMP14	394
6		SA1	SNX+1		CMP14	395
7		UX1,B2	X1		CMP14	396
8		LX1	10		CMP14	397
9		UX1,B3	X1		CMP14	398
10		LX1	10		CMP14	399
11		UX1,B4	X1		CMP14	400
12		LX1	10		CMP14	401
13		UX1,B5	X1		CMP14	402
14		LX1	10		CMP14	403
15		UX1,B6	X1		CMP14	404
16		LX1	10		CMP14	405
17		UX1,B7	X1		CMP14	406
18		SB1	A0-B0		CMP14	407
19		SB1	X1+B1		CMP14	408
20		SA1	SNA+1		CMP14	409
21		SA1	X1		CMP14	410
22		SX1	B1-B0		CMP14	411
23		PX1	X1,B7		CMP14	412
24		LX1	50		CMP14	413
25		PX1	X1,B6		CMP14	414
26		LX1	50		CMP14	415
27		PX1	X1,B5		CMP14	416
28		LX1	50		CMP14	417
29		PX1	X1,B4		CMP14	418
30		LX1	50		CMP14	419
31		PX1	X1,B3		CMP14	420
32		LX1	50		CMP14	421
33		PX1	X1,B2		CMP14	422
34		SB1	1		CMP14	423
35	SNR	SB2	A0+**		CMP14	424
36		SB3	A0+**		CMP14	425
37		SB4	A0+**		CMP14	426
38		SB5	A0+**		CMP14	427
39		SB6	A0+**		CMP14	428
40		SB7	A0+**		CMP14	429
41		SA0	A0+**		CMP14	430
42		EQ	SNINST	GO EXECUTE REPLACED INSTRUCTION WORD	CMP14	431
43	SNPROT	SA0	A0+0		CMP14	432
44		EQ	SNINST		CMP14	433
45	SCHAR	SPACE	4		CMP14	434
46	**	SCHAR	- STORE CHARACTER STRING.		CMP14	435
47	*	ENTRY	(X1) = CHARACTER STRING LEFT JUSTIFIED.		CMP14	436
48	*		(B5) = NUMBER OF CHARACTERS.		CMP14	437
49					CMP14	438
50					CMP14	439
51	SCHAR1	LX1	6		CMP14	440
52		BX5	-X2*X1		CMP14	441
53		NZ	X5,SCHAR2		CMP14	442
54		SX5	1R		CMP14	443
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	SCHAR2	RJ	SNSCH		CMP14	444
		SB5	B5-B1		CMP14	445
		NZ	B5,SCHAR1		CMP14	446
1	SCHAR	PS	RETURN EXIT		CMP14	447
2		MX2	-6		CMP14	448
3		EQ	SCHAR1		CMP14	449
4	SNUMB	SPACE	4		CMP14	450
5	**	SNUMB	- STORE NUMBER.		CMP14	451
6	*	ENTRY	(X1) = BINARY NUMBER LEFT JUSTIFIED.		CMP14	452
7	*		(B5) = NUMBER OF OCTAL DIGITS.		CMP14	453
8					CMP14	454
9					CMP14	455
10	SNUMB1	LX1	3		CMP14	456
11		BX3	-X2*X1		CMP14	457
12		SX5	X3+1R0		CMP14	458
13		RJ	SNSCH		CMP14	459
14		SB5	B5-B1		CMP14	460
15		NZ	B5,SNUMB1		CMP14	461
16	SNUMB	PS	RETURN EXIT		CMP14	462
17		MX2	-3		CMP14	463
18		EQ	SNUMB1		CMP14	464
19	SNWLIN	SPACE	4		CMP14	465
20	**	SNWLIN	- WRITE END OF LINE.		CMP14	466
21	*	ENTRY	(X0) = CURRENT WORD.		CMP14	467
22	*		(B7) = NUMBER OF CHARACTERS IN X0.		CMP14	468
23	*		(A0) = NUMBER OF WORDS IN LINE, NOT COUNTING (X0).		CMP14	469
24	*	EXIT	X0, B7, A0 = 0.		CMP14	470
25					CMP14	471
26					CMP14	472
27	SNWLIN	PS	RETURN EXIT		CMP14	473
28					CMP30	1389
29	RM	IFEQ	CP#RM,0		CMP30	1390
30					CMP30	1391
31		SB5	8		CMP14	474
32		EQ	B7,B5,SNWLIN2		CMP14	475
33	SNWLIN1	SX5	1R		CMP14	476
34		RJ	SNSCH		CMP14	477
35		NE	B7,B5,SNWLIN1		CMP14	478
36	SNWLIN2	LX0	12		CMP14	479
37		SB6	SNLINE		CMP14	480
38		BX6	X0		CMP14	481
39		SB7	A0+B1		CMP14	482
40		SA6	B6+A0		CMP14	483
41		WRITEW	D,B6,B7	WRITE LINE	CMP14	484
42					CMP30	1392
43	RM	ELSE			CMP30	1393
44					CMP30	1394
45		SX5	A0		CP096A	97
46		ZR	B7,SNWLIN1	IF AT END OF WORD	CP096A	98
47		SB5	-B7		CP096A	99
48		SB5	10+B5	LEFT JUSTIFY CHARACTERS	CP096A	100
49		SX6	B5+B5	AND STORE LAST WORD	CP096A	101
50		SB5	X6+B5		CP096A	102
51		SB5	B5+B5		CP096A	103
52		LX6	X0,B5		CP096A	104
53		SA6	SNLINE+A0		CP096A	105
54	SNWLIN1	IX6	X5+X5	COMPUTE LINE LENGTH IN CHARACTERS	CP096A	106
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		LX5	3		CP096A	107
		IX5	X5+X6		CP096A	108
		SX5	X5+B7		CP096A	109
1		PUT	D,SNLINE,X5	WRITE LINE	CMP30	1403
2					CMP30	1404
3	RM	ENDIF			CMP30	1405
4					CMP30	1406
5		SA0	B0		CMP14	485
6		SB7	B0		CMP14	486
7		MX0	0		CMP14	487
8		EQ	SNWLIN		CMP14	488
9	SNSCH	SPACE	4		CMP14	489
10	**	SNSCH	-	STORE SINGLE CHARACTER.	CMP26	11
11	*	ENTRY	(X0)	= CURRENT WORD.	CMP14	491
12	*		(X5)	= CHARACTER RIGHT JUSTIFIED WITH 00 FILL.	CMP14	492
13	*		(B7)	= NUMBER OF CHARACTERS IN X0.	CMP14	493
14	*		(A0)	= NUMBER OF WORDS IN LINE NOT COUNTING (X0).	CMP14	494
15	*	EXIT	(X0)	= NEW CURRENT WORD.	CMP14	495
16	*		(B7)	= UPDATED CHARACTER COUNT.	CMP14	496
17	*		(A0)	= UPDATED WORD COUNT.	CMP14	497
18					CMP14	498
19					CMP14	499
20	SNSCH1	SB7	B7+10		CMP14	500
21	SNSCH	PS		RETURN EXIT	CMP14	501
22		LX0	6		CMP14	502
23		SB7	B7-9		CMP14	503
24		BX0	X5+X0		CMP14	504
25		NZ	B7,SNSCH1		CMP14	505
26		BX6	X0		CMP14	506
27		MX0	0		CMP14	507
28		SA6	SNLINE+A0		CMP14	508
29		SA0	A0+B1		CMP14	509
30		EQ	SNSCH		CMP14	510
31					CP096A	110
32					CP096A	111
33	SNLCM	BSSZ	5	LCM POINTER AND WORK AREA	CP096A	112
34					CMP14	521
35					CMP14	522
36		QUAL	*		CMP14	523
37	DEBUG	ENDIF			CMP14	524
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						

** ACL - ADJUST LOW CORE LIMIT OF TABLES.
* ENTRY (X1) = NEW LOW LIMIT.

COMPASS 1640

COMPASS 1641

COMPASS 1642

COMPASS 1643

COMPASS 1644

COMPASS 1645

COMPASS 1646

COMPASS 1647

COMPASS 1648

COMPASS 1649

COMPASS 1650

COMPASS 1651

COMPASS 1652

COMPASS 1653

COMPASS 1654

CMP30 1407

COMPASS 1656

COMPASS 1657

COMPASS 1658

COMPASS 1659

COMPASS 1660

COMPASS 1661

COMPASS 1662

COMPASS 1663

COMPASS 1664

COMPASS 1665

COMPASS 1666

COMPASS 1667

COMPASS 1668

COMPASS 1669

COMPASS 1670

COMPASS 1671

** ADDWORD - ADD ONE WORD TO END OF MANAGED TABLE.
* ENTRY (X1) = DATUM.
* (A0) = TABLE INDEX.
* MACRO FORM ADDWORD TABNAM ALSO AVAILABLE.
* EXIT (X1) = DATUM.
* EXIT (X6) = DATUM.

COMPASS 1673

COMPASS 1674

COMPASS 1675

COMPASS 1676

COMPASS 1677

COMPASS 1678

COMPASS 1679

COMPASS 1680

COMPASS 1681

COMPASS 1682

COMPASS 1683

COMPASS 1684

COMPASS 1685

COMPASS 1686

COMPASS 1687

COMPASS 1688

COMPASS 1689

COMPASS 1690

COMPASS 1691

COMPASS 1692

COMPASS 1693

4724 0000000000

ACL

PS

RETURN EXIT

4725 5120003041

SA2

LOCORE

37621

IX6

X2-X1

4726 0326004737

PL

X6,ACL1

IF NEW LOW LIMIT IS LOWER

14166

BX1

-X6

4727 5160004741

SA6

ACLA

5100000035

MANAGE

MEMORY,X1

AUGMENT MEMORY BY REQUIRED AMOUNT

4731 5120004741

SA2

ACLA

36632

IX6

X3+X2

REMOVE EXCESS ALLOCATION

54630

SA6

A3

4732 5110003041

SA1

LOCORE

5140000202

SA4

CP.NFLS

4733 37612

IX6

X1-X2

7204777765

SX0

X4-10

37706

IX7

X0-X6

4734 54610

SA6

A1

5170003042

SA7

SIZCORE

4735 0100005533

RJ

MTU

PACK TABLES UP

4736 0400004724

EQ

ACL

RETURN

4737 5130003042

ACL1

SA3

SIZCORE

ADJUST CORE DESCRIPTORS

36736

IX7

X3+X6

AUGMENT CORE SIZE

10611

BX6

X1

RESET LOW CORE ADDRESS

4740 54730

SA7

A3

54620

SA6

A2

0400004724

EQ

ACL

RETURN

4741 00000000000000000000

ACLA

DATA

0

NEW LOW LIMIT

4742 5160004747

ADDWORD1

SA6

ADDWORDT

0100004751

RJ

ALC

4743 36323

IX3

X2+X3

5110004747

SA1

ADDWORDT

10611

BX6

X1

4744 5263777776

SA6

X3-1

4745 0000000000

ADDWORD

PS

RETURN EXIT

4746 10611

BX6

X1

76110

SX1

B1

0400004742

EQ

ADDWORD1

4747 00000000000000000000

ADDWORDT

DATA

0

TEMPORARY STORAGE

**	ALC - TABLE MANAGER AND ALLOCATOR.	COMPASS	1695
*	ALLOCATOR WILL MOVE TABLES TO ACQUIRE ROOM. ALSO MAY DUMP	COMPASS	1696
*	INTERMEDIATE OR CROSS-REFERENCES ONTO SCRATCH FILE.	COMPASS	1697
*	ENTRY (A0) = TABLE INDEX.	COMPASS	1698
*	(X1) = CHANGE (+ OR -) TO TABLE SIZE.	COMPASS	1699
*	EXIT (X2) = ORIGIN OF TABLE.	COMPASS	1700
*	(X3) = NEW LENGTH OF TABLE.	COMPASS	1701
		COMPASS	1702
		COMPASS	1703
4750	5020003402 ALCX SA2 ORIGINS+A0 RECLAIM VALUES FOR EXIT REPLY	COMPASS	1704
	5030003441 SA3 SIZES+A0	COMPASS	1705
		COMPASS	1706
4751	0000000000 ALC PS RETURN EXIT	COMPASS	1707
4752	6120000037 ALC1 SB2 NTABLES PRESET INDEX REGISTERS	COMPASS	1708
	5020003402 SA2 ORIGINS+A0 CURRENT ORIGIN	COMPASS	1709
4753	54322 SA3 A2+B2 CURRENT LENGTH	COMPASS	1710
	54421 SA4 A2+B1 NEXT TABLE ORIGIN	COMPASS	1711
	36613 IX6 X1+X3 NEW SIZE	COMPASS	1712
	37042 IX0 X4-X2 TEST IF ROOM FOR EXPANSION	COMPASS	1713
4754	37006 IX0 X0-X6	COMPASS	1714
	0330004756 NG X0,ALC2 JUMP TO RE-ALLOCATE CORE	COMPASS	1715
	54630 SA6 A3 STORE NEW SIZE	COMPASS	1716
4755	10366 BX3 X6	CMP30	1408
	0400004751 EQ ALC RETURN	CMP30	1409
		COMPASS	1718
*	MOVE TABLES.	COMPASS	1719
		COMPASS	1720
4756	5120003042 ALC2 SA2 SIZCORE SEE IF ENOUGH ROOM	COMPASS	1721
	10411 BX4 X1	COMPASS	1722
	67721 SB7 B2-B1	COMPASS	1723
4757	67771 ALC3 SB7 B7-B1	COMPASS	1724
	5157003441 SA5 SIZES+B7	COMPASS	1725
	36445 IX4 X4+X5	COMPASS	1726
4760	0570004757 NZ B7,ALC3 LOOP	COMPASS	1727
	5130003260 SA3 PASS	COMPASS	1728
4761	63730 SB7 X3	COMPASS	1729
	37024 IX0 X2-X4	COMPASS	1730
	63440 SB4 X4 (B4) = TOTAL LENGTH	COMPASS	1731
	67707 SB7 -B7	COMPASS	1732
4762	5120003055 SA2 LSTTHOU	CPSA125	8
	5140003146 SA4 INTERIO	CPSA251	8
4763	0302004771 ZR X2,ALC4 IF NOT USING UP LAST 1000B WORDS	CPSA125	9
	0320004772 PL X0,ALC5 ENOUGH SPACE FOR ENTRY	CPS243	5
4764	0277004770 JP ALCAA+B7 ELSE B7 = -PASS	CPSA125	12
		CPSA125	13
4765	0400005075 + EQ ALC18 PASS 3 - GET RID OF REFERENCES	CPSA125	14
4766	0304005023 + ZR X4,ALC10A	CPSA251	9
	0400005045 EQ ALC13 PASS 2 - TABLE OVERFLOW MESSAGE	CPSA251	10
4767	0304005023 + ZR X4,ALC10A	CPSA251	11
	0400005064 EQ ALC17 PASS 1 - TABLE OVERFLOW MESSAGE	CPSA251	12
4770	0400011116 ALCAA EQ LST7A PASS 0 - INSUFF. FL FOR SYSTEM TEXT MESSAGE	CPSA125	17
		CPSA125	18
4771	7230776777 ALC4 SX3 X0-1000B	COMPASS	1743
	0333005016 NG X3,ALC10 IF < 1000 WORDS LEFT	COMPASS	1744
4772	63610 ALC5 SB6 X1 (B6) = REQUESTED LENGTH	COMPASS	1745
	63500 SB5 X0 (B5) = SPACE AVAILABLE	COMPASS	1746
	0100005523 RJ MTD MOVE TABLES DOWN TO LOW CORE	COMPASS	1747

4773	6130003402		SB3	ORIGINS	RE-ALLOCATE UPWARDS	COMPASS	1748
	5030003441		SA3	SIZES+A0	INCREMENT SIZE	COMPASS	1749
4774	73636		SX6	X3+B6		COMPASS	1750
	54630		SA6	A3		COMPASS	1751
	5110003041		SA1	LOCORE		COMPASS	1752
4775	5120003042		SA2	SIZCORE		COMPASS	1753
	36012		IX0	X1+X2	X0 = LWA+1 OF CORE	COMPASS	1754
	67621		SB6	B2-B1		COMPASS	1755
4776	67661	ALC6	SB6	B6-B1	DECREMENT TABLE POINTER	COMPASS	1756
	56236		SA2	B3+B6	TABLE ORIGIN	COMPASS	1757
	54122		SA1	A2+B2	TABLE LENGTH	COMPASS	1758
	76450		SX4	B5	SPACE AVAILABLE	COMPASS	1759
4777	77321		SX3	B2-B1	NUMBER OF TABLES	COMPASS	1760
	23514		AX5	X4,B1		COMPASS	1761
	27404		IX6	X4/X3		COMPASS	1762
	0440005005		ZR	B4,ALC7	IF NO LENGTH	COMPASS	1763
	76340		SX3	B4	TOTAL LENGTH	COMPASS	1764
5002	42751		DX7	X5*X1		F4820	42
	21601		AX6	1		COMPASS	1766
	27707		IX7	X7/X3		COMPASS	1767
	36667		IX6	X6+X7		COMPASS	1768
5005	37606	ALC7	IX6	X0-X6		COMPASS	1769
	26101		UX1	X1		COMPASS	1770
	37761		IX7	X6-X1		COMPASS	1771
	10377		BX3	X7		COMPASS	1772
5006	54720		SA7	A2	SET NEW ORIGIN	COMPASS	1773
	22007		LX0	X7		COMPASS	1774
	13423		BX4	X2-X3		COMPASS	1775
5007	0304005010	+	ZR	X4,*+1	IF NO MOVE REQUESTED	COMPASS	1776
	0100005515		RJ	MOVE		COMPASS	1777
5010	0561004776		NE	B6,B1,ALC6	LOOP	COMPASS	1778
	5130003041		SA3	LOCORE		COMPASS	1779
5011	56230		SA2	B3	FETCH FWA	COMPASS	1780
	54122		SA1	A2+B2	FETCH SIZE	COMPASS	1781
	10633		BX6	X3		COMPASS	1782
	54620		SA6	A2		COMPASS	1783
5012	13423		BX4	X2-X3		COMPASS	1784
	0304005014		ZR	X4,ALC8	IF NO MOVE REQUIRED	COMPASS	1785
5013	0100005515		RJ	MOVE		COMPASS	1786
5014	0100005102	ALC8	RJ	ASU	ACCUMULATE STORAGE USED	COMPASS	1787
5015	0400004750		EQ	ALCX	RETURN	COMPASS	1788
						COMPASS	1789
		*		CORE OVERFLOW.		COMPASS	1790
						COMPASS	1791
5016	74600	ALC10	SX6	A0	SAVE ENTRY CALL VALUES	COMPASS	1792
	10711		BX7	X1		COMPASS	1793
	5160005100		SA6	ALCC		COMPASS	1794
5017	54761		SA7	A6+B1		COMPASS	1795
	5140000202		SA4	CP.NFLS	CURRENT FL	F4810B	60
5020	5120003057		SA2	MIDFLN	FL AT WHICH TABLES WILL BE DUMPED TO FILES	F4810B	61
	37424		IX4	X2-X4		F4810B	62
5021	0334005023		MI	X4,ALC10A	IF READY TO DUMP TABLES	F4810B	63
	0100005705		RJ	RFL	ELSE, REQUEST MORE CENTRAL MEMORY	F4810B	64
5022	0313005062		NZ	X3,ALC15	IF REQUEST COMPLETED, RESTORE AND TRY AGAIN	F4810B	65
5023	5140003146	ALC10A	SA4	INTERIO	ELSE, TRY TO DUMP TABLES TO FILES	F4810B	66
	0277005027		JP	ALCB+B7		COMPASS	1797
						COMPASS	1798

5024	0400005030	+	EQ	ALC10B	PASS 3 - TRY TO GET MORE FL	CPSA125	19
5025	0304005047	+	ZR	X4,ALC14	PASS 2 - IF INTERMEDIATE IN CORE	COMPASS	1800
	0400005032		EQ	ALC11		COMPASS	1801
5026	0304005047	+	ZR	X4,ALC14	PASS 1 - IF INTERMEDIATE IN CORE	COMPASS	1802
5027	0400005030	ALCB	EQ	ALC10B	PASS 0 - TRY TO GET MORE FL	CPSA125	20
						COMPASS	1806
5030	5110005101	ALC10B	SA1	ALCC+1	GET REQUESTED TABLE INCREASE	CPSA125	21
	0100005705		RJ	RFL	MAKE LAST ATTEMPT TO GET MORE FL.	CPSA125	22
5031	0400005062		EQ	ALC15	LSTTHOU.NE.0 INDICATES FAILURE OF REQUEST	CPSA125	23
						CPSA125	24
		*		PASS 2 OVERFLOW.		COMPASS	1807
						COMPASS	1808
5032	5120003463	ALC11	SA2	L.COMTAB	TRY DUMPING COMMON AND EXTERNAL	CPS005	1
	5130003465		SA3	L.LNKTAB	LINKAGE TABLES TO BINARY OUTPUT	CPS005	2
5033	5140003456		SA4	L.EXTAB		CPS005	3
	63220		SB2	X2		CPS005	4
5034	0712005036		GT	B2,B1,ALC11A	IF COMMON TABLE NOT EMPTY	CPS005	5
	63330		SB3	X3		CPS005	6
	63441		SB4	X4+B1		CPS005	7
5035	0643005040		LE	B3,B4,ALC12	IF NO EXTERNAL LINKAGES	CPS005	8
5036	0100026031	ALC11A	RJ	/PASS2/DLAST	STRIP THOSE TABLES	CPS005	9
5037	0400005062		EQ	ALC15	AND TRY AGAIN	COMPASS	1816
						CPSA125	25
5040	5110003475	ALC12	SA1	L.REFTAB	TRY TO DUMP REFERENCES TO DISK	COMPASS	1817
	0301005030		ZR	X1,ALC10B	IF NO REFERENCES TRY TO GET MORE FL.	CPSA125	26
5041	5120003436		SA2	O.REFTAB		COMPASS	1820
						CMP30	1412
		RM	IFEQ	CP#RM,0		CMP30	1413
	63620		WRITEW	R,X2,X1	DUMP REFERENCES	COMPASS	1821
		RM	ELSE			CMP30	1414
			FETCH	R,OC,X3		CMP30	1415
			SX6	X3-#YES#		CMP30	1416
			ZR	X6,ALC12A	IF FILE IS ALREADY OPEN	CMP30	1417
			OPENM	R,I-0,R		CMP30	1418
			SA1	L.REFTAB		CMP30	1419
			SA2	O.REFTAB		CMP30	1420
		ALC12A	IX3	X1+X1		CMP30	1421
			LX1	3		CMP30	1422
			IX7	X1+X3		CMP30	1423
			PUTP	R,X2,X7	DUMP REFERENCES	CMP30	1424
		RM	ENDIF			CMP30	1425
						CMP30	1426
5043	76610		SX6	B1		COMPASS	1822
	43700		MX7	0		COMPASS	1823
	5160004054		SA6	/PASS2/REFIO		COMPASS	1824
5044	5170003475		SA7	L.REFTAB		COMPASS	1825
	0400005062		EQ	ALC15		COMPASS	1826
						COMPASS	1827
5045	5110004271	ALC13	SA1	=10HPASS 2 TAB		CMP30	1427
	10611		BX6	X1		CMP30	1428
5046	5160003222		SA6	ASMK		CMP30	1429
	0400005064		EQ	ALC17		CMP30	1430
						COMPASS	1830
		*		DUMP INTERMEDIATE TO DISK.		COMPASS	1831
						COMPASS	1832
5047		ALC14	BSS	0		CPS135	4
						CMP30	1432

		RM	IFEQ	CP#RM,0		CMP30	1433
						CMP30	1434
		5047	7120003000	SX2	S	ENSURE SCRATCH FILE IS NOT BUSY	CPS135 5
1			0100000272	RECALL	X2		CPS135 6
2		5050	7120003000	SX2	S		CPSA116 5
3			7170777727	REWIND	X2,R	INSURE FILE IS POSITIONED AT BOI.	CPSA116 6
4		5052	5110003402	SA1	O.INTER	ORIGIN OF INTERMEDIATE TABLE	CPS135 7
5			5130003441	SA3	L.INTER	ITS LENGTH	CPS135 8
6		5053	43600	MX6	0		COMPASS 1836
7			76710	SX7	B1		COMPASS 1837
8			54630	SA6	A3	ZERO LENGTH OF INTERMEDIATE	COMPASS 1838
9			54740	SA7	A4	SET INTERMEDIATE FLAG	COMPASS 1839
10		5054	76071	SX0	B7+B1		COMPASS 1840
11			7120003000	SX2	S		CMP30 1435
12			63610	WRITEW	X2,X1,X3		COMPASS 1841
13		5056	0300005062	ZR	X0,ALC15	IF PASS 1	CMP30 1436
14			7170000024	WRITER	X2		CMP30 1437
15		5060	7170000050	REWIND	X2		CMP30 1438
16		5061	7170000010	READ	X2		CMP30 1439
17							CMP30 1440
18				RM	ELSE		CMP30 1441
19							CMP30 1442
20				FETCH	S,OC,X2		CMP30 1443
21				SX6	X2-#YES#		CMP30 1444
22				ZR	X6,ALC14A	IF FILE IS ALREADY OPEN	CMP30 1445
23				OPENM	S,I-O,R		CMP30 1446
24			ALC14A	SA1	O.INTER	ORIGIN OF INTERMIDATE TABLE	CPS135 9
25				SA3	L.INTER	ITS LENGTH	CPS135 10
26				SX2	S		CPSA116 7
27				REWINDM	X2,R	INSURE FILE IS POSITIONED AT BOI.	CPSA116 8
28				MX6	0		CPS135 11
29				SX7	B1		CMP30 1451
30				SA6	A3	ZERO LENGTH OF INTERMEDIATE	CMP30 1452
31				IX4	X3+X3		CMP30 1454
32				LX3	3		CMP30 1455
33				SA7	INTERIO	SET INTERMEDIATE FLAG	CPS135 12
34				IX3	X3+X4		CMP30 1456
35				PUT	S,X1,X3		CMP30 1457
36				SA3	PASS		CMP30 1458
37				SB7	X3		CMP30 1459
38				EQ	B7,B1,ALC15	IF PASS 1	CMP30 1460
39				PUT	S,BLANKS,10	JUNK WORD FOR RINTER READ AHEAD	CMP30 1461
40				REWINDM	S		CMP30 1462
41							CMP30 1463
42				RM	ENDIF		CMP30 1464
43							CMP30 1465
44		5062	5120005100	ALC15	SA2	ALCC	RESTORE ENTRY VALUES
45			54121		SA1	A2+B1	COMPASS 1843
46			53020		SA0	X2	COMPASS 1844
47		5063	0400004752		EQ	ALC1	COMPASS 1845
48						AND TRY AGAIN	COMPASS 1846
49							COMPASS 1854
50		5064		ALC17	BSS	0	CPSA125 27
51		5064	7110003220		MESSAGE	ASMJ,,R	F4810B 70
52		5066	7110003224		MESSAGE	ASML,,R	*ASSEMBLY ABORTED - PASS N TABLE*
53		5070	0100005755				*OVERFLOW ASSEMBLING XXXXXXXX*
54		5071	5120005100		RJ	RPD	CMP30 1467
55			54321		SA2	ALCC	F4810A 107
56					SA3	A2+B1	CMP30 1468
57							CMP30 1469

5072 7160041121

ABORT ,NODUMP

CMP30 1470

COMPASS 1857

COMPASS 1858

* PASS 3 OVERFLOW.

COMPASS 1859

5075 5110004053

ALC18

SA1

/PASS2/LOSTREF UPDATE LOSTREF AND DISCARD MEMORY

CMP042 36

5120003476

SA2

L.MEMORY

CMP042 37

5076 36612

IX6

X1+X2

CMP042 38

76700

SX7

B0

CMP042 39

54610

SA6

A1

CMP042 40

54720

SA7

A2

CMP042 41

5077 0400005062

EQ

ALC15

EXIT

COMPASS 1862

COMPASS 1863

5100 00000000000000000000

ALCC

DATA

0,0

TEMPORARY STORAGE FOR OVERFLOW

COMPASS 1864

** ASU - ACCUMULATE STORAGE USED.

COMPASS 1866

* (A0) IS PRESERVED.

COMPASS 1867

COMPASS 1868

COMPASS 1869

5102 0000000000

ASU

PS

RETURN EXIT

COMPASS 1870

5103 6170000033

SB7

NTABLES-4

COUNT STORAGE USED

COMPASS 1871

5130003041

SA3

LOCORE

COMPASS 1872

5104 5120003043

SA2

MAXCORE

COMPASS 1873

5110003442

SA1

SIZES+1

COMPASS 1874

5105 67771

ASU1

SB7

B7-B1

IGNORE INTER AND REFTAB

COMPASS 1875

36331

IX3

X3+X1

COMPASS 1876

54111

SA1

A1+B1

COMPASS 1877

5106 0570005105

NZ

B7,ASU1

LOOP

COMPASS 1878

54111

SA1

A1+B1

ADD IN L.MEMORY

COMPASS 1879

36631

IX6

X3+X1

COMPASS 1880

5107 37262

IX2

X6-X2

COMPASS 1881

0332005102

NG

X2,ASU

IF NEW MAX < OLD MAX

COMPASS 1882

54620

SA6

A2

COMPASS 1883

5110 0400005102

EQ

ASU

RETURN

COMPASS 1884

** ATS - ACCUMULATE TOTAL STORAGE USED.

CMP042 43

CMP042 44

CMP042 45

5111 0000000000

ATS

PS

RETURN EXIT

CMP042 46

5112 5110003043

SA1

MAXCORE

CMP042 47

5120000126

SA2

CP.MAXFL

CMP30 1471

5113 37321

IX3

X2-X1

CMP042 49

10611

BX6

X1

CMP042 50

0323005115

PL

X3,ATS1

IF OLD MAX \ NEW MAX

CPS028 208

5114 54620

SA6

A2

CPS028 209

5115 5110003172

ATS1

SA1

ALCM

ECS/LCM USED

CPS028 210

5120003044

SA2

BLCM

CPS028 211

5116 37321

IX3

X2-X1

CPS028 212

10611

BX6

X1

CPS028 213

0323005111

PL

X3,ATS

IF OLD MAX \ NEW MAX

CMP042 51

5117 54620

SA6

A2

CMP042 52

0400005111

EQ

ATS

RETURN

CMP042 53

** CBC - CHECK BASE CHARACTER.
* ASSUMED NUMBER RADIX IS CHANGED TO THAT SPECIFIED.
* ENTRY (X1) = CHARACTER OR ASTERISK OR BLANK.
* EXIT (X1) = CHARACTER.
* (X6) < 0 IF ERROR.

CMP30	1473
CMP30	1474
CMP30	1475
CMP30	1476
CMP30	1477
CMP30	1478
CMP30	1479
CMP30	1480
CMP30	1481
CMP30	1482
CMP30	1483
CMP30	1484
CMP30	1485
CMP30	1486
CMP30	1487
CMP30	1488
CMP30	1489
CMP30	1490
CMP30	1491
CMP30	1492
CMP30	1493
CMP30	1494
CMP30	1495
CMP30	1496
CMP30	1497
CMP30	1498
CMP30	1499
CMP30	1500
CMP30	1501
CMP30	1502
CMP30	1503
CMP30	1504
CMP30	1505
CMP30	1506
CMP30	1507
CMP30	1508
CMP30	1509
CMP30	1510
CMP30	1511
CMP30	1512
CMP30	1513
CMP30	1514
CMP30	1515
CMP30	1516
CMP30	1517
CMP30	1518
CMP30	1519
CMP30	1520
CMP30	1521
CMP30	1522
CMP30	1523
CMP30	1524
CMP30	1525
CMP30	1526
CMP30	1527
CMP30	1528
CMP30	1529

5120	0000000000	CBC	PS		RETURN EXIT
5121	6271777730		SB7	X1-1R*	
	5120005147		SA2	CBCA+2	
5122	6261777722		SB6	X1-1R	
	0470005136		ZR	B7,CBC3	IF ASTERISK
5123	0460005143		ZR	B6,CBC4	IF BLANK
	6170000003		SB7	3	
5124	26662	CBC1	UX6,B6	X2	SEARCH LIST OF VALID BASE LETTERS
	63516		SB5	X1+B6	
	67771		SB7	B7-B1	
	55221		SA2	A2-B1	
5125	0450005130		ZR	B5,CBC2	IF FOUND
	0570005124		NZ	B7,CBC1	
5126	76710		SX7	B1	NOT FOUND, SET *A* ERROR AND RETURN
	43601		MX6	1	
	5170003345		SA7	EFLG	
5127	5170003322		SA7	AERR	
	0400005120		EQ	CBC	
5130	5110003500	CBC2	SA1	BASESTK	
	5120003135		SA2	ABASE	
5131	73760		SX7	X6	
	21622		AX6	18	
	5170003133		SA7	NBASE	STORE NEW RADICES
5132	5160003134		SA6	MBASE	
	76770		SX7	B7	
	10622		BX6	X2	
5133	54720		SA7	A2	
	0100005627		RJ	PUSH	PUSH DOWN BASE STACK
5134	5110003135		SA1	ABASE	
	5221005145		SA2	CBCA+X1	
5135	26662		UX6,B6	X2	
	77106		SX1	-B6	RESTORE (X1)
	0400005120		EQ	CBC	
5136	5110003500	CBC3	SA1	BASESTK	
	0100005610		RJ	PULL	PUSH UP BASE STACK
5137	5226005145		SA2	CBCA+X6	
	26772		UX7,B7	X2	
	77107		SX1	-B7	(X1) = CHARACTER
5140	5160003135		SA6	ABASE	
	73670		SX6	X7	
	21722		AX7	18	
5141	5160003133		SA6	NBASE	SET RADICES
	5170003134		SA7	MBASE	
5142	0400005120		EQ	CBC	RETURN
5143	5110003135	CBC4	SA1	ABASE	
	5221005145		SA2	CBCA+X1	
5144	26672		UX6,B7	X2	
	77107		SX1	-B7	(X1) = CURRENT BASE
	0400005120		EQ	CBC	RETURN

5145	17730000000012000012	CBCA	VFD	2/0,10/-1RD,30/10,18/10	-CHAR, MBASE, NBASE	CMP30	1530
5146	17600000000010000010		VFD	2/0,10/-1R0,30/8,18/8		CMP30	1531
5147	17620000000012000010		VFD	2/0,10/-1RM,30/10,18/8		CMP30	1532
		**	CCC - CHECK CODE CHARACTER.			COMPASS	1886
		*	CHARACTER CODE TYPE IS CHANGED TO THAT SPECIFIED.			COMPASS	1887
		*	ENTRY (X1) = CHARACTER OR ASTERISK OR BLANK.			CMP30	1533
		*	EXIT (X1) = CHARACTER.			CMP30	1534
		*	(X6) < 0 IF ERROR.			COMPASS	1890
						COMPASS	1891
						COMPASS	1892
						COMPASS	1893
5150	0000000000	CCC	PS	RETURN EXIT			
5151	6271777730		SB7	X1-1R*		CMP30	1535
	5120005213		SA2	CCCA+5		CPSA281	22
5152	6261777722		SB6	X1-1R		CMP30	1537
	0470005173		ZR	B7,CCC3	IF ASTERISK	CMP30	1538
5153	0460005204		ZR	B6,CCC4	IF BLANK	CMP30	1539
	6170000006		SB7	6		CPSA281	23
5154	26662	CCC1	UX6,B6	X2	SEARCH LIST OF VALID CODE LETTERS	CMP30	1541
	63516		SB5	X1+B6		CMP30	1542
	67771		SB7	B7-B1		CMP30	1543
	55221		SA2	A2-B1		CMP30	1544
5155	0450005160		ZR	B5,CCC2	IF FOUND	CMP30	1545
	0570005154		NZ	B7,CCC1		CMP30	1546
5156		CCC1A	BSS	0		CPSA281	24
5156	76710		SX7	B1	NOT FOUND, SET *A* ERROR AND RETURN	CMP30	1547
	43601		MX6	1		CMP30	1548
	5170003345		SA7	EFLG		CMP30	1549
5157	5170003322		SA7	AERR		CMP30	1550
	0400005150		EQ	CCC		CMP30	1551
5160	7117777772	CCC2	SX1	B7-5		CPSA281	25
	5120003116		SA2	PPTYPE	(X2) = 0 IF 180 PP ASSEMBLY	CPSA293	14
5161	7222000003		SX2	X2+3		CPSA293	15
	0311005164		NZ	X1,CCC2A	IF NOT CODE *N*	CPSA293	16
5162	0312005156		NZ	X2,CCC1A	*N* VALID FOR 180 PP ASSEMBLY ONLY	CPSA293	17
	5130007311		SA3	/DATA/STCZ	SET FOR CHARACTER STORE OF 8-BIT/ASCII	CPSA293	18
5163	0400005165		EQ	CCC2B		CPSA293	19
						CPSA293	20
5164	0312005166	CCC2A	NZ	X2,CCC2C	IF NOT 180 PP ASSEMBLY	CPSA293	21
	5130007307		SA3	/DATA/STCW	SET FOR CHARACTER STORE OF 6-BIT/NON-ASCII	CPSA293	22
5165	10733	CCC2B	BX7	X3	SET CHARACTER STORE	CPSA293	23
	5170007276		SA7	/DATA/STC0	*** SAFE CODE-MODIFICATION ***	CPSA293	24
5166	5110003503	CCC2C	SA1	CODESTK		CPSA293	25
	5120003152		SA2	CT+1		CMP30	1553
5167	76770		SX7	B7		CMP30	1554
	55621		SA6	A2-B1	STORE NEW CODE	CMP30	1555
	54720		SA7	A2		CMP30	1556
	10622		BX6	X2		CMP30	1557
5170	0100005627		RJ	PUSH	PUSH DOWN CODE STACK	CMP30	1558
5171	5110003152		SA1	CT+1		CMP30	1559
	5221005206		SA2	CCCA+X1		CMP30	1560
5172	26662		UX6,B6	X2		CMP30	1561
	77106		SX1	-B6	RESTORE (X1)	CMP30	1562
	0400005150		EQ	CCC	RETURN	CMP30	1563

1
2

**	CIF - CHECK INPUT FORMAT.	CMP30	1583
*	ENTRY (X2) = FET/FIT ADDRESS.	CMP30	1584
*	(A0) = FWA OF CARD BUFFER.	CMP30	1585
*	EXIT (AMODE) = INPUT FILE FORMAT.	CMP30	1586
*	(CARD BUFFER) = FIRST CARD.	CMP30	1587
*	(EOFINP) " 0 IF NO DATA.	CMP30	1588
*	X2 AND A0 ARE PRESERVED.	CMP30	1589
		CMP30	1590
		CMP30	1591
5223	0000000000 CIF PS RETURN EXIT	CMP30	1592
	RM IFEQ CP#RM,0	CMP30	1593
		CMP30	1594
5224	43600 MX6 0	CMP30	1595
	5060000012 SA6 A0+10	CMP30	1596
		CMP30	1597
5225	0100022141 RJ /PASS1/RNC READ FIRST CARD OR 7700 HEADER WORD	CMP30	1598
5226	54100 SA1 A0	CMP30	1599
	20106 LX1 6	CMP30	1600
	6271777700 SB7 X1-77B	CMP30	1601
5227	20122 LX1 18	CMP30	1602
	0570005223 NZ B7,CIF IF NOT COMPRESSED SOURCE INPUT	CMP30	1603
	63710 SB7 X1 (I.E., FIRST CHARACTER NOT 77B)	CMP30	1604
5230	21130 AX1 24	CMP30	1605
	76611 SX6 B1+B1 CP.IFORM = +2 (UPDATE)	CMP30	1606
	0470005234 ZR B7,CIF1 IF WORD COUNT IN HEADER WORD IS ZERO	CMP30	1607
5231	76610 SX6 B1 CP.IFORM = +1 (MODIFY)	CMP30	1608
	0301005234 ZR X1,CIF1 IF REMAINDER OF HEADER WORD IS ZERO	CP114	8
5232	7170000064 SX7 64B	CP114	9
	20730 LX7 24 CHECK FOR 0064B IN BITS 35-24	CP114	10
5233	7160000003 SX6 3 CP.IFORM = +3 (MODIFY 64-CHAR)	CP114	11
	13117 BX1 X1-X7	CP114	12
5234	0311005223 CIF1 NZ X1,CIF IF NOT COMPRESSED	CMP30	1609
	5160000130 SA6 CP.IFORM SET INPUT FORMAT	CMP30	1610
		CMP30	1611
	RM ELSE	CMP30	1612
		CMP30	1613
	MX6 0	CMP30	1614
	SX7 A0	CMP30	1615
	SA6 A0+10	CMP30	1616
	SA7 T6RM1 SAVE FWA OF CARD BUFFER	CMP30	1617
	SA0 X2	CMP30	1618
	FETCH X2,RT,X1 CHECK FOR RECORD TYPE Z	CPS0094	7
	SB7 X1-3	CPS0094	8
	ZR B7,CIF4 IF RT=Z, INPUT IS NOT COMPRESSED	CPS0094	9
	SX2 A0	CPS0094	10
	SA1 T6RM1 FWA OF CARD BUFFER	CPS0094	11
	GETP X2,X1,10 READ FIRST WORD	CPS0094	12
	SX2 A0	CMP30	1620
	FETCH X2,FP,X4	CMP30	1621
	SX0 EOD	CMP30	1622
	BX6 X0*X4	CMP30	1623
	SA6 EOFINP	CMP30	1624
	NZ X6,CIF5 IF END OF DATA	CMP30	1625
+	ZR X4,*+1 IF NOT END OF RECORD	CMP30	1626
	SX4 1	CMP30	1627
	SKIPBL X2,X4 BACKSPACE OVER WORD	CMP30	1628
	SA4 T6RM1	CMP30	1629

			SX2	A0			CMP30	1630
			SA1	X4	FETCH WORD		CMP30	1631
			BX3	X1			CMP30	1632
1			AX1	-6			CMP30	1633
2			NZ	X1,CIF4	IF NOT COMPRESSED SOURCE INPUT		CMP30	1634
3			PL	X1,CIF4	(I.E., FIRST CHARACTER NOT 77B)		CMP30	1635
4			MX0	-36			CMP30	1636
5			SX6	B1+B1	CP.IFORM = +2 (UPDATE)		CMP30	1637
6			BX4	-X0*X3			CMP30	1638
7			SA5	=6R			CMP30	1639
8			NZ	X4,CIF1	IF NOT ZEROS IN BITS 35-00		CMP30	1640
9			LX3	24			CMP30	1641
10			SX5	X3			CMP30	1642
11			EQ	CIF2			CMP30	1643
12		CIF1	BX4	X4-X5			CMP30	1644
13			AX3	18			CPS028	214
14			NZ	X4,CIF4	IF NOT BLANKS IN BITS 35-00		CMP30	1646
15			BX4	-X0*X3			CMP30	1647
16			BX5	X5-X4			CMP30	1648
17		CIF2	NZ	X5,CIF4	IF NOT ZEROS NOR BLANKS IN BITS 53-36		CMP30	1668
18			SA6	CP.IFORM	SET INPUT FORMAT		CMP30	1669
19		CIF3	SA1	CP.IFORM			CPS028	215
20			SA4	T6RM1			CPS028	216
21			SB7	X1-2			CPS028	217
22			ZR	B7,CIF3A	IF UPDATE COMPRESSED COMPILE FILE		CPS028	218
23			GETP	X2,X4,10	SKIP HEADER WORD		CMP30	1674
24			EQ	CIF5			CMP30	1675
25		CIF3A	GETP	X2,X4,30			CPS028	219
26			SA4	T6RM1	MOVE HEADER WORDS FOR FIRST CARD		CPS028	220
27			SA1	X4+B1	TO END OF CARD BUFFER AREA		CPS028	221
28			SA3	A1+B1			CPS028	222
29			BX6	X1			CPS028	223
30			LX7	X3			CPS028	224
31			SA6	X4+14			CPS028	225
32			SA7	A6+B1			CPS028	226
33			EQ	CIF5			CPS028	227
34		CIF4	STORE	X2,MRL=160	NOT COMPRESSED, REDUCE MAX RECORD LENGTH		CPSA199	7
35		CIF5	SA4	T6RM1			CMP30	1677
36			SX2	A0	RESTORE (X2)		CMP30	1678
37			SA0	X4	RESTORE (A0)		CMP30	1679
38							CMP30	1680
39		RM	ENDIF				CMP30	1681
40							CMP30	1682
41	5235	0100022141	RJ	/PASS1/RNC	READ FIRST CARD		CMP30	1683
42	5236	0400005223	EQ	CIF	RETURN		CMP30	1684
43								
44								
45								
46								
47		**	CLL	- CLEAR LCM AREA TO ZEROS.			CP096A	114
48		*	ENTRY	(X2) = FWA OF AREA.			CP096A	115
49		*		(X3) = LWA+1 OF AREA.			CP096A	116
50		*	CALLS	RLC, WLC.			CP096A	117
51							CP096A	118
52							CP096A	119
53	5237	0000000000	CLL	PS	RETURN EXIT		CP096A	120
54	5240	37732	IX7	X3-X2			CP096A	121
55								
56								
57								
58								
59								
60								

	0337405240		MI	X7,*+1S17	IF FWA IS GREATER THAN LWA+1	CP096A	122
	76100		SX1	B0		CP096A	123
	5241	10422	BX4	X2		CP096A	124
		7120003060	SX2	LCMB	CLEAR BUFFER BY READING FROM RAL+0	CP096A	125
	5242	7130000100	SX3	100B		CP096A	126
		0100005733	RJ	RLC		CP096A	127
	5243	7130000100	SX3	100B	DECREMENT WORD COUNT	CP096A	128
		37673	IX6	X7-X3		CP096A	129
		10144	BX1	X4		CP096A	130
	5244	0326005245	PL	X6,CLL2	IF AT LEAST 100B WORDS REMAIN	CP096A	131
		76600	SX6	B0		CP096A	132
		10377	BX3	X7	SET REDUCED WORD COUNT	CP096A	133
	5245	73760	SX7	X6		CP096A	134
		36413	IX4	X1+X3	WRITE LCM	CP096A	135
		0100006245	RJ	WLC		CP096A	136
	5246	0317005243	NZ	X7,CLL1	LOOP	CP096A	137
		0400005237	EQ	CLL	RETURN	CP096A	138
		**	CLS - CLEAR SCM AREA TO ZEROS.			CMP30	1686
		*	DISASTER IF FWA IS GREATER THAN LWA.			CMP30	1687
		*	ENTRY (X2) = FWA OF AREA.			CMP30	1688
		*	(X3) = LWA+1 OF AREA.			CMP30	1689
		*	EXIT (X6) = (X7) = 0.			CMP30	1690
		*	USES X0-X3, A0, A6, A7, B5, B6, B7.			CMP30	1691
		*	CALLS PRESET OR RLC.			CMP30	1692
						CMP30	1693
						CMP30	1694
	5247	43100	MX1	0	NO LCM, USE PRESET	CMP30	1695
		13777	BX7	X7-X7		CMP30	1696
		0100005600	RJ	PRESET		CMP30	1697
						CMP30	1698
	5250	0000000000	CLS	PS	RETURN EXIT	CMP30	1699
	5251	37732	IX7	X3-X2		CMP30	1700
		5110000203	SA1	CP.AFLL		CPS028	228
	5252	0337405252	MI	X7,*+1S17	IF FWA IS GREATER THAN LWA+1	CMP30	1702
		0301005247	ZR	X1,CLS1	IF NO LCM	CMP30	1703
	5253	7267777677	SX6	X7-100B		CMP30	1704
		7130000100	SX3	100B		CMP30	1705
	5254	0326005255	PL	X6,CLS3	IF AT LEAST 100B WORDS REMAIN	CMP30	1706
		76600	SX6	B0		CMP30	1707
		73370	SX3	X7	SET REDUCED WORD COUNT	CMP30	1708
	5255	73760	SX7	X6		CMP30	1709
		76100	SX1	B0	READ LCM STARTING AT RAL+0	CMP30	1710
		0100005733	RJ	RLC		CMP30	1711
	5256	7222000100	SX2	X2+100B	INCREMENT SCM ADDRESS	CMP30	1712
		0317005253	NZ	X7,CLS2	LOOP	CMP30	1713
	5257	0400005250	EQ	CLS	RETURN	CMP30	1714
		**	COCT - CONVERT OCTAL NUMBER.			COMPASS	1939
		*	ENTRY (X1) = OCTAL NUMBER.			COMPASS	1940
		*	EXIT (X6) = DISPLAY CODE FOR OCTAL NUMBER.			COMPASS	1941

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5275	15310		CONOCT1	BX3	-X0*X1	EXTRACT DIGIT	CMP042	60
	23161			AX1	X1,B6		F4820	49
	6253777765			SB5	X3-10		F4820	50
5276	0750005277	+		NG	B5,*+1	IF NOT UPPER HEX DIGIT	F4820	51
	7135777745			SX3	B5+1R0-1R0		F4820	52
5277	7273777755			SX7	X3+1R0-1R		CMP042	62
	22377			LX3	X7,B7	POSITION DIGIT	CPS010	21
5300	6177000006			SB7	B7+6		CMP042	64
	36223			IX2	X2+X3		CPS010	22
5301	0311005275			NZ	X1,CONOCT1	LOOP	CMP042	66
	22376			LX3	X6,B7		CPS010	23
	36623			IX6	X2+X3	ADD SIGN IF MINUS	CPS010	24
							CMP042	68
5302	0000000000		CONOCT	PS		RETURN EXIT	CMP042	69
5303	5140003116			SA4	PPTYPE	CHECK IF HEX CONVERSION	F4820	53
	6160000003			SB6	3		F4820	54
5304	43071			MX0	-3		CMP042	70
	66700			SB7	B0		CMP042	71
	5120004270			SA2	=1H		CMP042	72
5305	43600			MX6	0		CPS010	25
	0321005307			PL	X1,CONOCT2	IF NOT NEGITIVE	F4820	55
	14111			BX1	-X1	COMPLEMENT VALUE	F4820	56
5306	7160777770			SX6	1R--1R		F4820	57
5307	0324005275		CONOCT2	PL	X4,CONOCT1	IF NOT HEX ASSEMBLY	F4820	58
	7244000002			SX4	X4+2		CPSA197	4
5310	0334005275			MI	X4,CONOCT1	IF NOT BCU/MCU.	CPSA197	5
	43070			MX0	-4		F4820	59
	66661			SB6	B6+B1		F4820	60
5311	0400005275			EQ	CONOCT1		CMP042	73
** CPS - CLEAR PUSH-DOWN STACKS.							CMP30	1716
							CMP30	1717
							CMP30	1718
5312	0000000000		CPS	PS		RETURN EXIT	CMP30	1719
5313	5110003550			SA1	STACKPTR		CMP30	1720
	43036			MX0	30		CMP30	1721
5314	53210		CPS1	SA2	X1	GET STACK CONTROL WORD	CMP30	1722
	21122			AX1	18	MAX ENTRY COUNT	CMP30	1723
	11302			BX3	X0*X2		CMP30	1724
	36631			IX6	X3+X1		CMP30	1725
5315	54111			SA1	A1+B1		CMP30	1726
	54620			SA6	A2		CMP30	1727
	0311005314			NZ	X1,CPS1	IF NOT END OF LIST	CMP30	1728
5316	0400005312			EQ	CPS	RETURN	CMP30	1729
** CPTIME - CONVERT CPU TIME.							CMP30	1731
* ENTRY (B7) = ADDRESS OF STARTING TIME.							CMP30	1732
* EXIT (X6) = *SSSS.MMM * ELAPSED CPU TIME.							CMP30	1733
							CMP30	1734
							CMP30	1735
5317	0000000000		CPTIME	PS		RETURN EXIT	CMP30	1736

5320	7160241115		TIME	CPTIMEA	GET CURRENT TIME	CMP30	1737			
5323	56570		SA5	B7		CMP30	1738			
	5110005333		SA1	CPTIMEA		CMP30	1739			
	37215		IX2	X1-X5	TIME DIFFERENCE	CMP30	1740			
5324	10522		BX5	X2		CMP30	1741			
	20260		LX2	-12		CMP30	1742			
	7130771747		SX3	1000-1S12		CMP30	1743			
5325	43060	+	MX0	-12		CMP30	1744			
	0322005326		PL	X2,*+1	IF NO BORROW	CMP30	1745			
	36553		IX5	X5+X3		CMP30	1746			
5326	15150		BX1	-X0*X5	MILLISECONDS	CMP30	1747			
	7211001750		SX1	X1+1000	FORCE LEADING ZEROS	CMP30	1748			
5327	0100005270		RJ	CONDEC	CONVERT TO DECIMAL	CMP30	1749			
5330	21514		AX5	12		CMP30	1750			
	73150		SX1	X5	SECONDS	CMP30	1751			
	5120005334		SA2	CPTIMEB		CMP30	1752			
5331	20606		LX6	6		CMP30	1753			
	13562		BX5	X6-X2	CHANGE *1* TO *.*	CMP30	1754			
	0100005270		RJ	CONDEC	CONVERT SECONDS TO DECIMAL	CMP30	1755			
5332	20636		LX6	30		CMP30	1756			
	13665		BX6	X6-X5		CMP30	1757			
	0400005317		EQ	CPTIME	RETURN	CMP30	1758			
						CMP30	1759			
5333	00000000000000000000	CPTIMEA	DATA	0	STORAGE FOR CURRENT TIME	CMP30	1760			
5334	5555555553655555555	CPTIMEB	VFD	36/6R	&1R1&1R.,24/4R	CMP30	1761			
		**	DFL	- DECREASE FIELD LENGTH.		F4810B	72			
		*	REQUESTS FL OF (LWA+1 TABLES + 1000B MGMT SPACE + 10 SLOP)			CPSA226	6			
		*	OR OF *MIDFLN* (LARGER OF *MIDFL* AND *CP.AFLS*), WHICHEVER IS			CPSA226	7			
		*	GREATER, UNLESS CURRENT FL IS .LE. CALCULATED REQUEST.			CPSA226	8			
		*	CLEARS *LSTTHOU* IF REQUEST IS MADE.			CPSA226	9			
						F4810B	74			
						F4810B	75			
5335	0000000000	DFL	PS		RETURN EXIT	F4810B	76			
5336	0100005523		RJ	MTD	MOVE TABLES DOWN	F4810B	77			
5337	5110003437		SA1	0.MEMORY	ORIGIN OF LAST TABLE	F4810B	78			
	5120003476		SA2	L.MEMORY	LENGTH OF LAST TABLE	F4810B	79			
5340	36112		IX1	X1+X2	LWA OF TABLES	F4810B	80			
	7120001012		SX2	1000B+10	LSTTHOU + SLOP	CPSA226	10			
	36121		IX1	X2+X1	LWA TABLES+FLINC	F4810B	82			
5341	5140000202		SA4	CP.NFLS	CURRENT FL	CPSA251	13			
	37241		IX2	X4-X1	COMPARE CURRENT TO CALC. FL	CPSA251	14			
5342	7160000000		SX6	0		CPSA251	15			
	0332005335		MI	X2,DFL	IF CURRENT .LE. CALC FL, EXIT	CPSA251	16			
5343	5160003055		SA6	LSTTHOU	CLEAR LAST 1000B FLAG	CPSA251	17			
	5130003057		SA3	MIDFLN	GET MINIMUM FL. TO BE REDUCED TO	CPSA125	32			
5344	37213		IX2	X1-X3	COMPARE TABLE SPACE TO MIDFLN	CPSA226	11			
	0322005346		PL	X2,DFL1	USE THE GREATER OF THE TWO	CPSA226	12			
	10133		BX1	X3	MIDFLN	CPSA226	13			
5345	37434		IX4	X3-X4	MIDFLN - CURRENT FL	CPSA251	18			
	0324005335		PL	X4,DFL	IF CURRENT .LE. MIDFLN, EXIT	CPSA251	19			
5346	43266	DFL1	MX2	-6	FOR ROUNDING UP	CPSA226	14			
	37112		IX1	X1-X2	FL + 77B	CPSA226	15			
	11112		BX1	X1*X2	ROUND	CPSA226	16			

F4810B	83
F4810B	84
F4810B	85

COMPASS	2003
COMPASS	2004

COMPASS 2007

COMPASS	2008
COMPASS	2009
COMPASS	2010

COMPASS	2011
COMPASS	2012
COMPASS	2013

COMPASS	2014
COMPASS	2015
COMPASS	2016

COMPASS	2017
COMPASS	2018
CMP11	1

COMPASS	2020
COMPASS	2021
COMPASS	2022

COMPASS	2023
COMPASS	2024
COMPASS	2025

COMPASS	2026
CMP30	1762
COMPASS	2028

COMPASS	2032
COMPASS	2033
COMPASS	2034
COMPASS	2035
COMPASS	2036

COMPASS 2038
COMPASS 2039

COMPASS	2040
COMPASS	2041
COMPASS	2042

COMPASS	2043
COMPASS	2044
COMPASS	2045

COMPASS	2046
COMPASS	2047
COMPASS	2048

COMPASS	2049
COMPASS	2050
COMPASS	2051

5372	54761	53637	SA6	X3+B7	STORE OLD ENTRY IN NEW POSITION	COMPASS	2052	
			SA7	A6+B1		COMPASS	2053	
		7233777377	SX3	X3-2*NOPCT		COMPASS	2054	
		20357	LX3	47		COMPASS	2055	
5373	12603		BX6	X0+X3		COMPASS	2056	
		22704	LX7	X4		COMPASS	2057	
		53657	SA6	X5+B7		COMPASS	2058	
		54761	SA7	A6+B1		COMPASS	2059	
						COMPASS	2060	
5374	0000000000	ENTOP	PS		RETURN EXIT	COMPASS	2061	
5375	27001		PX0	X1		COMPASS	2062	
		5140005441	SA4	HASH		COMPASS	2063	
		42304	DX3	X0*X4		COMPASS	2064	
5376	5150003403		SA5	0.0PTAB		COMPASS	2065	
		7100000376	SX0	2*NOPCT-2		COMPASS	2066	
5377	21350		AX3	47-TLUOPSHF		COMPASS	2067	
		11403	BX4	X0*X3		COMPASS	2068	
		43014	MX0	12		COMPASS	2069	
		63750	SB7	X5		COMPASS	2070	
5400	53547		SA5	X4+B7	CHECK BASE TABLE ENTRY	COMPASS	2071	
		10611	BX6	X1		COMPASS	2072	
		22702	LX7	X2		COMPASS	2073	
5401	0315005364		NZ	X5,ENTOP1	IF ALREADY OCCUPIED	COMPASS	2074	
		54650	SA6	A5	OCCUPY BASE ENTRY	COMPASS	2075	
		54751	SA7	A5+B1		COMPASS	2076	
5402	0400005374		EQ	ENTOP		COMPASS	2077	
						COMPASS	2078	
5403		3	ENTOPT	BSS	3	TEMPORARY STORAGE	COMPASS	2079
		**	ENTSYMT	-	ENTER SYMBOL INTO SYMBOL TABLE.	COMPASS	2081	
		*	ENTRY	(X1)	= SYMBOL.	COMPASS	2082	
		*		(X2)	= EQUIVALENT.	COMPASS	2083	
		*	EXIT	(X1)	= SYMBOL UNTOUCHED.	COMPASS	2084	
						COMPASS	2085	
						COMPASS	2086	
5406	5150003171	ENTSYMTX	SA5	SYMCNT	UP SYMBOL COUNT	CMP19	17	
		73751	SX7	X5+B1		CMP19	18	
		54750	SA7	A5		CMP19	19	
						CMP19	20	
5407	0000000000	ENTSYMT	PS		RETURN EXIT	COMPASS	2087	
5410	5130005441		SA3	HASH	HASHING CONSTANT	CMP19	21	
		5150003112	SA5	QVAL	QUALIFIER VALUE	CMP19	22	
5411	10611		BX6	X1		CMP19	23	
		27001	PX0	X1		CMP19	24	
		76700	SX7	B0		CMP19	25	
		21644	AX6	36		CMP19	26	
5412	42430		DX4	X3*X0	MULTIPLY SYMBOL BY HASHING CONSTANT	CMP19	27	
		6276770706	SB7	X6-2R'?		CMP19	28	
		12615	BX6	X1+X5	ADD QUALIFIER VALUE TO SYMBOL	CMP19	29	
5413	20514		LX5	12		CMP19	30	
		7100000776	SX0	NSYMT*2-2	MASK FOR BASE INDEX	CMP19	31	
		63650	SB6	X5		CMP19	32	
5414	21447		AX4	47-SHIFTQ		CMP19	33	
		5150003412	SA5	0.QVTAB		CMP19	34	

5415	11304	67661	SB6	B6-B1		CMP19	35
			BX3	X0*X4	BASE INDEX	CMP19	36
		5140003410	SA4	O.SYMTAB		CMP19	37
		63530	SB5	X3		CMP19	38
5416	0470005420		ZR	B7,ENS1	IF INVENTED SYMBOL	CMP19	39
		0760005421	NG	B6,ENS2	IF BLANK QUALIFIER	CMP19	40
5417	53556		SA5	X5+B6		CMP19	41
	46000		NO			CMP19	42
		0325005421	PL	X5,ENS2	IF NOREF FLAG NOT SET FOR QUALIFIER	CMP19	43
5420	76710	ENS1	SX7	B1		CMP19	44
	6100000000		SB0	0	SET NOREF FLAG IN SYMTAB ENTRY	CMP19	45
	20743		LX7	35		CMP19	46
5421	73045	ENS2	SX0	X4+B5	BASE TABLE ENTRY	CP096A	139
	53400		RX4	X0		CP096A	140
	12727		BX7	X2+X7		CMP19	48
5422	0314005424		NZ	X4,ENTSYMT1	IF BASE ENTRY OCCUPIED	COMPASS	2101
	53600		WX6	X0	OCCUPY BASE ENTRY	CP096A	141
	73001		SX0	X0+B1		CP096A	142
5423	53700		WX7	X0		CP096A	143
	0400005406		EQ	ENTSYMTX		COMPASS	2104
5424	5160005436	ENTSYMT1	SA6	ENTSYMTT	SAVE SYMBOL, EQUIV AND HASHED KEY	COMPASS	2105
	54761		SA7	A6+B1		COMPASS	2106
	10633		BX6	X3		COMPASS	2107
5425	54671		SA6	A7+B1		COMPASS	2108
						CP096A	144
		RM	IFNE	CP#RM,7		CP096A	145
	76111		MANAGE	SYMTAB,2		COMPASS	2109
5427	7243777775		SX4	X3-2	INDEX OF NEW ENTRY	CP096A	146
		RM	ELSE			CP096A	147
			SX1	B1+B1		CP096A	148
			RJ	ILF	INCREASE LCM FIELD LENGTH	CP096A	149
			SA4	L.SYMTAB		CP096A	150
			SA2	O.SYMTAB		CP096A	151
			MI	X6,ILC	IF INSUFFICIENT LCM AVAILABLE	CP096A	152
			IX7	X4+X1		CP096A	153
			SA7	A4	UPDATE L.SYMTAB	CP096A	154
		RM	ENDIF			CP096A	155
						CP096A	156
	63721		SB7	X2+B1	STORE NEW ENTRY	COMPASS	2110
5430	5130005440		SA3	ENTSYMTT+2		COMPASS	2112
	6160000052		SB6	42		COMPASS	2113
5431	73037	ENTSYMT2	SX0	B7+X3	SEARCH SYMBOL TABLE	CP096A	157
	53500		RX5	X0		CP096A	158
	23365		AX3	X5,B6		COMPASS	2115
5432	0313005431		NZ	X3,ENTSYMT2	LOOP TO END OF CHAIN	COMPASS	2116
	22664		LX6	X4,B6		COMPASS	2117
	12656		BX6	X5+X6	OR IN NEW CHAIN NUMBER	COMPASS	2118
5433	53600		WX6	X0		CP096A	159
	55231		SA2	A3-B1		COMPASS	2120
	55121		SA1	A2-B1		COMPASS	2121
	73047		SX0	B7+X4	STORE NEW ENTRY	CP096A	160
5434	22702		LX7	X2		COMPASS	2122
	10611		BX6	X1		COMPASS	2123
	7230777776		SX3	X0-1		CP096A	161
5435	53700		WX7	X0		CP096A	162
	53630		WX6	X3		CP096A	163
	0400005406		EQ	ENTSYMTX		CMP19	49

5436	3	ENTSYMTT	BSS	3	TEMPORARY STORAGE	COMPASS	2130
						COMPASS	2131
						COMPASS	2132
5441	20002525001001001001	HASH	DATA	2525001001001001	.BP0	COMPASS	2133
		**	GETCH - GET NEXT CHARACTER FROM CARD IMAGE.			COMPASS	2135
		*	UPDATES COLUMN, AND CHECKS AGAINST LASTCOL.			COMPASS	2136
		*	EXIT (X1) = (X6) = NEXT CHARACTER.			COMPASS	2137
		*	(X2) = NEGATIVE IF END OF STATEMENT.			COMPASS	2138
						COMPASS	2139
						COMPASS	2140
5442	54610	GNC1	SA6	A1	STORE NEW COLUMN NUMBER	COMPASS	2141
	46000		NO			COMPASS	2142
	5216026436		SA1	X6+CARD-1	FETCH NEW CHARACTER	COMPASS	2143
5443	10611	GNC2	BX6	X1		COMPASS	2144
	46000		NO			COMPASS	2145
	5160003145		SA6	CHAR		COMPASS	2146
						COMPASS	2147
5444	0000000000	GETCH	PS		RETURN EXIT	COMPASS	2148
5445	5110003144		SA1	COLUMN	SEE WHERE WE ARE	COMPASS	2149
	5120003261		SA2	LASTCOL	COMPARED TO END OF STATEMENT	COMPASS	2150
5446	73611		SX6	X1+B1	INCREMENT COLUMN NUMBER	COMPASS	2151
	37221		IX2	X2-X1		COMPASS	2152
	7110000055		SX1	1R		COMPASS	2153
5447	0322005442		PL	X2,GNC1		COMPASS	2154
	0400005443		EQ	GNC2		COMPASS	2155
		**	ILC - INSUFFICIENT LCM AVAILILABLE.			CP096A	165
		*	ENTRY (X7) = FIELD LENGTH NEEDED (SET BY *ILF*).			CP096A	166
						CP096A	167
						CP096A	168
		RM	IFEQ	CP#RM,7		CP096A	169
						CP096A	170
		ILC	BX1	X7	CONVERT TO OCTAL	CP096A	171
			RJ	CONOCT		CP096A	172
			SA1	ILCA	INSERT IN MESSAGE	CP096A	173
						CP096A	174
			MX0	-24		CP096A	175
			LX6	24		CP096A	176
			BX6	X0*X6		CP096A	177
			BX1	-X0*X1		CP096A	178
			BX6	X1+X6		CP096A	179
			SA6	A1		CP096A	180
						CP096A	181
			MESSAGE	ILCA,,R		CP096A	182
			SA1	PASS		CP096A	183
			SB7	X1-2		CP096A	184
			ZR	B7,ALC13	IF PASS 2	CP096A	185
			JP	ALC17	GO ISSUE TABLE OVERFLOW MESSAGE	CP096A	186
						CP096A	187
		ILCA	DATA	C* 00000B	LCM NEEDED TO CONTINUE. *	CP096A	188
						CP096A	189
		RM	ENDIF			CP096A	190

CPS028	230
CPS028	231
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CPS028	270
CPS028	271
CPS028	272
CPS2608	10

CPS2608	12
CPS2608	13
CPS2608	14
CPS2608	15
CPS2608	16
CPS2608	17
CPS2608	18
CPS2608	19
CPS2608	20

* X - 1,2,3,4,7

						CPS2608	21
						CPS2608	22
						CPS2608	23
1	5472	0000000000	LDHDR	PS	RETURN EXIT	CPS2608	24
2	5473	5120003461		SA2	L.TLDS	CPS2608	25
3		5130003302		SA3	K.TLDS	CPS2608	26
4	5474	43103		MX1	3	CPS2608	27
5		0302005500		ZR	X2,LDHDR1	CPS2608	28
6		37423		IX4	X2-X3	CPS2608	29
7	5475	6120000044		SB2	36	CPS2608	30
8		7244777776		SX4	X4-1	CPS2608	31
9	5476	22424		LX4	X4,B2	CPS2608	32
10		12714		BX7	X1+X4	CPS2608	33
11		5140003422		SA4	O.TLDS	CPS2608	34
12	5477	36443		IX4	X4+X3	CPS2608	35
13		53740		SA7	X4	CPS2608	36
14	5500	10722	LDHDR1	BX7	X2	CPS2608	37
15		54730		SA7	A3	CPS2608	38
16		5100000020		ADDWORD	TLDS	CPS2608	39
17	5502	0400005472		EQ	LDHDR	CPS2608	40
18			RM	ENDIF		CPS2608	
19							
20							
21							
22			**	MOVE	- MOVE BLOCK OF DATA.	COMPASS	2157
23			*	MOVE	MOVES EITHER UPWARDS OR DOWNWARDS TO AVOID OVER-STORES.	COMPASS	2158
24			*	ENTRY	(X1) = WORD COUNT.	COMPASS	2159
25			*		(X2) = SOURCE ADDRESS.	COMPASS	2160
26			*		(X3) = DESTINATION ADDRESS.	COMPASS	2161
27						COMPASS	2162
28						COMPASS	2163
29	5503	6170777775	MOVEI	SB7	-2	COMPASS	2164
30		73227		SX2	X2+B7	COMPASS	2165
31		73337		SX3	X3+B7	COMPASS	2166
32	5504	66711		SB7	B1+B1	COMPASS	2167
33		0306005506		ZR	X6,MOVER	COMPASS	2168
34		53527		SA5	X2+B7	COMPASS	2169
35	5505	36226		IX2	X2+X6	COMPASS	2170
36		10755		BX7	X5	COMPASS	2171
37		53737		SA7	X3+B7	COMPASS	2172
38		36336		IX3	X3+X6	COMPASS	2173
39	5506	0301005515	MOVER	ZR	X1,MOVE	COMPASS	2174
40		76511		SX5	B1+B1	COMPASS	2175
41		37115		IX1	X1-X5	COMPASS	2176
42	5507	53227		SA2	X2+B7	COMPASS	2177
43		54421		SA4	A2+B1	COMPASS	2178
44		10622		BX6	X2	COMPASS	2179
45		22704		LX7	X4	COMPASS	2180
46	5510	53637		SA6	X3+B7	COMPASS	2181
47		54761		SA7	A6+B1	COMPASS	2182
48		0301005515		ZR	X1,MOVE	COMPASS	2183
49	5511	54227		SA2	A2+B7	COMPASS	2184
50		54447		SA4	A4+B7	COMPASS	2185
51	5512	10622	MOVEI	BX6	X2	COMPASS	2186
52		54227		SA2	A2+B7	COMPASS	2187
53		22704		LX7	X4	COMPASS	2188
54		54447		SA4	A4+B7	COMPASS	2189
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			SX2	X2+B5		CP096A	232
			SX3	X3+B5		CP096A	233
			EQ	MVL2		CP096A	234
1						CP096A	235
2		RM	ELSE			CP096A	236
3						CP096A	237
4	5543	0400405543	EQ	**1S17	ERROR IF NOT SCOPE 2	CP096A	238
5						CP096A	239
6		RM	ENDIF			CP096A	240
7							
8							
9							
10							
11		**	OVL - LOAD OVERLAY.			CPS064	31
12		*	ENTRY (X1) = OVERLAY NAME.			CPS064	32
13		*	(X2) = 12/ LEVEL, 12/ 0, 18/ LWA+1, 18/ ORIGIN.			CPS064	33
14						CPS064	34
15						CPS064	35
16		OVL	IFNE	OVERLAY,0		CPS064	36
17						CPS064	37
18	5544	0000000000	OVL	PS	RETURN EXIT	CPS064	38
19	5545	5130005574		SA3	OVLY+1	CPS064	39
20		22601		LX6	X1	CPS064	40
21		12723		BX7	X2+X3	CPS064	41
22	5546	5170005576		SA7	OV LZ+1	CPS064	42
23		54671		SA6	A7+B1	CPS064	43
24		20315		LX3	59-46	CPS064	44
25	5547	0323005550		PL	X3,OV L1	CPS064	45
26		55331		SA3	A3-B1	CPS064	46
27		10633		BX6	X3	CPS064	47
28	5550	55671	OVL1	SA6	A7-B1	CPS064	48
29		43700		MX7	0	CPS064	49
30		5170000067		SA7	RA.LDR	CPS064	50
31	5551	7160140426		LOADREQ	OV LZ	CPS064	51
32					REQUEST OVERLAY LOAD	CPS064	52
33			RM	IFNE	CP#RM,7	CPS064	53
34	5554	0100000266	OVL2	RECALL	WAIT FOR LOADER	CPS064	54
35	5555	5140000067		SA4	RA.LDR	CPS064	55
36		0304005554		ZR	X4,OV L2	CPS064	56
37			RM	ENDIF		CPS064	57
38						CPS064	58
39	5556	5110005576		SA1	OV LZ+1	CPS064	59
40		20127		LX1	59-36	CPS064	60
41	5557	0321005544		PL	X1,OV L	CPS064	61
42		5110005577		SA1	OV LZ+2	CPS064	62
43	5560	7160000055		SX6	1R	CPS064	63
44		12616		BX6	X1+X6	CPS064	64
45		20666		LX6	-6	CPS064	65
46	5561	5160005572		SA6	OV LM+1	CPS064	66
47		7110005571		MESSAGE	OV LM	CPS064	67
48	5563	0100005755		RJ	RPD	F4810A	108
49	5564	7160041121		ABORT	,NODUMP	CPS064	68
50						CPS064	69
51	5567	03171520365301000000	OVLA	CON	0L"OV LA"	CPS064	70
52	5570	01010000026437010561		VFD	12/0101B,12/,18/ENDA+1,18/ORG A	CPS064	71
53						CPS064	72
54	5571	55030116245514170104	OVLM	DIS	,* CANT LOAD -----*	CPS064	73
55							
56							
57							
58							
59							
60							

5573		OVL	BSS	0	LOADER PARAMETERS, SET BY *SFL* IN PASS 0	CPS064	74
		LIB	IFC	EQ, "CP.OVLIB"		CPS064	75
5573	03171520365301000000		CON	0L"OVLA" USE GLOBAL LIBRARY SET		CPS064	76
5574	00000140000000000000		VFD	12/,12/0140B,18/,18/		CPS064	77
		LIB	ELSE			CPS064	78
			CON	0L"CP.OVLIB" USE SPECIFIED LIBRARY		CPS064	79
			VFD	12/,12/2140B,18/,18/		CPS064	80
		LIB	ENDIF			CPS064	81
5575	3	OVLZ	BSS	3	SPACE FOR LOADER PARAMETER LIST	CPS064	82
		OVL	ENDIF			CPS064	83
						CPS064	84
						CPS064	85
						CPS064	86
		**		PRESET - PRESET AREA OF STORAGE.		COMPASS	2253
		*		DISASTER IF FWA IS GREATER THAN LWA.		COMPASS	2254
		*		ENTRY (X1) = DATA.		COMPASS	2255
		*		(X2) = FWA.		COMPASS	2256
		*		(X3) = LWA+1.		COMPASS	2257
						COMPASS	2258
						COMPASS	2259
5600	0000000000	PRESET	PS		RETURN EXIT	COMPASS	2260
5601	10611		BX6	X1		COMPASS	2261
	37032		IX0	X3-X2		COMPASS	2262
	76310		SX3	B1		COMPASS	2263
	53620		SA6	X2		COMPASS	2264
5602	11203		BX2	X0*X3		COMPASS	2265
	21001		AX0	1		COMPASS	2266
	0300005600		ZR	X0,PRESET		COMPASS	2267
5603	10711	+	BX7	X1		COMPASS	2268
	0302005604		ZR	X2,*+1		COMPASS	2269
	54661		SA6	A6+B1		COMPASS	2270
5604	37003		IX0	X0-X3		COMPASS	2271
	54661		SA6	A6+B1		COMPASS	2272
	0300005600		ZR	X0,PRESET		COMPASS	2273
5605	37003	+	IX0	X0-X3		COMPASS	2274
	54761		SA7	A6+B1		COMPASS	2275
	5067000001		SA6	A7+1		CMP30	1763
5606	0310005605		NZ	X0,*-1		COMPASS	2277
	0400005600		EQ	PRESET		COMPASS	2278
		**		PULL - REMOVE TOP ENTRY FROM A PUSH-DOWN STACK.		CMP30	1765
		*		ENTRY (X1) = STACK CONTROL WORD.		CMP30	1766
		*		(A1) = ADDRESS OF SAME.		CMP30	1767
		*		EXIT (X1) = (X6) = TOP ENTRY IN STACK.		CMP30	1768
		*		THE ENTRY IS DELETED FROM THE STACK.		CMP30	1769
						CMP30	1770
						CMP30	1771
5607	21130	PULL1	AX1	24	RETURN DEFAULT VALUE	CMP30	1772
	10611		BX6	X1		CMP30	1773
						CMP30	1774

20230

LX2

24

CMP30

1827

12626

BX6

X2+X6

RESTORE CONTROL WORD

CMP30

1828

54610

SA6

A1

CMP30

1829

1

5627 0000000000

PUSH

PS

RETURN EXIT

CMP30

1830

5630 43066

MX0

-6

CMP30

1831

63710

SB7

X1

AVAILABLE ENTRY COUNT

CMP30

1832

21122

AX1

18

CMP30

1833

15710

BX7

-X0*X1

CMP30

1834

5631 0470005642

ZR

B7,PUSH3

IF STACK IS FULL

CMP30

1835

21106

AX1

6

CMP30

1836

63670

SB6

X7

CURRENT WORD NUMBER

CMP30

1837

5632 15310

BX3

-X0*X1

CURRENT BIT POSITION

CMP30

1838

21106

AX1

6

CMP30

1839

15210

BX2

-X0*X1

CMP30

1840

63520

SB5

X2

BITS PER ENTRY

CMP30

1841

5633 0303005636

ZR

X3,PUSH2

IF WORD IS FULL

CMP30

1842

54216

SA2

A1+B6

CMP30

1843

67605

SB6

-B5

CMP30

1844

5634 63536

SB5

X3+B6

NEW BIT POSITION

CMP30

1845

22356

LX3

X6,B5

POSITION NEW ENTRY VALUE

CMP30

1846

12623

BX6

X2+X3

APPEND TO CURRENT WORD

CMP30

1847

54620

SA6

A2

STORE IT BACK

CMP30

1848

5635 20106

LX1

6

CMP30

1849

0400005625

EQ

PUSH1

GO RESTORE CONTROL WORD

CMP30

1850

5636 20166

PUSH2

LX1

-6

CMP30

1851

66661

SB6

B6+B1

BUMP WORD NUMBER

CMP30

1852

15210

BX2

-X0*X1

UNUSED BITS AT TOP OF WORD

CMP30

1853

63525

SB5

X2+B5

CMP30

1854

5637 6140000074

SB4

60

CMP30

1855

20114

LX1

12

CMP30

1856

67545

SB5

B4-B5

NEW BIT POSITION

CMP30

1857

5640 22656

LX6

X6,B5

POSITION NEW ENTRY VALUE

CMP30

1858

76760

SX7

B6

CMP30

1859

46000

NO

CMP30

1860

54616

SA6

A1+B6

STORE NEW WORD

CMP30

1861

5641 0400005625

EQ

PUSH1

GO RESTORE CONTROL WORD

CMP30

1862

5642 21106

PUSH3

AX1

6

CMP30

1863

63770

SB7

X7

CURRENT WORD NUMBER

CMP30

1864

15710

BX7

-X0*X1

CMP30

1865

21106

AX1

6

CMP30

1866

5643 63670

SB6

X7

CURRENT BIT POSITION

CMP30

1867

15710

BX7

-X0*X1

CMP30

1868

21106

AX1

6

CMP30

1869

63570

SB5

X7

BITS PER ENTRY

CMP30

1870

5644 15710

BX7

-X0*X1

CMP30

1871

43001

MX0

1

CMP30

1872

6145777704

SB4

B5-59

CMP30

1873

5645 22040

LX0

X0,B4

MX0 -BPE

CMP30

1874

54311

SA3

A1+B1

CMP30

1875

54231

SA2

A3+B1

CMP30

1876

22153

LX1

X3,B5

CMP30

1877

5646 0471005653

EQ

B7,B1,PUSH5

IF ONE-WORD STACK

CMP30

1878

63475

SB4

X7+B5

CMP30

1879

11101

BX1

X0*X1

CMP30

1880

5647 22342

LX3

X2,B4

CMP30

1881

63370

SB3

X7

UNUSED BITS AT TOP OF WORD

CMP30

1882

55

56

57

58

59

60

1412THE

1

CMP30	1884
CMP30	1885
CMP30	1886
CMP30	1887
CMP30	1888
CMP30	1889
CMP30	1890
CMP30	1891
CMP30	1892
CMP30	1893
CMP30	1894
CMP30	1895
CMP30	1896
CMP30	1897
CMP30	1898
CMP30	1899
CMP30	1900
CMP30	1901

76

37663
11636
37326IX6
BX6
IX3X6-X3
X3*X6
X2-X6CPSA125 50
F4810B 146
CPSA125 51

5714	0323005715		PL	X3,RFL2	IF REQUEST NOT GREATER THAN MAXIMUM JOB FL	F4810B	148
	10622		BX6	X2	ELSE REQUEST MAXIMUM JOB FL	F4810B	149
5715	37246	RFL2	IX2	X4-X6	COMPARE REQUESTED FL TO CURRENT	SIE7969	5
	0302005705		ZR	X2,RFL	IF REQUEST = CURRENT, RETURN	SIE7969	6
	20636		LX6	30-0		SIE7969	7
5716	54640		SA6	A4	PREPARE REQUEST/REPLY WORD	F4810B	151
	7160150515		MEMORY	CM,CP.NFLS,	RECALL MAKE MEMORY REQUEST	F4810B	152
5721	5120000202		SA2	CP.NFLS	GET REPLY WORD	F4810B	153
	21236		AX2	30-0	SHIFT RETURNED FL INTO LOWER 30 BITS	F4810B	154
	10622		BX6	X2		F4810B	155
5722	5160000202		SA6	CP.NFLS	SET UP NEW CURRENT FL	F4810B	156
	5130003041		SA3	LOCORE	UNUSABLE SPACE	F4810B	157
5723	7266777765		SX6	X6-10	ALLOW TEN WORDS FOR SLOP	F4810B	158
	5160003440		SA6	O.ENDTAB	RESET END OF TABLES POINTER	F4810B	159
5724	37663		IX6	X6-X3	NEW FL - UNUSABLE SPACE - 10 WORDS SLOP	F4810B	160
	5160003042		SA6	SIZCORE	SET TABLE SPACE	F4810B	161
5725	0400005705		EQ	RFL	RETURN	F4810B	162

** RLC - READ LARGE CORE MEMORY.
* ENTRY (X1) = LCM FWA.
* (X2) = SCM FWA.
* (X3) = WORD COUNT.
* USES X - 0, 1, 3.
* B - 5, 6, 7.
* A - 0.

CMP30 1903
CMP30 1904
CMP30 1905
CMP30 1906
CP096A 241
CP096A 242
CP096A 243
CMP30 1908
CMP30 1909

5726	6273776777	RLC1	SB7	X3-1000B		CMP30	1910
	6160001000		SB6	1000B		CMP30	1911
5727	0670005730		PL	B7,RLC2	IF AT LEAST 1000B WORDS REMAIN	CMP30	1912
	66700		SB7	B0		CMP30	1913
	63630		SB6	X3	SET REDUCED WORD COUNT	CMP30	1914
5730		RLC2	BSS	0		CMP30	1915
						CMP30	1916
			IF	DEF,HAFEXIT		CPSA134	68
5730	0116000000	+	RE	B6		CMP30	1918
	0100005737	-	RJ	RLC3	IF ERROR	CMP30	1919
			ELSE	1		CPSA134	69
			RL	B6		CMP30	1921
						CMP30	1922
5731	36001		IX0	X0+X1	INCREMENT ADDRESSES	CMP30	1923
	54006		SA0	A0+B6		CMP30	1924
	76370		SX3	B7		CMP30	1925
5732	0707005726		GT	B7,B0,RLC1	LOOP	CMP30	1926
						CMP30	1927
5733	0000000000	RLC	PS		RETURN EXIT	CMP30	1928
5734	10011		BX0	X1		CMP30	1929
	53020		SA0	X2		CMP30	1930
	6150000003		SB5	3	RETRY COUNTER	CMP30	1931
5735	7110001000		SX1	1000B		CMP30	1932
	0333005733		MI	X3,RLC		CMP30	1933

5736	0313005726		NZ	X3,RLC1	IF WORD COUNT GREATER THAN ZERO	CMP30	1934
	0400005733		EQ	RLC	RETURN	CMP30	1935
						CMP30	1936
		ECS	IF	DEF,HAFEXIT		CPSA134	70
						CMP30	1938
5737	0000000000	RLC3	PS		RETURN EXIT	CMP30	1939
5740	67551		SB5	B5-B1		CMP30	1940
	0750005743		MI	B5,RLC4	IF FAILURE AFTER 4 ATTEMPTS	CMP30	1941
5741	0116000000	+	RE	B6		CMP30	1942
	0400005740	-	EQ	RLC3+1	IF ERROR	CMP30	1943
5742	6150000003		SB5	3	RESET RETRY COUNT	CMP30	1944
	0400005737		EQ	RLC3	RETURN	CMP30	1945
5743	7110005751	RLC4	MESSAGE	RLCM,,R		CMP30	1946
5745	0100005755		RJ	RPD	RESTORE DEFAULT PRINT DENSITY IF NECESSARY	F4810A	109
5746	7160041121		ABORT	,NODUMP		CMP30	1947
						CMP30	1948
5751	55012323051502143155	RLCM	DATA	C* ASSEMBLY ABORTED - ECS READ ERROR.*		CMP30	1949
						CMP30	1950
		ECS	ENDIF			CMP30	1951
		**	RPD	- RESTORE PRINT DENSITY.		F4810A	111
		*		RESTORE PRINTER DENSITY TO DEFAULT IF IT HAS BEEN CHANGED.		F4810A	112
						F4810A	113
						F4810A	114
5755	0000000000	RPD	PS		RETURN EXIT	F4810A	115
5756	5120003074		SA2	FRSTLIN	CHECK IF PRINT DENSITY IS EIGHT	CPS236	13
	0302005755		ZR	X2,RPD	IF PRINT DENSITY IS SIX, LEAVE IT.	CPS236	14
						F4810A	118
		RM	IFEQ	CP#RM,0		F4810A	119
5757	5120000116		SA2	CP.LISTF		F4810A	120
	0302005765		ZR	X2,RPD1	IF NO LONG LIST	F4810A	121
5760	5110003075		SA1	LASTLIN		CPSA265	39
	0301005763		ZR	X1,RDP0	IF PRINT DENSITY AT DEFAULT	CPSA265	40
5761	64610		WRITEH	0,A1,1		CPSA265	41
5763		RDP0	BSS	0		CPSA265	42
5763	7120000221		WRITER	0,RECALL		F4810A	123
5765	5110000120	RPD1	SA1	CP.EPAG	TEST *WRITTEN TO* FLAG (58)	CPS236	16
	22111		LX1	B1		CPS236	17
5766	0321005755		PL	X1,RPD	IF NOTHING WAS WRITTEN TO ERROR FILE.	CPS236	18
	5110003075		SA1	LASTLIN		CPSA265	43
5767	0301005771		ZR	X1,RDP2	IF PRINT DENSITY AT DEFAULT	CPSA265	44
	64610		WRITEH	E,A1,1		CPSA265	45
5771		RDP2	BSS	0		CPSA265	46
5771	7120000231		WRITER	E,RECALL		F4810A	132
5773	0400005755		EQ	RPD	RETURN	F4810A	133
						F4810A	134
		RM	ELSE			F4810A	135
			SA1	LASTLIN		CPSA265	47
			ZR	X1,RPD	IF PRINT DENSITY AT DEFAULT	CPSA266	7
			SA2	CP.LISTF		F4810A	136
			ZR	X2,RPD1	IF NO LONG LIST	F4810A	137
			PUT	0,LASTLIN,10	RESTORE PRINTER TO SIX LPI DENSITY	CPS236	20
		RPD1	SA1	CP.EPAG	TEST *WRITTEN TO* FLAG (58).	CPS236	21
			LX1	B1		CPS236	22

PL X1,RPD IF NOTHING WAS WRITTEN TO ERROR FILE.
PUT E, LASTLIN,10 RESTORE PRINTER TO SIX LPI DENSITY
EQ RPD RETURN

CPS236 23
CPS236 24
F4810A 146
F4810A 147
F4810A 148

RM ENDIF

** SCE - SCAN ELEMENT.
* ENTRY (B2) = MASK CODE FOR DELIMITERS TO BE RECOGNIZED AS
* SEPARATORS. ALL OTHERS ARE TREATED AS CHARACTERS
* 0 , = / - SPACE
* 1 , / - SPACE
* 2 , / SPACE

CP147 15
CPS173 5
CPS173 6
CPS173 7
CPS173 8
CPS173 9

* EXIT (X1) = (X6) = ELEMENT, LEFT JUSTIFIED, ZERO FILLED,
* TRUNCATED TO 7 CHARACTERS.
* (B2) = SEPARATOR CODE.

CPS173 10
CP147 16
CP147 17

* 0 SPACE OR COMMA
* 1 =
* 2 /
* 3 -
* -1 OTHER

CP147 18
CP147 19
CP147 20
CP147 21
CP147 22
CP147 23

5774 0000000000

SCE

PS

RETURN EXIT

CP147 24
CP147 25
CP147 26

5775 5110003144

SA1

COLUMN

FETCH POINTER TO 1ST CHAR OF ELEM

CP147 27

5120004276

SA2

=1216BS12

MASK FOR -/=SPACE,

CP147 28

5776 0420006000

ZR

B2,SCEA

IF PROPER MASK.

CPS173 11

5120004277

SA2

=1206BS12

ELSE MASK FOR - / SPACE ,

CPS173 12

5777 0421006000

EQ

B2,B1,SCEA

IF PROPER MASK.

CPS173 13

5120004300

SA2

=206BS12

ELSE MASK FOR / SPACE ,

CPS173 14

6000 5211026436

SCEA

SA1

X1+CARD-1

FETCH 1ST CHAR OF ELEM

CPS173 15

13666

BX6

X6-X6

SET LEFT JUSTIFY SHIFT COUNT

CP147 30

6001 6150000074

SB5

60

SET LEFT JUSTIFY SHIFT COUNT

CP147 31

6140000022

SB4

18

SET LEFT JUSTIFY SHIFT COUNT

CP147 32

6002 6160000006

SB6

6

SET LEFT JUSTIFY SHIFT COUNT

CP147 33

6003 63710

SCE1

SB7

X1

SET LEFT JUSTIFY SHIFT COUNT

CP147 34

22372

LX3

X2,B7

SET LEFT JUSTIFY SHIFT COUNT

CP147 35

67556

SB5

B5-B6

SET LEFT JUSTIFY SHIFT COUNT

CP147 36

22451

LX4

X1,B5

LEFT JUSTIFY CHARACTER

CP147 37

6004 0333006010

MI

X3,SCE2

IF SEPARATOR

CP147 38

12664

BX6

X6+X4

INSERT CHARACTER

CP147 39

54111

SA1

A1+B1

FETCH NEXT CHARACTER

CP147 40

6005 0654006003

GE

B5,B4,SCE1

LOOP

CP147 41

55111

SA1

A1-B1

POINT TO EIGHTH CHARACTER

CP147 42

13664

BX6

X6-X4

REMOVE EIGHTH CHARACTER

CP147 43

6006 76710

SX7

B1

REMOVE EIGHTH CHARACTER

CP147 44

67201

SB2

-B1

REMOVE EIGHTH CHARACTER

CP147 45

5170003322

SA7

AERR

NOTE ERROR

CP147 46

6007 5170003345

SA7

EFLG

NOTE ERROR

CP147 47

0400006014

EQ

SCE3

NOTE ERROR

CP147 48

6010 5130004301

SCE2

SA3

=440700002463BS24

CODES FOR -/=SPACE,

CP147 49

43471

MX4

-3

CODES FOR -/=SPACE,

CP147 50

76770

SX7

B7

CODES FOR -/=SPACE,

CP147 51

CP147 52

6011	5170003145		SA7	CHAR	UPDATE CURRENT CHARACTER CELL	CP147	53				
	20702		LX7	2	SHIFT COUNT = 4*(CHAR)-4*1R+-1	CP147	54				
6012	6237777552		SB3	X7-1R+*4-1		CP147	55				
	22333		LX3	B3		CP147	56				
	15534		BX5	-X4*X3		CP147	57				
6013	6225777776		SB2	X5-1	SEPARATOR CODE	CP147	58				
6014	7071751341	SCE3	SX7	A1-CARD+1	UPDATE POINTER TO CARD IMAGE	CP147	59				
	5170003144		SA7	COLUMN		CP147	60				
6015	10166		BX1	X6		CP147	61				
	0400005774		EQ	SCE	EXIT	CP147	62				
		**	SCITEM - SCAN ITEM IN ADDRESS FIELD.				COMPASS 2299				
		*	AERR NOTED IF GREATER THAN 8 CHARS, AND SYMBOL TRUNCATED.				COMPASS 2300				
		*	SEPARATORS ARE + - * BLANK COMMA &				COMPASS 2301				
		*	* AND / APPLY ONLY IF NOT FIRST CHARACTER.				COMPASS 2302				
		*	EXIT (X6) = SCANNED ITEM.				COMPASS 2303				
		*	(X1) = TERMINATOR CHARACTER.				COMPASS 2304				
6016	20606	SCITEM1	LX6	6		COMPASS	2306				
	12616		BX6	X1+X6	APPEND CHARACTER	COMPASS	2307				
	54111		SA1	A1+B1	FETCH NEW CHARACTER	COMPASS	2309				
	22203		LX2	X3		COMPASS	2310				
6017	63710	SCITEM2	SB7	X1		COMPASS	2311				
	23272		AX2	X2,B7		COMPASS	2312				
	20273		LX2	59		COMPASS	2313				
6020	0322006016		PL	X2,SCITEM1		COMPASS	2314				
	7071751341		SX7	A1-CARD+1		COMPASS	2315				
6021	5170003144		SA7	COLUMN		COMPASS	2316				
	10711		BX7	X1		COMPASS	2317				
	43214		MX2	12		COMPASS	2318				
6022	5170003145		SA7	CHAR		COMPASS	2319				
	11326		BX3	X2*X6	CHECK FOR MORE THAN 8 CHARACTERS	COMPASS	2320				
	76710		SX7	B1		COMPASS	2321				
6023	0303006025		ZR	X3,SCITEM		COMPASS	2322				
	15662		BX6	-X2*X6	TRUNCATE TO 8 CHARACTERS	COMPASS	2323				
6024	5170003322		SA7	AERR	NOTE ERROR	COMPASS	2324				
	5170003345		SA7	EFLG		COMPASS	2325				
6025	0000000000	SCITEM	PS		RETURN EXIT	COMPASS	2327				
6026	5110003144		SA1	COLUMN		COMPASS	2328				
	5120004302		SA2	=2003006BS36	MASK FOR +- ,B&	COMPASS	2329				
6027	5211026436		SA1	X1+CARD-1	FETCH CURRENT CHARACTER	COMPASS	2330				
	5130004303		SA3	=2003036BS36	MASK FOR +-*/ ,B&	COMPASS	2331				
6030	13666		BX6	X6-X6		COMPASS	2332				
	0400006017		EQ	SCITEM2		COMPASS	2333				
		**	SCLIST - SCAN ITEMS SEPARATED BY COMMA AND TERMINATED BY				COMPASS 2335				
		*	A BLANK.				COMPASS 2336				
		*	AERR NOTED IF GREATER THAN 8 CHARACTERS.				COMPASS 2337				
		*	COMMA THROWN AWAY.				COMPASS 2338				

* EXIT (X6) = SCANNED ITEM.

COMPASS 2339

COMPASS 2340

COMPASS 2341

COMPASS 2342

COMPASS 2343

COMPASS 2344

COMPASS 2345

COMPASS 2346

COMPASS 2347

CMP162 1

COMPASS 2349

COMPASS 2350

COMPASS 2351

COMPASS 2352

COMPASS 2353

COMPASS 2354

COMPASS 2355

COMPASS 2356

COMPASS 2357

COMPASS 2358

COMPASS 2359

COMPASS 2360

COMPASS 2361

** SETUP - PREPARE LINE FOR ASSEMBLY.

COMPASS 2363

* THIS ROUTINE SCANS THE CARD AND ESTABLISHES THE CELLS...

COMPASS 2364

* LOCSYM LOCATION SYMBOL.

COMPASS 2365

* BADLOC FLAGGED IF LOCATION EXCEEDS 8 CHARS.

COMPASS 2366

* IOP OPERATION FIELD SYMBOL.

COMPASS 2367

* COL COLUMN NUMBER BEFORE OP CODE.

COMPASS 2368

* COL+1 COLUMN NUMBER BEFORE ADDRESS.

COMPASS 2369

* STYPE TYPE OF CARD - BLANK OR ASTERISK.

COMPASS 2370

* COLUMN COLUMN NUMBER OF FIRST ADDR. CHAR.

COMPASS 2371

* CHAR FIRST CHARACTER OF ADDRESS FIELD.

COMPASS 2372

COMPASS 2373

COMPASS 2374

6044 6140777722

SETUP0

SB4

-1R

COMPASS 2375

43600

MX6

0

COMPASS 2376

63714

SB7

X1+B4

TEST COLUMN 1 FOR BLANK

COMPASS 2377

6045 54111

SA1

A1+B1

FETCH COLUMN 2

COMPASS 2378

0570006046

NZ

B7,SETUP1

IF COLUMN 1 NON-BLANK

COMPASS 2379

66740

SB7

B4

FORCE FIRST CHARACTER TO BE BLANK

COMPASS 2380

6046 6255026436

SETUP1

SB5

CARD+X5-1

COMPASS 2381

5100003143

SA0

COL+1

COMPASS 2382

6047 65215

SB2

A1-B5

PRESET B2 = -COMCOL+2

COMPASS 2383

6130777775

SB3

-2

COMPASS 2384

6050 20606

SETUP3

LX6

6

COMPASS 2385

77274

SX2

B7-B4

RESTORE CHARACTER VALUE

COMPASS 2386

63714

SB7

X1+B4

PREPARE NEW CHARACTER TEST

COMPASS 2387

12662

BX6

X6+X2

APPEND CHARACTER VALUE

COMPASS 2388

6051 54111

SA1

A1+B1

FETCH NEXT CHARACTER

COMPASS 2389

0570006050

NZ

B7,SETUP3

KEEP ACCUMULATING IF OLD NON-BLANK

COMPASS 2390

66331

SB3

B3+B1

INCREMENT FIELD COUNTER

COMPASS 2391

6052 5163003103

SA6

B3+1+LOCSYM

STORE LOCATION OR OP-CODE SYMBOL

COMPASS 2392

9

						COMPASS	2450
						COMPASS	2451
						COMPASS	2452
	6101	0000000000	SLO	PS	RETURN EXIT		
1	6102	5110003062		SA1	XLIST	COMPASS	2453
2		0311006101		NZ	X1,SLO	COMPASS	2454
3	6103	5110003145		SA1	CHAR	COMPASS	2455
4		6271777730		SB7	X1-1R*	COMPASS	2456
5	6104	0470006123		ZR	B7,SLO5	COMPASS	2457
6		5110003347		SA1	LISTOPS+1	CMP30	1952
7	6105	6170000032		SB7	LLISTOPS-2	CMP30	1953
8		66211		SB2	B1+B1	CMP30	1954
9		10611		BX6	X1	CMP30	1955
10	6106	54112	+	SA1	A1+B2	CMP30	1956
11		20601		LX6	1	CMP30	1957
12		67772		SB7	B7-B2	CMP30	1958
13		12661		BX6	X6+X1	CMP30	1959
14	6107	0570006106		NZ	B7,*-1	CMP30	1960
15		5110003507		SA1	LISTSTK	CMP30	1961
16	6110	0100005627		RJ	PUSH	CMP30	1962
17	6111	5120003144		SA2	COLUMN	COMPASS	2459
18		5212026436		SA1	X2+CARD-1	COMPASS	2460
19	6112	5100000016		SA0	LLISTOPS/2	COMPASS	2461
20		6140777731		SB4	-1R-	COMPASS	2462
21	6113	76710	SL01	SX7	B1	COMPASS	2463
22		64300		SB3	A0	COMPASS	2464
23		66211		SB2	B1+B1	COMPASS	2465
24		63714		SB7	X1+B4	COMPASS	2466
25	6114	0570006115		NZ	B7,SL02	COMPASS	2467
26		76700		SX7	B0	COMPASS	2468
27		54111		SA1	A1+B1	COMPASS	2469
28	6115	5120003346	SL02	SA2	LISTOPS	COMPASS	2470
29		63610		SB6	X1	COMPASS	2471
30	6116	26672	SL03	UX6	X2,B7	COMPASS	2472
31		67331		SB3	B3-B1	COMPASS	2473
32		54222		SA2	A2+B2	COMPASS	2474
33	6117	0730006130		NG	B3,SL07	COMPASS	2475
34		0567006116		NE	B6,B7,SL03	COMPASS	2476
35	6120	55721		SA7	A2-B1	COMPASS	2477
36		6170777722		SB7	-1R	COMPASS	2478
37	6121	63617	SL04	SB6	X1+B7	COMPASS	2479
38		54111		SA1	A1+B1	COMPASS	2480
39		0461006113		EQ	B6,B1,SL01	COMPASS	2481
40	6122	0560006121		NZ	B6,SL04	COMPASS	2482
41		0400006101		EQ	SLO	COMPASS	2483
42	6123	5110003507	SL05	SA1	LISTSTK	CMP30	1963
43		0100005610		RJ	PULL	CMP30	1964
44	6124	76710		SX7	B1	COMPASS	2485
45		11671		BX6	X7*X1	COMPASS	2486
46		5160003401		SA6	LISTOPS+LLISTOPS-1	COMPASS	2487
47	6125	6170000015		SB7	NLISTOPS-1	CMP30	1965
48		66211		SB2	B1+B1	CMP30	1966
49	6126	21101	SL06	AX1	1	COMPASS	2489
50		11671		BX6	X7*X1	COMPASS	2490
51		67771		SB7	B7-B1	COMPASS	2491
52		55662		SA6	A6-B2	CMP30	1967
53	6127	0570006126		NZ	B7,SL06	COMPASS	2493
54		0400006101		EQ	SLO	COMPASS	2494
55							
56							
57							
58							
59							
60							

76

□

11625			BX6	X2*X5	EXTRACT LINK	CPS064	113				
37356			IX3	X5-X6	ISOLATE ACTUAL SYMBOL	CPS064	114				
13713			BX7	X1-X3		CPS064	115				
6174	20615		LX6	13	POSITION LINK FOR LATER TESTING	CPS064	116				
	0307006165		ZR	X7,TLUOP2	IF MATCH FOUND	CPS064	117				
	36460		IX4	X6+X0	CALCULATE ADDRESS OF CHAIN ENTRY	CPS064	118				
6175	0316006173		NZ	X6,TLUOP1		CPS064	119				
	5160003303		SA6	OPTYPE		CPS064	120				
6176	0400006166		EQ	TLUOP		CPS064	121				
		**	TLUSYMT - LOOK UP SYMBOL IN SYMBOL TABLE.				CP096A 245				
		*	ENTRY (X1) = SYMBOL RIGHT JUSTIFIED.				COMPASS 2559				
		*	EXIT (X1) = SYMBOL.				COMPASS 2560				
		*	(X2) = TABLE ENTRY.				CMP19 65				
		*	(X3) = LOCATION OF EQUIVALENT (0 IF NOT FOUND).				CMP19 66				
		*	(X4) = INDEX OF EQUIVALENT IN SYMTAB.				COMPASS 2563				
		*	(X5) = SYMBOL WITH QUALIFIER.				CMP1 2				
6177	76470		SLU3	SX4	B7	COMPASS	2565				
	7230000000			SX3	X0+	CP096A	246				
	37404			IX4	X0-X4	CP096A	247				
6200	0000000000		TLUSYMT	PS	RETURN EXIT	COMPASS	2568				
6201	5120005441			SA2	HASH	COMPASS	2569				
	5150003112			SA5	QVAL	CMP19	67				
6202	27001			PX0	X1	CMP19	68				
	67501			SB5	-B1	CMP19	69				
	42302			DX3	X0*X2	CMP19	70				
6203	5120003410			SA2	0.SYMTAB	CMP19	71				
	7100000776			SX0	(B7) = TABLE ORIGIN	CMP19	72				
6204	12551			BX5	NSYMT*2-2	CMP19	73				
	6160000052			SB6	ADD QUALIFIER VALUE TO SYMBOL	CMP19	74				
	21347			AX3	42	CMP19	75				
6205	63720			SB7	47-SHIFTQ	CMP19	76				
	11403			BX4	X2	CMP19	77				
6206	73047		SLU1	SX0	TABLE ORIGIN	CMP19	78				
	53300			RX3	BASE INDEX	CP096A	249				
	73001			SX0	B7+X4	CP096A	250				
	53200			RX2	X0	CP096A	251				
6207	13635			BX6	X0	CP096A	252				
	23462			AX4	X3-X5	COMPASS	2584				
	0306006177			ZR	X2,B6	COMPASS	2585				
6210	13631			BX6	X6,SLU3	COMPASS	2586				
	0316006211			NZ	X3-X1	COMPASS	2587				
	63500			SB5	X6,SLU2	COMPASS	2588				
6211	0314006206		SLU2	NZ	IF MATCH FOUND	CP096A	253				
	43200			MX2	IF LINK " 0	COMPASS	2590				
	76300			SX3	END OF SYMBOL TABLE	COMPASS	2591				
6212	0750006200			NG	B0	COMPASS	2592				
	76050			SX0	B5,TLUSYMT	COMPASS	2593				
	53200			RX2	IF NOT FOUND	CP096A	254				
6213	0400006177			EQ	B5	CP096A	255				
					SLU3	COMPASS	2595				

** UPPOS - INCREMENT POSITION COUNTER.
* ENTRY (X1) = INCREMENT.

COMPASS 2597
COMPASS 2598
COMPASS 2599
COMPASS 2600
COMPASS 2601
COMPASS 2602
COMPASS 2603
COMPASS 2604
CPSA288 15
COMPASS 2606
COMPASS 2607
COMPASS 2608
COMPASS 2609
COMPASS 2610
COMPASS 2611
COMPASS 2612
COMPASS 2613
COMPASS 2614
COMPASS 2615
COMPASS 2616

6214 0000000000
6215 5120003110

UPPOS

PS

SA2

POSCTR

RETURN EXIT

37621

54620

IX6

X2-X1

DECREMENT POSITION COUNTER

SA6

A2

SA3

LWORD

WORD LENGTH - 12, 16, OR 60

6216 5130003123

6217 0326006214

UPPOS1

PL

X6,UPPOS

EXIT IF STILL IN THIS WORD

5140003104

SA4

ORGCTR

ADJUST ORIGIN AND LOCATION COUNTERS

6220 5150003106

SA5

LOCCTR

36663

43073

IX6

X6+X3

MX0

59

IX7

X4-X0

6221 37740

54740

SA7

A4

37750

IX7

X5-X0

54750

SA7

A5

6222 54660

0400006217

SA6

A6

EQ

UPPOS1

** VFYLINK - VERIFY LINKAGE SYMBOL.
* VALID LINKAGE SYMBOLS MUST BE...
* 1) 7 OR FEWER CHARACTERS (3 OR FEWER IF PP).
* 2) BEGIN WITH A-Z IF CP.
* ENTRY (X6) = SYMBOL TO BE CHECKED.
* EXIT (X1) = (X6) = SYMBOL, TRUNCATED IF NECESSARY.
* (X7) = 0 IF OK, "0 IF BAD.

COMPASS 2618
COMPASS 2619
COMPASS 2620
COMPASS 2621
COMPASS 2622
CPS002 1
COMPASS 2624
COMPASS 2625
COMPASS 2626
COMPASS 2630
CPS002 2
CPS002 3
CPS002 4
CPS002 5
CPS002 6
CPSA281 37
CPS002 8
CPS002 9
CPS002 10
F4820 62
CPS002 11
CPS002 12
CPS002 13
CPS002 14
CPS002 15
CPS002 16
CPS002 17
CPS002 18
CPS002 19
CPS002 20
CPS002 21
CPS002 22
CPS002 23

6223 0000000000
6224 5140003114

VFYLINK

PS

SA4

MACHINE

RETURN EXIT

5150003116

SA5

PPTYPE

6225 43306

15145

MX3

6

BX1

-X5*X4

43022

MX0

-7*6

SET FOR 7-CHARACTER NAME

6226 0335006230

0301006230

MI

X5,VFL1

IF BCU, MCU, OR 180 PPU

ZR

X1,VFL1

IF CPU OR 7000 PPU ASSEMBLY

6227 43052

MX0

-3*6

6000 PERIPH, SET FOR 3-CHARACTER NAME

6230 11706

VFL1

BX7

X0*X6

10566

BX5

X6

22106

LX1

X6

6231 0307006234

6232 21606

VFL2

ZR

X7,VFL3

IF NAME NOT TOO LONG

15663

AX6

6

BX6

-X3*X6

TRUNCATE EXCESS CHARACTERS FROM RIGHT

11506

BX5

X0*X6

6233 0315006232

10166

NZ

X5,VFL2

LOOP

BX1

X6

22506

LX5

X6

6234 0314006223

0306006223

VFL3

NZ

X4,VFYLINK

IF PPU ASSEMBLY

ZR

X6,VFYLINK

IF EMPTY NAME

6235 11435

20506

VFL4

BX4

X3*X5

LEFT JUSTIFY NAME

0304006235

LX5

6

ZR

X4,VFL4

CPS002	24
CPS002	25
CPS002	26
CPS002	27

CMP30	1979
CMP30	1980
CMP30	1981
CMP30	1982
CP096A	256
CP096A	257
CP096A	258

CMP30	1984
CMP30	1985
CMP30	1986
CMP30	1987
CMP30	1988
CMP30	1989
CMP30	1990
CMP30	1991
CMP30	1992
CPSA134	71
CMP30	1994
CMP30	1995
CMP30	1996
CMP30	1997
CMP30	1998
CMP30	1999
CMP30	2000
CMP30	2001
CMP30	2002
CMP30	2003
CMP30	2004
CMP30	2005
CMP30	2006
CMP30	2007
CMP30	2008
CMP30	2009
CMP30	2010
CPSA134	72
CMP30	2013
F4810A	149
CMP30	2014
CMP30	2015
CMP30	2016
CMP30	2017
CMP30	2018

**	LJUST - LEFT JUSTIFY SYMBOL.	COMPASS	2649				
*	ENTRY (X1) = NAME.	COMPASS	2650				
*	EXIT (X1) = NAME UNCHANGED.	COMPASS	2651				
*	(X6) = BLANK FILL NAME LEFT JUSTIFIED.	COMPASS	2652				
*	(X7) = ZERO FILL NAME LEFT JUSTIFIED.	COMPASS	2653				
		COMPASS	2654				
		COMPASS	2655				
6262	0000000000	LJUST	PS	RETURN EXIT	COMPASS	2656	
6263	43006		MX0	6	COMPASS	2657	
	7120000055		SX2	1R	COMPASS	2658	
	10611		BX6	X1	COMPASS	2659	
6264	22701		LX7	X1	COMPASS	2660	
6265	20606	+	LX6	6	COMPASS	2661	
	20706		LX7	6	COMPASS	2662	
	11306		BX3	X0*X6	COMPASS	2663	
	12626		BX6	X2+X6	COMPASS	2664	
6266	0303006265		ZR	X3,*-1	COMPASS	2665	
	0400006262		EQ	LJUST	COMPASS	2666	
**	SCAD - SCAN ADDRESS FIELD.	COMPASS	2668				
*	ENTRY (X1) = FIELD WIDTH OF INSTRUCTION.	COMPASS	2669				
*	EXIT VALUES IN EXVAL, EXREL, EXREG, EXEXT, EXERR.	COMPASS	2670				
		COMPASS	2671				
		COMPASS	2672				
		CMP30	2019				
		CMP30	2020				
6267	00000000000000000000	TEOP	DATA	0	TERM OPERATOR	COMPASS	2673
6270	00000000000000000000	TEVAL	DATA	0	TERM VALUE	COMPASS	2674
6271	00000000000000000000	TEREL	DATA	0	TERM RELOCATION	COMPASS	2675
6272	00000000000000000000	TECOE	DATA	0	TERM CO-EFFICIENT	COMPASS	2676
6273	00000000000000000000	TEEXT	DATA	0	TERM EXTERNAL	COMPASS	2677
						COMPASS	2678
6274	00000000000000000000	ELOP	DATA	0	ELEMENT OPERATOR	COMPASS	2679
6275	00000000000000000000	ELVAL	DATA	0	ELEMENT VALUE	COMPASS	2680
6276	00000000000000000000	ELREL	DATA	0	ELEMENT RELOCATION	COMPASS	2681
6277	00000000000000000000	ELEXT	DATA	0	ELEMENT EXTERNAL	COMPASS	2682
6300	00000000000000000000	ELREG	DATA	0	ELEMENT REGISTER	COMPASS	2683
						COMPASS	2684
6301	00000000000000000000	KADFLAG	DATA	0	ADDRESS TERM FLAG	COMPASS	2685
6302	00000000000000000000	EXERR	DATA	0	ADDRESS FIELD ERROR	COMPASS	2686
6303	00000000000000000000	EXLGN	DATA	0	EXPRESSION FIELD LENGTH	COMPASS	2687
6304	00000000000000000000	EXSTOP	DATA	0	STOP CHARACTER. 0=BLANK, 1=COMMA	COMPASS	2688
						COMPASS	2689
						COMPASS	2690
6305	0000000000	SCAD	PS	RETURN EXIT	COMPASS	2691	
6306	10711		BX7	X1	SAVE EXPRESSION LENGTH	COMPASS	2692
	5170006303		SA7	EXLGN		COMPASS	2693
	76600		SX6	B0	INITIALIZE FLAGS	COMPASS	2694
6307	22706		LX7	X6		COMPASS	2695
	55771		SA7	A7-B1	EXERR	COMPASS	2696
	5160006301		SA6	KADFLAG		COMPASS	2697
6310	5170003255		SA7	EXREL		COMPASS	2698
	54671		SA6	A7+B1	EXEXT	COMPASS	2699
	54761		SA7	A6+B1	EXREG	COMPASS	2700

6311	14666		BX6	-X6		CMP029A	1
	5160003254		SA6	EXVAL	EXVAL = -0	CMP029A	2
6312	5120003154		SA2	UI+1	CLEAR RELEVANT PORTION OF *RVTAB*	CPS2672	22
	5130003155		SA3	UI+2		CMP30	2022
6313	63620		SB6	X2		CMP30	2023
	63730		SB7	X3		CMP30	2024
	5110003416		SA1	0.RVTAB		CPS2672	23
6314	36112		IX1	X1+X2		CPS2672	24
	5271777776		SA7	X1-1	ENTRY FOR FIRST BLOCK	CPS2672	25
6315	66661	+	SB6	B6+B1		CMP30	2026
	54771		SA7	A7+B1		CMP30	2027
	0767006315		LT	B6,B7,*		CMP30	2028
6316	5110003145		SA1	CHAR		COMPASS	2706
						COMPASS	2713
	*	ENTRY ON NEW TERM.				COMPASS	2714
						COMPASS	2715
6317	6271777722	SCAD1	SB7	X1-1R	TEST FOR BLANK OR COMMA	COMPASS	2716
	0470006466		ZR	B7,SCADX	IF BLANK	COMPASS	2717
6320	0471006465		EQ	B7,B1,SCADX1	IF COMMA	COMPASS	2718
	76600		SX6	B0		COMPASS	2719
	10766		BX7	X6		COMPASS	2720
6321	5160006270		SA6	TEVAL	CLEAR TEVAL	COMPASS	2721
	54761		SA7	A6+B1	TREL	COMPASS	2722
	54671		SA6	A7+B1	TECOE	COMPASS	2723
6322	76710		SX7	B1		COMPASS	2724
	5170006267		SA7	TEOP	SET TEOP TO 1	COMPASS	2725
						COMPASS	2726
	*	ENTRY ON NEW ELEMENT.				COMPASS	2727
						COMPASS	2728
6323	6271777732	SCAD2	SB7	X1-1R+		COMPASS	2729
	0470006522		ZR	B7,SCAD900	JUMP IF +	COMPASS	2730
6324	0417006522		EQ	B1,B7,SCAD900	JUMP IF -	COMPASS	2731
	6271777710		SB7	X1-1R&		COMPASS	2732
6325	0470006525		ZR	B7,SCAD901	JUMP IF &	COMPASS	2733
	76610		SX6	B1	SET ELEMENT OPERATOR	COMPASS	2734
6326	5160006274		SA6	ELOP		COMPASS	2735
6327	76600	SCAD3	SX6	B0		COMPASS	2736
	43774		MX7	60		COMPASS	2737
	5160006276		SA6	ELREL		COMPASS	2738
6330	55761		SA7	A6-B1	SET ELVAL = -0	COMPASS	2739
	54661		SA6	A6+B1	AND ELEFT = 0	COMPASS	2740
	5120004304		SA2	=30060020B	CHECK FOR BLANK, COMMA, PLUS, MINUS, &	COMPASS	2741
6331	63710		SB7	X1		COMPASS	2742
	22072		LX0	X2,B7		COMPASS	2743
	0330006340		NG	X0,SCAD4		COMPASS	2744
6332		1 SCANEV	BSSZ	1	RJ YEVITEM OR ZEVITEM TO EVAL. ITEM	COMPASS	2745
6333	5110003145		SA1	CHAR	RESTORE CHARACTER	COMPASS	2746
	5120006300		SA2	ELREG	TEST FOR A REGISTER	COMPASS	2747
6334	0302006337		ZR	X2,SCAD40	JUMP IF NOT A REGISTER	COMPASS	2748
	5130003257		SA3	EXREG		COMPASS	2749
6335	20311		LX3	9		COMPASS	2750
	12632		BX6	X3+X2	OR ELREG INTO EXREG	COMPASS	2751
	54630		SA6	A3		COMPASS	2752
6336	0400006340		EQ	SCAD4		COMPASS	2753
6337	43674	SCAD40	MX6	60	SET ADDRESS FLAG	COMPASS	2754
	5160006301		SA6	KADFLAG		COMPASS	2755
6340	5120006274	SCAD4	SA2	ELOP	JUMP ON ELEMENT OPERATOR	COMPASS	2756

		63720		SB7	X2		COMPASS	2757
	6341	0277006341		JP	B7+*		COMPASS	2758
							COMPASS	2759
1	6342	0400006365	+	EQ	SCAD21	INITIAL OPERATION	COMPASS	2760
2	6343	0400006377	+	EQ	SCAD22	MULTIPLICATION	COMPASS	2761
3	6344	5120006277	+	SA2	ELEXT	DIVISION	COMPASS	2762
4		5140006273		SA4	TEEXT		COMPASS	2763
5							COMPASS	2764
6	6345	5150006271		SA5	TEREL		COMPASS	2765
7		55321		SA3	A2-B1	ELREL	COMPASS	2766
8		12223		BX2	X2+X3		COMPASS	2767
9	6346	36445		IX4	X4+X5		COMPASS	2768
10		12242		BX2	X4+X2		COMPASS	2769
11		0312006403		NZ	X2,SCAD225	JUMP IF ILLEGAL DIVISION	COMPASS	2770
12	6347	5130006275		SA3	ELVAL	PERFORM DIVISION IF DENOMINATOR	COMPASS	2771
13		5140006272		SA4	TECOE	IS NON-ZERO	COMPASS	2772
14	6350	0303006435		ZR	X3,SCAD220		COMPASS	2773
15		10644		BX6	X4	PERFORM TECOE = TECOE/ELVAL	COMPASS	2774
16		21460		AX4	48	HIGH 12 BITS OF NUMERATOR	COMPASS	2775
17	6351	0306006362		ZR	X6,SCAD23A	IF NUMERATOR IS ZERO	COMPASS	2776
18		10733		BX7	X3		COMPASS	2777
19		21360		AX3	48	HIGH 12 BITS OF DENOMINATOR	COMPASS	2778
20	6352	27507		PX5	X7	FLOAT LOW DENOMINATOR = DD	COMPASS	2779
21		6170000060		SB7	48		COMPASS	2780
22		27373		PX3	B7,X3	FLOAT D	COMPASS	2781
23	6353	24363		NX3	X3,B6	NORMALIZE D	COMPASS	2782
24		24755		NX7	X5,B5		COMPASS	2783
25		32537		DX5	X3+X7	JUSTIFY EXPONENTS OF D AND DD	COMPASS	2784
26		27474		PX4	X4,B7	FLOAT, NORMALIZE AND JUSTIFY N	COMPASS	2785
27	6354	30237		FX2	X3+X7		COMPASS	2786
28		24774		NX7	X4,B7		COMPASS	2787
29		27306		PX3	X6		COMPASS	2788
30		24363		NX3	X3,B6		COMPASS	2789
31	6355	30437		FX4	X3+X7		COMPASS	2790
32		32337		DX3	X3+X7		COMPASS	2791
33		44642		FX6	X4/X2	N/D	COMPASS	2792
34		40762		FX7	X6*X2	N/D*D	COMPASS	2793
35	6356	31047		FX0	X4-X7	REMAINDER OF N/D IN BOTH PRECISIONS	COMPASS	2794
36		33747		DX7	X4-X7		CPS010	29
37		24060		NX0	X0,B6	NORMALIZE AND JUSTIFY REMAINDER	COMPASS	2796
38		30070		FX0	X7+X0		COMPASS	2797
39	6357	42762		DX7	X6*X2	N/D*D IN LOW PRECISION	COMPASS	2798
40		40465		FX4	X6*X5		COMPASS	2799
41		31537		FX5	X3-X7		COMPASS	2800
42		30505		FX5	X0+X5		COMPASS	2801
43	6360	31554		FX5	X5-X4		COMPASS	2802
44		44352		FX3	X5/X2		CPS010	30
45		32763		DX7	X6+X3		COMPASS	2804
46		30663		FX6	X6+X3		COMPASS	2805
47	6361	26676		UX6	X6,B7		COMPASS	2806
48		22676		LX6	X6,B7		COMPASS	2807
49		0670006363		PL	B7,SCAD23B	JUMP IF NO LOW-ORDER PART	COMPASS	2808
50	6362	43000	SCAD23A	MX0	0		COMPASS	2809
51		36606		IX6	X0+X6		COMPASS	2810
52		0400006364		EQ	SCAD23C		COMPASS	2811
53	6363	26777	SCAD23B	UX7	X7,B7		COMPASS	2812
54		22777		LX7	B7,X7		COMPASS	2813
55								
56								
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1412THE

		36667		IX6	X6+X7		COMPASS	2814
	6364	5160006272	SCAD23C	SA6	TECOE	STORE RESULT	COMPASS	2815
		0400006405		EQ	SCAD24		COMPASS	2816
1	6365	5120006276	SCAD21	SA2	ELREL	ENTRY ON FIRST ELEMENT OF TERM	COMPASS	2817
2		5130006277		SA3	ELEXT		COMPASS	2818
3	6366	0312006372		NZ	X2,SCAD210	JUMP IF ELEMENT RELOCATABLE	COMPASS	2819
4		5140006275		SA4	ELVAL	STORE ABSOLUTE VALUE OF ELEMENT	COMPASS	2820
5	6367	10644		BX6	X4		COMPASS	2821
6		22703		LX7	X3		COMPASS	2822
7	6370	5160006272	+	SA6	TECOE		COMPASS	2823
8		5170006273		SA7	TEEXT		COMPASS	2824
9	6371	0400006405		EQ	SCAD24		COMPASS	2825
10	6372	76610	SCAD210	SX6	B1	NON-ABSOLUTE VALUES	COMPASS	2826
11		5160006272		SA6	TECOE	SET TERM COEFFICIENT TO 1	COMPASS	2827
12	6373	5120006275	SCAD215	SA2	ELVAL	MOVE ELEMENT TO TERM	COMPASS	2828
13		5130006276		SA3	ELREL		COMPASS	2829
14	6374	5140006277		SA4	ELEXT		COMPASS	2830
15		10622		BX6	X2		COMPASS	2831
16		22703		LX7	X3		COMPASS	2832
17	6375	5160006270		SA6	TEVAL		COMPASS	2833
18		54761		SA7	A6+B1	TEREL	COMPASS	2834
19		10644		BX6	X4		COMPASS	2835
20	6376	5160006273	+	SA6	TEEXT		COMPASS	2836
21		0400006405		EQ	SCAD24		COMPASS	2837
22	6377	5120006276	SCAD22	SA2	ELREL	ENTRY ON MULTIPLICATION	COMPASS	2838
23		5130006277		SA3	ELEXT		COMPASS	2839
24	6400	36232		IX2	X3+X2		COMPASS	2840
25		0302006435		ZR	X2,SCAD220	CHECK ABSOLUTE MULTIPLY	COMPASS	2841
26	6401	5120006271		SA2	TEREL		COMPASS	2842
27		5130006273		SA3	TEEXT		COMPASS	2843
28	6402	36223		IX2	X2+X3		COMPASS	2844
29		0302006373		ZR	X2,SCAD215	CHECK FOR REL TIMES EXT	COMPASS	2845
30	6403	76610	SCAD225	SX6	B1	COMPLAIN IF ERROR	COMPASS	2846
31		5160006302		SA6	EXERR		COMPASS	2847
32	6404	5160003345		SA6	EFLG		COMPASS	2848
33		5160003322		SA6	AERR		COMPASS	2849
34	6405	6271777730	SCAD24	SB7	X1-1R*	ENTRY AFTER ELEMENT	COMPASS	2850
35		0470006517		ZR	B7,SCAD800	CHECK FOR * OR / OPERATORS	COMPASS	2851
36	6406	0417006517		EQ	B1,B7,SCAD800		COMPASS	2852
37		5120006267		SA2	TEOP	END OF TERM	COMPASS	2853
38	6407	5130006272		SA3	TECOE		COMPASS	2854
39		7242777776		SX4	X2-1		COMPASS	2855
40	6410	5120006273		SA2	TEEXT		COMPASS	2856
41		20472		LX4	59-1		COMPASS	2857
42		21474		AX4	60		COMPASS	2858
43	6411	13334		BX3	X3-X4		COMPASS	2859
44		55431		SA4	A3-B1	TEREL	COMPASS	2860
45		0312006417		NZ	X2,SCAD110	JUMP IF TERM EXTERNAL	COMPASS	2861
46	6412	0314006426		NZ	X4,SCAD112	JUMP IF TERM RELOCATABLE	COMPASS	2862
47		5140006267		SA4	TEOP		COMPASS	2863
48	6413	7244777772		SX4	X4-5		COMPASS	2864
49		5150003254		SA5	EXVAL		COMPASS	2865
50	6414	0304006416		ZR	X4,SCAD24A	IF & OPERATOR	COMPASS	2866
51		36635		IX6	X3+X5	ADD TERM VALUE INTO EXPRESSION	COMPASS	2867
52		54650		SA6	A5	EXVAL	COMPASS	2868
53	6415	0400006317		EQ	SCAD1		COMPASS	2869
54	6416	13635	SCAD24A	BX6	X3-X5	ADD TERM INTO EXPRESSION	COMPASS	2870

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6444	63720		SB7	X2		COMPASS	2923
	76610		SX6	B1		COMPASS	2924
	43700		MX7	0		COMPASS	2925
6445	66771	SCADCON1	SB7	B7+B1		COMPASS	2926
	5127003257		SA2	EXREG+B7		COMPASS	2927
	12121		BX1	X2+X1		COMPASS	2928
6446	0570006445		NZ	B7,SCADCON1		COMPASS	2929
	0301006440		ZR	X1,SCADCON	IF NO ERRORS	COMPASS	2930
6447	5160003322		SA6	AERR	SET AERR	COMPASS	2931
	5160003345		SA6	EFLG		COMPASS	2932
6450	5170003254		SA7	EXVAL	CLEAR OUT REPLY	COMPASS	2933
	54771		SA7	A7+B1	EXREL	COMPASS	2934
	54771		SA7	A7+B1	EXEXT	COMPASS	2935
6451	54771		SA7	A7+B1	EXREG	COMPASS	2936
	0400006440		EQ	SCADCON	RETURN	COMPASS	2937
6452	00000000000000000000	SCADCONT DATA	0	TEMPORARY STORAGE		COMPASS	2938
						COMPASS	2939
		**	SCADMU	- 60-BIT INTEGER MULTIPLY FOR ADDRESS SCAN.		COMPASS	2941
		*	ENTRY	(X2) = MULTIPLIER.		COMPASS	2942
		*		(X3) = MULTIPLICAND.		COMPASS	2943
		*	EXIT	(X7) = PRODUCT.		COMPASS	2944
						COMPASS	2945
						COMPASS	2946
6453	0000000000	SCADMU	PS	RETURN EXIT		COMPASS	2947
6454	6170000036		SB7	30		COMPASS	2948
	66677		SB6	B7+B7	PRESET B6 = 60	COMPASS	2949
	23762		AX7	B6,X2	GET HIGH ORDER SIGN BIT	COMPASS	2950
6455	13272		BX2	X7-X2	ABSOLUTE VALUE OF X2	COMPASS	2951
	23663		AX6	X3,B6		COMPASS	2952
	13363		BX3	X6-X3	ABSOLUTE VALUE OF X3	COMPASS	2953
	43036		MX0	30		COMPASS	2954
6456	13767		BX7	X6-X7	SIGN OF RESULT	COMPASS	2955
	15530		BX5	-X0*X3		COMPASS	2956
	21336		AX3	30		COMPASS	2957
	15620		BX6	-X0*X2		COMPASS	2958
6457	21236		AX2	30		COMPASS	2959
	27272		PX2	B7,X2	PACK AU WITH EXPONENT 30	COMPASS	2960
	27505		PX5	X5	PACK BL WITH EXPONENT 00	COMPASS	2961
	42225		DX2	X2*X5	1. AU*BL,D EXP = 30	COMPASS	2962
6460	27406		PX4	X6	FORM AL	COMPASS	2963
	42645		DX6	X4*X5	2. AL*BL,D EXP = 0	COMPASS	2964
	27373		PX3	X3,B7	FORM BU	COMPASS	2965
	42334		DX3	X3*X4	3. AL*BU,D EXP = 30	COMPASS	2966
6461	36223		IX2	X2+X3	4. 1+ 3,I EXP = 30	COMPASS	2967
	40445		FX4	X4*X5	5. AL*BL,S EXP = 48	COMPASS	2968
	15540		BX5	-X0*X4	TRUNCATE AL*BL,S	COMPASS	2969
	26676		UX6	X6,B7	UNPACK 00 TERM	COMPASS	2970
6462	20236		LX2	30		COMPASS	2971
	20560		LX5	48	ALIGN DECIMAL POINTS	COMPASS	2972
	36225		IX2	X2+X5		COMPASS	2973
	11302		BX3	X0*X2	DISCARD EXTRA BITS	COMPASS	2974
6463	36636		IX6	X3+X6	ADD HIGH AND LOW PARTS	COMPASS	2975
	13567		BX5	X6-X7	SIGN RESULT	COMPASS	2976

6464	0400006453	37757	IX7 EQ	X5-X7 SCADMU	CORRECT -0 TO +0	COMPASS COMPASS	2977 2978
** SCADX - END OF EXPRESSION.							
6465	0100005444	SCADX1	RJ	GETCH	THROW AWAY COMMA	COMPASS	2980
6466	5130003154	SCADX	SA3	UI+1		COMPASS	2981
	5140003155		SA4	UI+2		COMPASS	2982
6467	5150006302		SA5	EXERR		COMPASS	2983
	76670		SX6	B7	RECORD STOP CHARACTER	CMP30	2029
	63630		SB6	X3		CMP30	2030
6470	63740		SB7	X4		CMP30	2031
	5160006304		SA6	EXSTOP		COMPASS	2032
6471	0315006515		NZ	X5,SCAD56	IF EXPRESSION ERROR	CMP30	2033
	5130003416		SA3	O.RVTAB	(X3) = FWA-1 RVTAB	CPS2672	2987
6472	7233777776		SX3	X3-1		CPS2672	2034
	5120003256		SA2	EXEXT		CMP30	2035
6473	53536	SCADX2	SA5	X3+B6	NEXT RVTAB ENTRY	CPS2672	31
	0776006501		GT	B6,B7,SCAD53	IF END OF BLOCKS	CMP30	2037
	66661		SB6	B6+B1		CMP30	2038
6474	63550		SB5	X5		CMP30	2039
	0305006473		ZR	X5,SCADX2	IF NO COEFFICIENT FOR THIS RELOCATION	CMP30	2040
	21501		AX5	1		CMP30	2041
6475	77651		SX6	B5-B1		CMP30	2042
	77761		SX7	B6-B1		CMP30	2043
	20607		LX6	7		CMP30	2044
6476	0315006513		NZ	X5,SCAD55	IF NOT +1 OR -1, ERROR	CMP30	2045
	0312006513		NZ	X2,SCAD55	IF ANY OTHER RELOCATION OR EXTERNAL, ERROR	CMP30	2046
6477	37676		IX6	X7-X6	CALCULATE RELOCATION	CMP30	2047
	12226		BX2	X2+X6		CMP30	2048
	5160003255		SA6	EXREL		COMPASS	3004
6500	0676006473		LE	B6,B7,SCADX2	LOOP	CMP30	2049
6501	5150003254	SCAD53	SA5	EXVAL	PROPAGATE MINUS ZERO	CMP30	2050
	5120006301		SA2	KADFLAG		COMPASS	3008
6502	36652		IX6	X5+X2		COMPASS	3009
	54650		SA6	A5		COMPASS	3010
	5120003116		SA2	PPTYPE		F4820	63
6503	0322006507		PL	X2,SCAD61	IF ONES COMPLEMENT	F4820	64
	7222000003		SX2	X2+3		CPSA197	6
6504	0302006507		ZR	X2,SCAD61	PPTYPE NOT -1 NOR -2	CPSA197	7
	0326006507		PL	X6,SCAD61	IF RESULT POSITIVE	F4820	65
6505	43701		MX7	1		F4820	66
	76210		SX2	B1		F4820	67
	15667		BX6	-X7*X6		F4820	68
	36662		IX6	X6+X2		F4820	69
6506	12667		BX6	X6+X7		F4820	70
	54660		SA6	A6		F4820	71
6507		SCAD61	BSS	0		F4820	72
6507	5120006303		SA2	EXLGN	CHECK FOR FIELD OVERFLOW	COMPASS	3011
	63720		SB7	X2		COMPASS	3012
	23776		AX7	X6,B7		COMPASS	3013
6510	0307006305		ZR	X7,SCAD		COMPASS	3014
	76710		SX7	B1	*** ADDRESS FIELD OVERFLOW	COMPASS	3015

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**	SCD - SCAN DATA ITEM.				COMPASS	3066
*	SETS AERR AND EXERR IF BAD DATA OCCURS.				COMPASS	3067
*	ENTRY (X2) = ORIGIN OF DATA.				COMPASS	3068
*	(X3) = LIMITING WORD COUNT FOR DATA.				COMPASS	3069
*	(X4) = ADDRESS FIELD FLAG. (1 ADDRESS, 0 DATA, -1 LIT)				COMPASS	3070
*	(X5) = FIELD WIDTH FOR CHARACTER DATA IN ADDRESS FIELD.				COMPASS	3071
*	EXIT (X3) = WORD COUNT OF DATA STORED.				COMPASS	3072
					COMPASS	3073
					COMPASS	3074
		QUAL	DATA		COMPASS	3075
					COMPASS	3076
6537	SCDA	BSS	0		COMPASS	3077
					COMPASS	3078
6537	00000000000000000000	RD	DATA	0	RADIX OF VALUE	COMPASS 3079
6540	00000000000000000000	SI	DATA	0	SIGN OF VALUE	COMPASS 3080
6541	00000000000000000000	DV	DATA	0,0	DECIMAL VALUE	COMPASS 3081
6543	00000000000000000000	OV	DATA	0,0	OCTAL VALUE	COMPASS 3082
6545	00000000000000000000	RN	DATA	0	REAL NUMBER FLAG	COMPASS 3083
6546	00000000000000000000	FC	DATA	0	COUNT OF FRACTIONAL DIGITS	COMPASS 3084
					COMPASS	3085
6547	00000000000000000000	EF	DATA	0	-E- SCALE FLAG (1 = SINGLE, 2 = DOUBLE)	COMPASS 3086
6550	00000000000000000000	ES	DATA	0	SIGN OF -E- SCALE FACTOR	COMPASS 3087
6551	00000000000000000000	EV	DATA	0	VALUE OF -E- SCALE FACTOR	COMPASS 3088
					COMPASS	3089
6552	00000000000000000000	SF	DATA	0	-S- SCALE FLAG	COMPASS 3090
6553	00000000000000000000	SS	DATA	0	SIGN OF -S- SCALE FACTOR	COMPASS 3091
6554	00000000000000000000	SV	DATA	0	VALUE OF -S- SCALE FACTOR	COMPASS 3092
					COMPASS	3093
6555	00000000000000000000	PF	DATA	0	-P- SCALE FLAG	COMPASS 3094
6556	00000000000000000000	PS	DATA	0	SIGN OF -P- SCALE FACTOR	COMPASS 3095
6557	00000000000000000000	PV	DATA	0	VALUE OF -P- SCALE FACTOR	COMPASS 3096
					COMPASS	3097
6560	00000000000000000000	OC	DATA	0	OCTAL FLAG FOR 8 OR 9 DETECTED	COMPASS 3098
					COMPASS	3099
21	SCDAL	EQU	*-SCDA-1		COMPASS	3100
					COMPASS	3101
6561	00000000000000000000	DO	DATA	0	DATA ORIGIN ADDRESS	COMPASS 3102
6562	00000000000000000000	DL	DATA	0	WORD COUNT OF DATA FIELD	COMPASS 3103
6563	00000000000000000000	AF	DATA	0	ADDRESS FIELD FLAG (-1 LIT, 0 DATA, 1 ADD)	COMPASS 3104
6564	00000000000000000000	FW	DATA	0	FIELD WIDTH FOR CHARACTER DATA IN ADDRESS	COMPASS 3105
					COMPASS	3106
					COMPASS	3107
6565	0000000000	SCD	PS	0	ENTRY/EXIT	COMPASS 3108
6566	10622		BX6	X2	STORE CALLING SEQUENCE PARAMETERS	COMPASS 3109
	22703		LX7	X3		COMPASS 3110
	5160006561		SA6	D0		COMPASS 3111
6567	54761		SA7	A6+B1		COMPASS 3112
	10644		BX6	X4		COMPASS 3113
	22705		LX7	X5		COMPASS 3114
	54671		SA6	A7+B1		COMPASS 3115
6570	54761		SA7	A6+B1		COMPASS 3116
	6140000021		SB4	SCDAL	CLEAR LOCAL VARIABLES	COMPASS 3117
	43600		MX6	0		COMPASS 3118
6571	76510		SX5	B1		COMPASS 3119
	5160006537		SA6	SCDA		COMPASS 3120
6572	5110003145		SA1	CHAR	FIRST CHARACTER	COMPASS 3121
6573	67441	SCD1	SB4	B4-B1		COMPASS 3122

54661
0540006573

SA6
NZ A6+B1
B4,SCD1

COMPASS 3123
COMPASS 3124
COMPASS 3125

** CHECK FIRST CHARACTER FOR SIGN OF DATA.

COMPASS 3126
COMPASS 3127
COMPASS 3128

6574 6271777732

SB7 X1-1R+ CHECK CHARACTER

0470006577

ZR B7,SCD2 IF ***

COMPASS 3129

6575 0571006600

NE B7,B1,SCD3 IF NOT *-*

COMPASS 3130

43674

MX6 60 SET SIGN NEGATIVE

COMPASS 3131

6576 5160006540

SA6 SI

COMPASS 3132

6577 0100005444

SCD2

RJ GETCH

SKIP SIGN

COMPASS 3133

COMPASS 3134

** CHECK FIRST CHARACTER TO DETERMINE DATA TYPE.

COMPASS 3135

6600 5120004305

SCD3

SA2 =10000000401110436B MASK FOR #ZROLHDCBA

COMPASS 3136

63710

SB7 X1

CMP136 1

23272

AX2 X2,B7

COMPASS 3138

6601 20273

LX2 59

COMPASS 3139

47022

CX0 X2

COMPASS 3140

0322006630

PL X2,NDS

IF NOT ONE OF THE ABOVE CHARACTERS

COMPASS 3141

6602 63700

SB7 X0

COMPASS 3142

0277006612

JP B7+SCDB-1

JUMP TO LETTER PROCESSOR

COMPASS 3143

COMPASS 3144

** ERR - PROCESS DATA ERROR AND EXIT.

COMPASS 3146

COMPASS 3147

6603 76610

ERR

SX6 B1

NOTE ERROR IN DATA

COMPASS 3148

5160006302

SA6 EXERR

COMPASS 3149

76310

SX3 B1

LENGTH = 1

COMPASS 3150

6604 5160003345

SA6 EFLG

COMPASS 3151

5160003322

SA6 AERR

COMPASS 3152

6605 5120006561

SA2 D0

COMPASS 3153

76600

SX6 B0

VALUE = 0

COMPASS 3154

53620

SA6 X2

COMPASS 3155

COMPASS 3156

** SCDX - PROCESS TERMINATOR AND EXIT.

COMPASS 3158

COMPASS 3159

6606 5140004306

SCDX

SA4 =36060020B MASK FOR \+-*/ ,&@

COMPASS 3160

5120006563

SA2 AF

COMPASS 3161

6607 0312006610

NZ X2,SCDX1

IF ADDRESS FIELD

COMPASS 3162

5140004307

SA4 =6BS12

MASK FOR \ ,@

COMPASS 3163

6610 63710

SCDX1

SB7 X1

COMPASS 3164

22674

LX6 X4,B7

COMPASS 3165

0336006565

NG X6,SCD

RETURN IF ONE OF THE ABOVE

COMPASS 3166

6611 0100005444

RJ GETCH

SKIP CHARACTER

COMPASS 3167

6612 0400006603

EQ ERR

PROCESS ERROR

COMPASS 3168

COMPASS 3169

1412THE

COMPASS 3171
COMPASS 3172

1412THE

** LRS - PROCESS LEADING RADIX SPECIFICATION.
* ENTRY (X6) = RADIX.
* EXIT TO *NDS*.

COMPASS 3260
COMPASS 3261
COMPASS 3262
COMPASS 3263
COMPASS 3264
COMPASS 3265
COMPASS 3266

6627 5160006537 LRS SA6 RD
0100005444 RJ GETCH SKIP CHARACTER

** NDS - NUMERIC DATA SCAN.
* CONVERT UP TO 32 DIGITS, DECIMAL AND OCTAL.
* SET REAL NUMBER FLAG IF *.* ENCOUNTERED.
* SET OCTAL FLAG IF *8* OR *9* ENCOUNTERED.
* SET FRACTION DIGIT COUNT.

COMPASS 3268
COMPASS 3269
COMPASS 3270
COMPASS 3271
COMPASS 3272
COMPASS 3273
COMPASS 3274

6630 43005 NDS MX0 -55 MASK FOR DIGIT OVERFLOW
76700 SX7 B0 H10 = 0
5120003144 SA2 COLUMN INITIALIZE CARD POINTERS
6631 5212026435 SA1 X2+CARD-2
5100000007 SA0 7
6632 5120004310 SA2 =7774BS21 MASK FOR \0123456789@
43300 MX3 0 L10 = 0
10477 BX4 X7 H8 = 0
6633 36577 IX5 X7+X7 L8 = 0
66200 SB2 B0
66300 SB3 B0
66400 SB4 B0
6634 66511 SB5 B1+B1
6160000067 SB6 55
6635 0400006641 EQ NDS2 ENTER LOOP

COMPASS 3275
COMPASS 3276
COMPASS 3277
COMPASS 3278
COMPASS 3279
COMPASS 3280
COMPASS 3281
COMPASS 3282
COMPASS 3283
COMPASS 3284
COMPASS 3285
COMPASS 3286
COMPASS 3287
COMPASS 3288
COMPASS 3289

* (X7) = H10, (X3) = L10.
* (X4) = H8, (X5) = L8.
* (B4) = *8* OR *9* ENCOUNTERED.
* (B3) = FRACTION DIGIT COUNT.
* (B2) = *.* ENCOUNTERED.

COMPASS 3290
COMPASS 3291
COMPASS 3292
COMPASS 3293
COMPASS 3294
COMPASS 3295

6636 22657 NDS1 LX6 B5,X7 3. 8*H10
36767 IX7 X6+X7 H10 = (2)+(3)
66323 SB3 B2+B3 COUNT FRACTIONAL DIGITS
15212 BX2 -X2*X1 EXTRACT 8/9 BIT
6637 22653 LX6 X3,B5 4. 8*L10
63424 SB4 X2+B4 8/9 PRESENCE
36313 IX3 X1+X3 5. (1)+DIGIT
54220 SA2 A2 REFETCH DIGITS MASK
6640 20503 LX5 3 6. 8*L8
36363 IX3 X6+X3 L10 = (4)+(5)
20403 LX4 3 H8 = 8*H8
36515 IX5 X1+X5 L8 = (6)+DIGIT
6641 54111 NDS2 SA1 A1+B1 NEXT CHARACTER
23663 AX6 X3,B6 OVERFLOW FROM L10
63710 SB7 X1
36767 IX7 X6+X7 H10 = H10+CARRY

COMPASS 3296
COMPASS 3297
COMPASS 3298
COMPASS 3299
COMPASS 3300
COMPASS 3301
COMPASS 3302
COMPASS 3303
COMPASS 3304
COMPASS 3305
COMPASS 3306
COMPASS 3307
COMPASS 3308
COMPASS 3309
COMPASS 3310
COMPASS 3311
COMPASS 3312
COMPASS 3313

6642	15330		BX3	-X0*X3	CLEAR OVERFLOW FROM L10	COMPASS	3314
	23665		AX6	X5,B6	OVERFLOW FROM L8	COMPASS	3315
	36464		IX4	X6+X4	H8 = H8+CARRY	COMPASS	3316
		15550	BX5	-X0*X5	CLEAR OVERFLOW FROM L8	COMPASS	3317
6643	22672		LX6	X2,B7	CHECK CHARACTER	COMPASS	3318
	7211777744		SX1	X1-1R0	CONVERT CHARACTER TO DIGIT	COMPASS	3319
		36333	IX3	X3+X3	1. 2*L10	COMPASS	3320
6644	74200		SX2	A0	RESET 7 IN X2	COMPASS	3321
	20701		LX7	1	2. 2*H10	COMPASS	3322
	0336006636		NG	X6,NDS1	LOOP IF CHARACTER = DIGIT	COMPASS	3323
						COMPASS	3324
6645	6177777720		SB7	B7-1R.	CHECK CHARACTER	COMPASS	3325
	0570006654		NZ	B7,NDS3	IF NOT *.*	COMPASS	3326
6646	54111		SA1	A1+B1	NEXT CHARACTER	COMPASS	3327
	54220		SA2	A2	SET UP FOR LOOP RE-ENTRY	COMPASS	3328
	0420006652		ZR	B2,NDS2A	IF FIRST *.*	CPS2658	7
6647	7061751341		SX6	A1-CARD+1	ERROR, BUT FIRST SET CARD POINTERS	CPS2658	8
	5160003144		SA6	COLUMN		CPS2658	9
6650	10711		BX7	X1		CPS2658	10
	5170003145		SA7	CHAR		CPS2658	11
6651	0400006603		EQ	ERR		CPS2658	12
						CPS2658	13
6652	66210	NDS2A	SB2	B1	SET REAL NUMBER FLAG	CPS2658	14
	63710		SB7	X1		COMPASS	3329
	22672		LX6	X2,B7		COMPASS	3330
	74200		SX2	A0		COMPASS	3331
6653	7211777744		SX1	X1-1R0		COMPASS	3332
	0336006636		NG	X6,NDS1	IF DIGIT	COMPASS	3334
						COMPASS	3335
6654	7211000033	NDS3	SX1	X1+1R0	RESET NEXT CHARACTER	COMPASS	3336
	21701		AX7	1	H10 = (2)/2	COMPASS	3337
	23613		AX6	X3,B1	L10 = (1)/2	COMPASS	3338
6655	5170006541		SA7	DV	SET DECIMAL VALUE	COMPASS	3339
	54671		SA6	A7+B1		COMPASS	3340
	10744		BX7	X4	SET OCTAL VALUE	COMPASS	3341
6656	22605		LX6	X5		COMPASS	3342
	54761		SA7	A6+B1		COMPASS	3343
	54671		SA6	A7+B1		COMPASS	3344
	76720		SX7	B2	SET REAL NUMBER FLAG	COMPASS	3345
6657	76630		SX6	B3	SET FRACTIONAL DIGIT COUNT	COMPASS	3346
	5170006545		SA7	RN		COMPASS	3347
6660	5160006546		SA6	FC		COMPASS	3348
	76740		SX7	B4	SET OCTAL FLAG	COMPASS	3349
6661	7061751341		SX6	A1-CARD+1	CORRECT CARD POINTERS	COMPASS	3350
	5170006560		SA7	OC		COMPASS	3351
6662	5160003144		SA6	COLUMN		COMPASS	3352
	10711		BX7	X1	SET NEXT CHARACTER	COMPASS	3353
6663	5170003145		SA7	CHAR		COMPASS	3354
	0520006720		NZ	B2,NDS5	IF REAL NUMBER	COMPASS	3355
		**	CHECK CHARACTER FOLLOWING NUMERIC DATA TO DETERMINE				COMPASS 3357
		*	IF DATA IS NUMERIC COUNT CHARACTER STRING.				COMPASS 3358
							COMPASS 3359
							COMPASS 3360

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		43300		MX3	0	L16 = 0		CMP136	28
6703	6160000067			SB6	55			CMP136	29
		43404		MX4	4			CMP136	30
		76200		SX2	B0			CMP136	31
								CMP136	32
6704	20304		HDS1	LX3	4			CMP136	33
		20704		LX7	4			CMP136	34
		36332		IX3	X3+X2	ADD IN NEW DIGIT		CMP136	35
		54111		SA1	A1+B1	NEXT CHARACTER		CMP136	36
6705	23663			AX6	X3,B6	OVERFLOW FROM L16		CMP136	37
		15330		BX3	-X0*X3	CLEAR OVERFLOW FROM L16		CMP136	38
		36776		IX7	X7+X6	H16 = H16 + CARRY		CMP136	39
6706	0301006712			ZR	X1,HDS2	IF COLON		CMP136	40
		6271777770		SB7	X1-1RF-1			CMP136	41
6707	7221000011			SX2	X1-1RA+10			CMP136	42
		0770006704		MI	B7,HDS1	IF *A* - *F*		CMP136	43
6710	6271777732			SB7	X1-1R9-1			CMP136	44
		7221777744		SX2	X1-1R0			CMP136	45
6711	0670006712			PL	B7,HDS2	IF NOT *0* - *9*		CMP136	46
		0322006704		PL	X2,HDS1	LOOP TO NON-HEX CHARACTER		CMP136	47
								CMP136	48
6712	7061751341		HDS2	SX6	A1-CARD+1	CORRECT CARD POINTERS		CMP136	49
		5170006541		SA7	DV	SET DECIMAL VALUE		CMP136	50
6713	5160003144			SA6	COLUMN			CMP136	51
		10633		BX6	X3			CMP136	52
6714	7170000012			SX7	10	SET RADIX DEFINED		CMP136	53
		54671		SA6	A7+B1			CMP136	54
6715	5170006537			SA7	RD			CMP136	55
		10611		BX6	X1	SET NEXT CHARACTER		CMP136	56
6716	5160003145			SA6	CHAR			CMP136	57
		0400006720		EQ	NDS5			CMP136	58
** CHECK FOR TERMINATOR OR MODIFIER CHARACTERS.								COMPASS	3390
								COMPASS	3391
								COMPASS	3392
6717	0100005444		NDS4	RJ	GETCH			COMPASS	3393
6720	5120004312		NDS5	SA2	=2003036000002300064B	MASK FOR \&, / * - + SPOEDB@		COMPASS	3394
		63710		SB7	X1			COMPASS	3395
		23272		AX2	B7,X2			COMPASS	3396
6721	20273			LX2	59			COMPASS	3397
		47022		CX0	X2			COMPASS	3398
		0322006603		PL	X2,ERR	ERROR IF NOT ONE OF THE ABOVE CHARACTERS		COMPASS	3399
6722	63700			SB7	X0	JUMP TO PROCESSOR		COMPASS	3400
		5130006563		SA3	AF	(B4) = ADDRESS FIELD FLAG		COMPASS	3401
		63430		SB4	X3			COMPASS	3402
6723	0277006723			JP	B7+NDSB-1			COMPASS	3403
** NDSB - TRAILING CHARACTER JUMP TABLE.								COMPASS	3405
* INDEXED BY BIT COUNT OF CHARACTER MASK.								COMPASS	3406
								COMPASS	3407
								COMPASS	3408

COMPASS	3409
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COMPASS	3414
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COMPASS	3462

6746	13645		BX6	X4-X5		COMPASS	3463
		5140006546	SA4	FC		COMPASS	3464
6747	0460006752		ZR	B6,NDS8	IF DECIMAL NUMBER	COMPASS	3465
						COMPASS	3466
		**	CHECK OCTAL FIELD FOR CHARACTERS 8 OR 9.			COMPASS	3467
						COMPASS	3468
		5120006543	SA2	OV	USE OCTAL VALUE	COMPASS	3469
6750	37664		IX6	X6-X4	ADJUST -S- SCALE FOR FRACTIONAL DIGITS	COMPASS	3470
		20401	LX4	1		COMPASS	3471
		54321	SA3	A2+B1		COMPASS	3472
		37664	IX6	X6-X4		COMPASS	3473
6751	5140006560		SA4	OC	CHECK OCTAL FLAG	COMPASS	3474
		0314006603	NZ	X4,ERR	ERROR IF *8* OR *9* ENCOUNTERED IN SCAN	COMPASS	3475
						COMPASS	3476
6752	37704	NDS8	IX7	X0-X4	ADJUST -E- SCALE FOR FRACTIONAL DIGITS	COMPASS	3477
		5160006554	SA6	SV		COMPASS	3478
6753	5170006551		SA7	EV		COMPASS	3479
						COMPASS	3480
		**	FORM TRIPLE PRECISION FLOATING VALUE FROM 105 BIT VALUE.			COMPASS	3481
		*	(X5) = HIGH.			COMPASS	3482
		*	(X6) = MIDDLE.			COMPASS	3483
		*	(X7) = LOW.			COMPASS	3484
						COMPASS	3485
		43023	MX0	-41		COMPASS	3486
		27703	PX7	X3	LOW = BITS 0 - 47 OF LOW VALUE	COMPASS	3487
6754	21360		AX3	48	1. BITS 48 - 59 OF LOW VALUE	COMPASS	3488
		15420	BX4	-X0*X2	2. BITS 0 - 40 OF HIGH VALUE	COMPASS	3489
		20407	LX4	7		COMPASS	3490
		12643	BX6	X4+X3	MIDDLE = (2)+(1)	COMPASS	3491
6755	6170000060		SB7	48	MIDDLE EXPONENT = 48	COMPASS	3492
		21251	AX2	41	HIGH = BITS 41 - 59 OF HIGH VALUE	COMPASS	3493
		66677	SB6	B7+B7	HIGH EXPONENT = 96	COMPASS	3494
6756	27676		PX6	X6,B7		COMPASS	3495
		27562	PX5	X2,B6		COMPASS	3496
						COMPASS	3497
		**	NORMALIZE FLOATING VALUE.			COMPASS	3498
						COMPASS	3499
		24077	NX0	B7,X7		COMPASS	3500
		24575	NX5	B7,X5		COMPASS	3501
6757	24676		NX6	B7,X6		COMPASS	3502
		30206	FX2	X0+X6		COMPASS	3503
		32306	DX3	X0+X6		COMPASS	3504
		30752	FX7	X5+X2		COMPASS	3505
6760	32452		DX4	X5+X2		COMPASS	3506
		30643	FX6	X4+X3		COMPASS	3507
		32543	DX5	X4+X3		COMPASS	3508
						COMPASS	3509
		**	BEGIN SCALING.			COMPASS	3510
		*	(B7) = ACCUMULATED EXPONENT.			COMPASS	3511
						COMPASS	3512
		66700	SB7	B0		COMPASS	3513
6761	5120006551		SA2	EV		COMPASS	3514
		0305007043	ZR	X5,NDS9	IF VALUE = 0	COMPASS	3515

** PROCESS -E- SCALING.

COMPASS 3517
COMPASS 3518
COMPASS 3519
COMPASS 3520
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COMPASS 3559
COMPASS 3560
COMPASS 3561
COMPASS 3562
COMPASS 3563
COMPASS 3564
COMPASS 3565
COMPASS 3566
COMPASS 3567
COMPASS 3568
COMPASS 3569
COMPASS 3570
COMPASS 3571
COMPASS 3572
COMPASS 3573

6762 5170007133
54671
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6763 22705
54761
5150006541
6764 0322006767
7160000017
6765 37760
13076
5120007110
6766 54321
54431
0400006770
6767 43400
76300
5120004313
6770 43170
15501
21004
66600
6771 5205007113
26252
76150
6772 6150777717
27653
66555
6773 27502
27754
0400006776
6774 5150006541
54351
54431
6775 10255
0100007075
6776 73116
63616
76110
11201
6777 21001
54651
54761
10655
7000 54650
0302007005
7001 5120007133
54321
54431
7002 66776
0100007075

SA7 SCVC SAVE NORMALIZED VALUE
SA6 A7+B1
BX0 X2
LX7 X5
SA7 A6+B1
SA5 DV PRESET (A5) TO HIGH ORDER OF VALUE
PL X2,SCV1 IF POSITIVE DECIMAL SCALING
SX6 15
IX7 X6-X0 15-(E SCALE VALUE)
BX0 X7-X6
SA2 SCVA 10*(-16)
SA3 A2+B1
SA4 A3+B1
EQ SCV2
SCV1 MX4 0 CLEAR LOW PART OF 10*16
SX3 B0
SA2 =1.0E16
SCV2 MX1 -4
BX5 -X1*X0 EXTRACT SMALL POWER OF 10
AX0 4 POSITION 10*16 BIT
SB6 B0 CLEAR 10 EXPONENT CUMULANT
SA0 X5+SCVB PRESET FOR POWERS OF TEN
UX2 B5,X2 EXTRACT EXPONENT
SX1 B5
SB5 -48
PX6 X3,B5 REPACK WITH ZERO EXPONENTS
SB5 B5+B5
PX5 X2
PX7 X4,B5
EQ SCV4 ENTER SCALE LOOP
SCV3 SA5 DV
SA3 A5+B1
SA4 A3+B1
BX2 X5
RJ TPM SQUARE POWER OF 10
SCV4 SX1 X1+B6 DOUBLE BINARY EXPONENT
SB6 X1+B6 AND CUMULATE
SX1 B1
BX2 X0*X1 EXTRACT NEXT POWER BIT
AX0 1
SA6 A5+B1 STORE SCALED POWER OF 10
SA7 A6+B1
BX6 X5
SA6 A5
ZR X2,SCV5 IF THIS POWER DOES NOT APPLY
SA2 SCVC FETCH SCALED CUMULANT
SA3 A2+B1
SA4 A3+B1
SB7 B7+B6 ADD EXP OF POWER TO EXP OF CUMULANT
RJ TPM MULTIPLY BY POWER OF 10

7003	63717		SB7	X1+B7	LAST BIT TO EXPONENT SCALING	COMPASS	3574
	5160007134		SA6	SCVC+1		COMPASS	3575
	54761		SA7	A6+B1		COMPASS	3576
7004	10655		BX6	X5		COMPASS	3577
	55661		SA6	A6-B1		COMPASS	3578
7005	0310006774	SCV5	NZ	X0,SCV3	IF MORE SCALING NECESSARY	COMPASS	3579
						COMPASS	3580
	54100		SA1	A0	LOAD POWER BETWEEN 1 AND 10**15	COMPASS	3581
7006	5120007135		SA2	SCVC+2	REFETCH SCALED VALUE	COMPASS	3582
	55321		SA3	A2-B1		COMPASS	3583
	55431		SA4	A3-B1		COMPASS	3584
7007	40712		FX7	X1*X2	1. T*AL S L	COMPASS	3585
	42613		DX6	X1*X3	2. T*AM D L	COMPASS	3586
	30776		FX7	X7+X6	3. (1)+(2) S L	COMPASS	3587
	40213		FX2	X1*X3	4. T*AM S M	COMPASS	3588
7010	42314		DX3	X1*X4	5. T*AU D M	COMPASS	3589
	30523		FX5	X2+X3	6. (4)+(5) S M	COMPASS	3590
	40614		FX6	X1*X4	7. T*AU S U	COMPASS	3591
	32123		DX1	X2+X3	8. (4)+(5) D L	COMPASS	3592
7011	30771		FX7	X7+X1	9. (3)+(8) S L	COMPASS	3593
	5120006547		SA2	EF		COMPASS	3594
7012	5130006545		SA3	RN		COMPASS	3595
	21201		AX2	1		COMPASS	3596
7013	0303007015		ZR	X3,SCV6	IF INTEGER NUMBER	COMPASS	3597
						COMPASS	3598
		**		ROUND VALUE.		COMPASS	3599
						COMPASS	3600
	0312007015		NZ	X2,SCV6	IF DOUBLE PRECISION	COMPASS	3601
7014	34665		RX6	X6+X5	ROUND DOUBLE TO SINGLE	COMPASS	3602
	43500		MX5	0	MIDDLE = 0	COMPASS	3603
	13711		BX7	X1-X1	LOW = 0	COMPASS	3604
						COMPASS	3605
7015	32456	SCV6	DX4	X5+X6	ROUND TRIPLE TO DOUBLE	COMPASS	3606
	30556		FX5	X5+X6		COMPASS	3607
	34647		RX6	X4+X7		COMPASS	3608
	32756		DX7	X5+X6	(X7) = LOW	COMPASS	3609
7016	30656		FX6	X5+X6	(X6) = HIGH	COMPASS	3610
	26156		UX1	B5,X6	(B7) = EXPONENT OF HIGH	COMPASS	3611
	66775		SB7	B7+B5		COMPASS	3612
						COMPASS	3613
		**		PERFORM -S- SCALING.		COMPASS	3614
						COMPASS	3615
7017	5110006554		SA1	SV		COMPASS	3616
	63717		SB7	B7+X1		COMPASS	3617
	27676		PX6	X6,B7		COMPASS	3618
7020	6157775777		SB5	B7-2000B	CHECK EXPONENT	COMPASS	3619
	5110003145		SA1	CHAR	NEXT CHARACTER	COMPASS	3620
7021	0650006603		PL	B5,ERR	EXPONENT EXCEEDS MAXIMUM ALLOWABLE	COMPASS	3621
	6150776000		SB5	-1777B		COMPASS	3622
7022	6167777717		SB6	B7-48		COMPASS	3623
	0307007024		ZR	X7,SCV7	IF LOW = 0	COMPASS	3624
7023	27767		PX7	X7,B6		COMPASS	3625
7024	0756007026	SCV7	LT	B5,B6,SCV8	IF MIDDLE IS RELEVANT	COMPASS	3626
	43700		MX7	0	MIDDLE = 0	COMPASS	3627
7025	0757007026		LT	B5,B7,SCV8		COMPASS	3628
	43600		MX6	0	CLEAR UNDER FLOW QUANTITY	COMPASS	3629
7026	5130006545	SCV8	SA3	RN		COMPASS	3630

1412THE

7027	5140003114	0303007051	ZR	X3,INT	IF INTEGER NUMBER	COMPASS	3631
			SA4	MACHINE	CHECK CODE TYPE	COMPASS	3632
		0314006603	NZ	X4,ERR	ERROR IF PP CODE	COMPASS	3633
** PERFORM -P- SCALING.						COMPASS	3634
						COMPASS	3635
						COMPASS	3636
7030	5150006555		SA5	PF		COMPASS	3637
		0305007043	ZR	X5,NDS9	COMPLETE VALUE IF NO -P- SCALE	COMPASS	3638
7031	5130006557		SA3	PV	SET SIGNED -P- VALUE	COMPASS	3639
						COMPASS	3640
7032	13034	5140006556	SA4	PS		COMPASS	3641
	26676		BX0	X3-X4		COMPASS	3641
			UX6	B7,X6		COMPASS	3642
						COMPASS	3643
						COMPASS	3644
7033	26767	37040	IX0	X4-X0		COMPASS	3644
			UX7	B6,X7		COMPASS	3645
						COMPASS	3646
7034	6150777717	0330006603	NG	X0,ERR	IF -P- SCALE TOO BIG	COMPASS	3646
			SB5	-48	PREPARE SINGLE PRECISION	COMPASS	3647
		0302007036	ZR	X2,SCV9	IF SINGLE PRECISION	COMPASS	3648
7035	6150777637		SB5	-96	PREPARE DOUBLE PRECISION	COMPASS	3649
7036	63505		SCV9	SB5	X0+B5	COMPASS	3650
	0650006603		PL	B5,ERR	IF -P- SCALE WILL LOOSE ALL BITS	COMPASS	3651
						COMPASS	3652
7037	23757	63500	SB5	X0		COMPASS	3652
	76310		AX7	X7,B5		COMPASS	3653
			SX3	B1		COMPASS	3654
						COMPASS	3655
						COMPASS	3656
7040	11463	37343	IX3	X4-X3		COMPASS	3656
			BX4	X6*X3		COMPASS	3657
						COMPASS	3658
						COMPASS	3659
7041	23064	6165777717	SB6	B5-48		COMPASS	3659
			AX0	X4,B6		COMPASS	3660
						COMPASS	3661
						COMPASS	3662
						COMPASS	3663
7042	6177777717	27676	PX6	X6,B7	APPEND FINAL EXPONENT	COMPASS	3663
	27777		SB7	B7-48		COMPASS	3664
			PX7	X7,B7		COMPASS	3665
						COMPASS	3665
						COMPASS	3666
						COMPASS	3667
** STORE FINAL VALUE.						COMPASS	3667
						COMPASS	3668
						COMPASS	3669
7043	5120006547	NDS9	SA2	EF	CHECK PRECISION	COMPASS	3670
	21201		AX2	1		COMPASS	3671
7044	5130006561		SA3	D0	DATA DESTINATION ADDRESS	COMPASS	3672
						COMPASS	3673
7045	5150006540	5140006562	SA4	DL	WORD COUNT OF DATA FIELD	COMPASS	3673
	13665		SA5	SI		COMPASS	3674
						COMPASS	3675
						COMPASS	3676
7046	53630	13775	BX7	X7-X5		COMPASS	3676
			SA6	X3	STORE UPPER	COMPASS	3677
	21401		AX4	1	CHECK DATA FIELD	COMPASS	3678
						COMPASS	3679
7047	0302006606	76310	SX3	B1	WORD COUNT OF DATA = 1	COMPASS	3679
			ZR	X2,SCDX	EXIT IF SINGLE PRECISION	COMPASS	3680
		0304006603	ZR	X4,ERR	ERROR IF NO ROOM IN DATA FIELD FOR LOWER	COMPASS	3681
7050	54761		SA7	A6+B1	STORE LOWER	COMPASS	3682
	76311		SX3	B1+B1	WORD COUNT OF DATA = 2	COMPASS	3683
	0400006606		EQ	SCDX	EXIT	COMPASS	3684
						COMPASS	3684

1412THE

** INT - CONVERT TO INTEGER VALUE.

COMPASS 3686
COMPASS 3687
COMPASS 3688
COMPASS 3689
COMPASS 3690
COMPASS 3691
COMPASS 3692
COMPASS 3693
COMPASS 3694
COMPASS 3695
COMPASS 3696
COMPASS 3697
COMPASS 3698

1	7051	26676	INT	UX6	B7,X6	UNPACK HIGH		1
2		26067		UX0	B6,X7	UNPACK LOW		2
3		6157777762		SB5	B7-13			3
4	7052	22676		LX6	X6,B7			4
5		76710		SX7	B1	SET SINGLE PRECISION		5
6		22060		LX0	X0,B6			6
7		12660		BX6	X6+X0	COMBINE HIGH AND LOW VALUE		7
8	7053	5170006547		SA7	EF			8
9		0750007043		NG	B5,NDS9	IF INTEGER WITHIN RANGE		9
10	7054	0400006603		EQ	ERR	ERROR		10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20
21								21
22								22
23								23
24								24
25								25
26								26
27								27
28								28
29								29
30								30
31								31
32								32
33								33
34								34
35								35
36								36
37								37
38								38
39								39
40								40
41								41
42								42
43								43
44								44
45								45
46								46
47								47
48								48
49								49
50								50
51								51
52								52
53								53
54								54
55								55
56								56
57								57
58								58
59								59
60								60

** ESC - SET -E- SCALE.

COMPASS 3700
COMPASS 3701
COMPASS 3702

7055	76710	ESC	SX7	B1	PRESET SINGLE PRECISION
	0100005444		RJ	GETCH	NEXT CHARACTER
7056	6221777772		SB2	X1-1RE	
	0520007063		NZ	B2,SSV	IF NOT *E*
7057	76711		SX7	B1+B1	SET DOUBLE PRECISION
	0100005444		RJ	GETCH	NEXT CHARACTER
7060	0400007063		EQ	SSV	

COMPASS 3703
COMPASS 3704
COMPASS 3705
COMPASS 3706
COMPASS 3707
COMPASS 3708
COMPASS 3709

** PSC - SET -P- SCALE.

COMPASS 3711
COMPASS 3712
COMPASS 3713
COMPASS 3714
COMPASS 3715

7061	5120006545	PSC	SA2	RN	
	0302006603		ZR	X2,ERR	IF NOT REAL NUMBER

** SSC - SET -S- SCALE.

COMPASS 3717
COMPASS 3718
COMPASS 3719
COMPASS 3720
COMPASS 3721

7062	76710	SSC	SX7	B1	
	0100005444		RJ	GETCH	NEXT CHARACTER

** SSV - SET SCALE VALUE.

COMPASS 3723
COMPASS 3724
COMPASS 3725
COMPASS 3726

* ENTRY (X7) = SCALE FLAG.
* (B6) = ADDRESS OF SCALE TYPE SIGN.

7063	57561	SSV	SA5	B6-B1	CHECK SCALE FLAG
	57761		SA7	B6-B1	STORE SCALE FLAG
	0315006603		NZ	X5,ERR	ERROR IF DUPLICATED SPECIFICATION
7064	43700		MX7	0	
	6271777732		SB7	X1-1R+	CHECK CHARACTER
7065	0470007067		ZR	B7,SSV1	IF +
	0571007070		NE	B7,B1,SSV2	IF NOT -
7066	43674		MX6	60	SET SIGN NEGATIVE
	56660		SA6	B6	
7067	0100005444	SSV1	RJ	GETCH	NEXT CHARACTER
7070	6271777744	SSV2	SB7	X1-1R0	CHECK CHARACTER
	6251777733		SB5	X1-1R9	
7071	0770007074		NG	B7,SSV3	IF ALPHA
	0651007074		GE	B5,B1,SSV3	IF NOT DIGIT
7072	10577		BX5	X7	ACCUMULATION * 10
	20702		LX7	2	
	36575		IX5	X7+X5	
	20501		LX5	1	
7073	76370		SX3	B7	

COMPASS 3727
COMPASS 3728
COMPASS 3729
COMPASS 3730
COMPASS 3731
COMPASS 3732
COMPASS 3733
COMPASS 3734
COMPASS 3735
COMPASS 3736
COMPASS 3737
COMPASS 3738
COMPASS 3739
COMPASS 3740
COMPASS 3741
COMPASS 3742
COMPASS 3743
COMPASS 3744
COMPASS 3745
COMPASS 3746
COMPASS 3747

36753
0400007067

IX7
EQ

X5+X3
SSV1

LOOP

COMPASS 3748
COMPASS 3749
COMPASS 3750
COMPASS 3751
COMPASS 3752

7074 56761

0400006720

SSV3

SA7
EQ

B6+B1
NDS5

STORE VALUE
RETURN TO PROCESS NEXT CHARACTER

**

TPM - TRIPLE PRECISION MULTIPLY.

COMPASS 3754

*

ENTRY (X2,X3,X4) = 1ST FACTOR.

COMPASS 3755

*

(X5,X6,X7) = 2ND FACTOR.

COMPASS 3756

*

EXIT (X5,X6,X7) = PRODUCT.

COMPASS 3757

COMPASS 3758

COMPASS 3759

7075 0000000000

TPM

PS

0

ENTRY/EXIT

COMPASS 3760

7076 40654

FX6

X5*X4

1. BU*AL S L

COMPASS 3761

42753

DX7

X5*X3

2. BU*AM D L

COMPASS 3762

30467

FX4

X6+X7

3. (1)+(2) S L

COMPASS 3763

40653

FX6

X5*X3

4. BU*AM S M

COMPASS 3764

7077 42752

DX7

X5*X2

5. BU*AU D M

COMPASS 3765

30167

FX1

X6+X7

6. (4)+(5) S M

COMPASS 3766

54551

SA5

A5+B1

BM

COMPASS 3767

32667

DX6

X6+X7

7. (4)+(5) D L

COMPASS 3768

7100 40753

FX7

X5*X3

8. BM*AM S L

COMPASS 3769

30446

FX4

X4+X6

9. (3)+(7) S L

COMPASS 3770

42652

DX6

X5*X2

10. BM*AU D L

COMPASS 3771

30474

FX4

X7+X4

11. (8)+(9) S L

COMPASS 3772

7101 30364

FX3

X6+X4

12. (10)+(11) S L

COMPASS 3773

40752

FX7

X5*X2

13. BM*AU S M

COMPASS 3774

30617

FX6

X1+X7

14. (6)+(13) S M

COMPASS 3775

54451

SA4

A5+B1

BL

COMPASS 3776

7102 55551

SA5

A5-B1

BU

COMPASS 3777

32717

DX7

X1+X7

15. (6)+(13) D L

COMPASS 3778

30737

FX7

X3+X7

16. (12)+(15) S L

COMPASS 3779

40342

FX3

X4*X2

17. BL*AU S L

COMPASS 3780

7103 40552

FX5

X5*X2

18. BU*AU S U

COMPASS 3781

30773

FX7

X7+X3

19. (16)+(17) S L

COMPASS 3782

30367

FX3

X6+X7

POST NORMALIZE RESULT

COMPASS 3783

32467

DX4

X6+X7

COMPASS 3784

7104 30235

FX2

X3+X5

COMPASS 3785

32535

DX5

X3+X5

COMPASS 3786

30345

FX3

X4+X5

COMPASS 3787

32445

DX4

X4+X5

COMPASS 3788

7105 26252

UX2

B5,X2

COMPASS 3789

76150

SX1

B5

COMPASS 3790

6150777717

SB5

-48

COMPASS 3791

7106 27653

PX6

X3,B5

REPACK WITH ZERO EXPONENTS

COMPASS 3792

66555

SB5

B5+B5

COMPASS 3793

27502

PX5

X2

COMPASS 3794

27754

PX7

X4,B5

COMPASS 3795

7107 0400007075

EQ

TPM

RETURN

COMPASS 3796

**

SCVA - 10*(-16) IN TRIPLE PRECISION.

COMPASS 3798

						COMPASS	3799
						COMPASS	3800
						COMPASS	3801
1	7110		SCVA	BSS	0		
2	7110	16327151262457542115		CON	16327151262457542115B	COMPASS	3802
3	7111	15527025551413537150		CON	15527025551413537150B	COMPASS	3803
4	7112	14723630465154737561		CON	14723630465154737561B	COMPASS	3804
5							
6							
7							
8			**		SCVB - TABLE OF POWERS OF 10.	COMPASS	3806
9						COMPASS	3807
10						COMPASS	3808
11	7113		SCVB	BSS	0	COMPASS	3809
12	7113	17204000000000000000		CON	1.	COMPASS	3810
13	7114	17235000000000000000		CON	10.	COMPASS	3811
14	7115	17266200000000000000		CON	100.	COMPASS	3812
15	7116	17317640000000000000		CON	1.E3	COMPASS	3813
16	7117	17354704000000000000		CON	1.E4	COMPASS	3814
17	7120	17406065000000000000		CON	1.E5	COMPASS	3815
18	7121	17437502200000000000		CON	1.E6	COMPASS	3816
19	7122	17474611320000000000		CON	1.E7	COMPASS	3817
20	7123	17525753604000000000		CON	1.E8	COMPASS	3818
21	7124	17557346545000000000		CON	1.E9	COMPASS	3819
22	7125	17614520137100000000		CON	1.E10	COMPASS	3820
23	7126	17645644166720000000		CON	1.E11	COMPASS	3821
24	7127	17677215224504000000		CON	1.E12	COMPASS	3822
25	7130	17734430234712400000		CON	1.E13	COMPASS	3823
26	7131	17765536304075100000		CON	1.E14	COMPASS	3824
27	7132	20027065765114320000		CON	1.E15	COMPASS	3825
28						COMPASS	3826
29	7133	00000000000000000000	SCVC	DATA	0,0,0	TEMPORARY STORAGE FOR SCALING	COMPASS 3827
30							
31							
32							
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*** CHARACTER DATA.

COMPASS 3829

*

COMPASS 3830

*

COMPASS 3831

*

NFCCC-CCC

COMPASS 3832

*

GENERATE *N* CHARACTERS OF DATA FROM THE STRING *CCC-CCC* IN

COMPASS 3833

*

FORMAT *F*.

COMPASS 3834

*

N MUST NOT BE BLANK FOR ADDRESS FIELDS.

COMPASS 3835

*

IF *N* IS PRECEDED BY A *-* , THE CHARACTER STRING WILL BE

COMPASS 3836

*

COMPLEMENTED.

COMPASS 3837

*

IF *N* = *0* , STRING IS TERMINATED BY \+-* / , @ FOR ADDRESS

COMPASS 3838

*

FIELDS , BY \ , @ FOR *DATA* , *LIT* , OR LITERAL FIELDS.

COMPASS 3839

*

COMPASS 3840

*

F/CCC-CCC/

COMPASS 3841

*

GENERATE DATA FROM CHARACTER STRING *CCC-CCC* IN FORMAT *F* .

COMPASS 3842

*

*/ * IS ANY DELIMITER CHARACTER.

COMPASS 3843

*

COMPASS 3844

*

F

JUSTIFY

FILL

COMPASS 3845

*

COMPASS 3846

*

H

LEFT

TRAILING BLANK

COMPASS 3847

*

A

RIGHT

LEADING BLANK

COMPASS 3848

*

C

LEFT

TRAILING ZERO , TWO ZEROS GUARANTEED

COMPASS 3849

*

Z

LEFT

TRAILING ZERO , ONE ZERO GUARANTEED

COMPASS 3850

*

L

LEFT

TRAILING ZERO

COMPASS 3851

*

R

RIGHT

LEADING ZERO

COMPASS 3852

**

DCS - DELIMITED CHARACTER STRING.

COMPASS 3854

*

ENTRY (B6) = ADDRESS OF CHARACTER STRING PROCESSOR.

COMPASS 3855

COMPASS 3856

COMPASS 3857

7136 67201

DCS

SB2

-B1

CLEAR CHARACTER COUNT

COMPASS 3858

56000

SA0

B0

SET FLAG TO THROW AWAY TERMINATOR

COMPASS 3859

0100005444

RJ

GETCH

GET DELIMITING LETTER

COMPASS 3860

7137 5120003261

SA2

LASTCOL

STORE IN LAST COLUMN

COMPASS 3861

5232026437

SA3

X2+CARD

CMP12 1

7140 54630

SA6

A3

STORE DELIMITER AT END OF CARD

COMPASS 3863

10011

BX0

X1

SAVE DELIMITER

COMPASS 3864

10633

BX6

X3

COMPASS 3865

COMPASS 3866

7141 66221

DCS1

SB2

B2+B1

COUNT CHARACTER

COMPASS 3867

54111

SA1

A1+B1

FETCH NEXT CHARACTER

COMPASS 3868

64310

SB3

A1

COMPASS 3869

13410

BX4

X1-X0

COMPASS 3870

7142 0314007141

NZ

X4,DCS1

IF NOT DELIMITER

COMPASS 3871

54660

SA6

A6

RESET LAST COLUMN TO * *

COMPASS 3872

7143 6270777722

SB7

X0-1R

COMPASS 3873

75663

SX6

A6-B3

COMPASS 3874

7144 0470007145

+

ZR

B7,*+1

IF DELIMITER IS * *

COMPASS 3875

0306006603

ZR

X6,ERR

IF MISSING DELIMITER

COMPASS 3876

7145 5110006563

SA1

AF

(X1) = ADDRESS FIELD FLAG

COMPASS 3877

7211777776

SX1

X1-1

COMPASS 3878

7146 0266000000

JP

B6

PROCESS CHARACTER STRING

COMPASS 3879

1412THE

1

** NCS - NUMERIC COUNT CHARACTER STRING.
* ENTRY (B6) = ADDRESS OF CHARACTER STRING PROCESSOR.

COMPASS 3881
COMPASS 3882
COMPASS 3883
COMPASS 3884
COMPASS 3885
COMPASS 3886
COMPASS 3887
COMPASS 3888
COMPASS 3889
COMPASS 3890
COMPASS 3891
COMPASS 3892
COMPASS 3893
COMPASS 3894
COMPASS 3895
COMPASS 3896
COMPASS 3897
COMPASS 3898
COMPASS 3899
COMPASS 3900
COMPASS 3901
COMPASS 3902
COMPASS 3903
COMPASS 3904
COMPASS 3905
COMPASS 3906
COMPASS 3907
COMPASS 3908
COMPASS 3909
COMPASS 3910
COMPASS 3911
COMPASS 3912
COMPASS 3913
COMPASS 3914

COMPASS 3916
COMPASS 3917
COMPASS 3918
COMPASS 3919
COMPASS 3920
COMPASS 3921
COMPASS 3922
COMPASS 3923
COMPASS 3924
COMPASS 3925
COMPASS 3926
COMPASS 3927

COMPASS 3929
COMPASS 3930
COMPASS 3931

7147	5130006541	NCS	SA3	DV	CHECK VALUE OF COUNT
	54231		SA2	A3+B1	
	56010		SA0	B1	SET FLAG TO SAVE TERMINATOR
7150	0313006603		NZ	X3,ERR	ERROR IF UPPER PART OF VALUE " 0
	63220		SB2	X2	
7151	5120006537		SA2	RD	
	0312006603		NZ	X2,ERR	ERROR IF RADIX SPECIFIED
7152	5140003144		SA4	COLUMN	
	7150027745		SX5	CARD+71*NCARDS	
7153	73742		SX7	X4+B2	CHECK THAT THIS DOES NOT EXCEED END
	37657		IX6	X5-X7	
	0336006603		NG	X6,ERR	
7154	0520007162		NZ	B2,NCS3	IF NON-ZERO VALUE
	7130003000		SX3	3000B	MASK FOR \ ,@
7155	5120006563		SA2	AF	
	20344		LX3	36	
	63220		SB2	X2	
7156	0521007157		NE	B2,B1,NCS1	IF NOT ADDRESS FIELD
	5130004303		SA3	=2003036BS36	MASK FOR \& ,/*-+@
7157	67201	NCS1	SB2	-B1	
	5214026436		SA1	X4+CARD-1	SET FOR DELIMITER SCAN
7160	54111	NCS2	SA1	A1+B1	
	63710		SB7	X1	
	23273		AX2	X3,B7	
	66221		SB2	B2+B1	
7161	20273		LX2	59	
	0322007160		PL	X2,NCS2	
7162	5110006563	NCS3	SA1	AF	(X1) = ADDRESS FIELD FLAG
	7211777776		SX1	X1-1	
7163	0266000000		JP	B6	PROCESS CHARACTER STRING

** CSH - PROCESS -H- FORMAT.

7164	77601	CSH	SX6	-B1	
	66300		SB3	B0	NO LEADING CHARACTERS
	0100007262		RJ	CCS	COMPUTE CHARACTER STRING
7165	63460		SB4	X6	SET TRAILING CHARACTER COUNT
	76710		SX7	B1	
	7100000055		SX0	1R	SPACE FILL
7166	5170006552		SA7	SF	
	0331007204		NG	X1,GCS	IF NOT ADDRESS FIELD
7167	5170006554		SA7	SV	SET JUSTIFICATION FLAG

** CSA - PROCESS -A- FORMAT.

7170	77601	CSA	SX6	-B1		COMPASS	3932
	66400		SB4	B0	NO TRAILING CHRACTERS	COMPASS	3933
	0100007262		RJ	CCS	COMPUTE CHARACTER STRING	COMPASS	3934
7171	63360		SB3	X6	SET LEADING CHARACTER COUNT	COMPASS	3935
	7100000055		SX0	1R	SPACE FILL	COMPASS	3936
	76710		SX7	B1		COMPASS	3937
7172	5170006552		SA7	SF		COMPASS	3938
	0400007204		EQ	GCS		COMPASS	3939
		**	CSC - PROCESS -C- FORMAT.			COMPASS	3941
						COMPASS	3942
						COMPASS	3943
7173	76610	CSC	SX6	B1		COMPASS	3944
	66300		SB3	B0	NO LEADING CHARACTERS	COMPASS	3945
	0100007262		RJ	CCS	COMPUTE CHARACTER STRING	COMPASS	3946
7174	63460		SB4	X6	SET TRAILING CHARACTER COUNT	COMPASS	3947
	43001		MX0	1	ZERO FILL, NO CONVERSION	CMP069	1
	0331007204		NG	X1,GCS	IF NOT ADDRESS FIELD	COMPASS	3949
		**	CSZ - PROCESS -Z- FORMAT.			COMPASS	3951
						COMPASS	3952
						COMPASS	3953
7175	76600	CSZ	SX6	B0		COMPASS	3954
	66300		SB3	B0	NO LEADING CHARACTERS	COMPASS	3955
	0100007262		RJ	CCS	COMPUTE CHARACTER STRING	COMPASS	3956
7176	63460		SB4	X6	SET TRAILING CHARACTER COUNT	COMPASS	3957
	43001		MX0	1	ZERO FILL, NO CONVERSION	CMP069	2
	0331007204		NG	X1,GCS	IF NOT ADDRESS FIELD	COMPASS	3959
		**	CSL - PROCESS -L- FORMAT.			COMPASS	3961
						COMPASS	3962
						COMPASS	3963
7177	77601	CSL	SX6	-B1		COMPASS	3964
	66300		SB3	B0	NO LEADING CHARACTERS	COMPASS	3965
	0100007262		RJ	CCS	COMPUTE CHARACTER STRING	COMPASS	3966
7200	63460		SB4	X6	SET TRAILING CHARACTER COUNT	COMPASS	3967
	43001		MX0	1	ZERO FILL, NO CONVERSION	CMP069	3
	0331007204		NG	X1,GCS	IF NOT ADDRESS FIELD	COMPASS	3969
7201	76710		SX7	B1	SET JUSTIFICATION FLAG	COMPASS	3970
	5170006554		SA7	SV		COMPASS	3971
		**	CSR - PROCESS -R- FORMAT.			COMPASS	3973
						COMPASS	3974
						COMPASS	3975
7202	77601	CSR	SX6	-B1		COMPASS	3976

1

		10600		BX6	X0	PACK TRAILING FILL CHARACTRRS	COMPASS	4019
		0100007275		RJ	STC		COMPASS	4020
	7226	0314007225		NZ	X4,GCS5		COMPASS	4021
							COMPASS	4022
	7227	0520007230	GCS6	NZ	B2,GCS7	THROW AWAY TERMINATOR IN BRACKET CASE	COMPASS	4023
		0100005444		RJ	GETCH		COMPASS	4024
	7230	0100005444	GCS7	RJ	GETCH	THROW AWAY LAST CHARACTER	COMPASS	4025
	7231	54450		SA4	A5		COMPASS	4026
		37354		IX3	X5-X4	CALCULATE WORD COUNT	COMPASS	4027
		5120006554		SA2	SV		COMPASS	4028
	7232	0302007247		ZR	X2,GCS9	IF NO JUSTIFICATION	F4820	74
		5120006564		SA2	FW		COMPASS	4030
	7233	5130003116		SA3	PPTYPE		F4820	75
		76633		SX6	B3+B3	DATA CHARACTER COUNT * 4	F4820	76
		73063		SX0	X6+B3		COMPASS	4032
	7234	5150003151		SA5	CT	CHARACTER TYPE SHIFT COUNT	CPSA281	44
		7255777722		SX5	X5-45		CPSA281	45
	7235	0315007236		NZ	X5,GCS7A	IF NOT 8-BIT ASCII	CPSA281	46
		22016		LX0	X6,B1		CPSA281	47
	7236		GCS7A	BSS	0		CPSA281	48
	7236	37020		IX0	X2-X0		COMPASS	4033
		63700		SB7	X0		COMPASS	4034
		53540		SA5	X4		COMPASS	4035
		22775		LX7	B7,X5		F4820	77
	7237	54750		SA7	A5		F4820	78
		0323007245		PL	X3,GCS8	IF NOT HEX CHARACTERS	F4820	79
	7240	7233000002		SX3	X3+2		CPSA197	8
		0333007245		MI	X3,GCS8	IF NOT BCU/MCU	CPSA197	9
	7241	22016		LX0	X6,B1		F4820	80
		37020		IX0	X2-X0	SHIFT = FW - 8 * DATA CHARACTER COUNT	F4820	81
		63700		SB7	X0		F4820	82
	7242	6127777717		SB2	B7-48		F4820	83
		22675		LX6	X5,B7		F4820	84
		43714		MX7	12		F4820	85
	7243	22525		LX5	X5,B2		F4820	86
		22727		LX7	X7,B2		F4820	87
		11676		BX6	X7*X6		F4820	88
		15757		BX7	-X7*X5		F4820	89
	7244	12667		BX6	X6+X7		F4820	90
		54650		SA6	A5		F4820	91
	7245	0670007247	GCS8	PL	B7,GCS9	IF NO TRUNCATION	F4820	92
		76610		SX6	B1		COMPASS	4039
	7246	5160003341		SA6	W7ERR		COMPASS	4040
		5160003345		SA6	EFLG		COMPASS	4041
	7247	5120006552	GCS9	SA2	SF		F4820	93
		0302006606		ZR	X2,SCDX	EXIT IF NO JUSTIFICATION NECESSARY	COMPASS	4043
	7250	5120006564		SA2	FW		COMPASS	4044
		6272777703		SB7	X2-60		COMPASS	4045
	7251	0470006606		ZR	B7,SCDX		COMPASS	4046
		43601		MX6	1		COMPASS	4047
		66771		SB7	B7+B1		COMPASS	4048
	7252	22676		LX6	X6,B7		COMPASS	4049
		53540		SA5	X4		COMPASS	4050
		15656		BX6	-X6*X5		COMPASS	4051
		53640		SA6	X4		COMPASS	4052
	7253	0400006606		EQ	SCDX	EXIT	COMPASS	4053

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**	CCS - CALCULATE CHARACTER STRING.	COMPASS	4055
*	ENTRY (B2) = CHARACTER COUNT.	COMPASS	4056
*	(X1) = ADDRESS FIELD FLAG - 1.	COMPASS	4057
*	(X6) = EXTRA CHARACTER FLAG.	F4820	94
*	EXIT (X6) = (B2+NCHARS+X6)/NCHARS*NCHARS-B2.	COMPASS	4058
*	(X3) = EFFECTIVE VALUE OF NCHARS.	COMPASS	4059
*	SAVES X1, B2, B3, B4, A0.	F4820	95
		COMPASS	4060
		COMPASS	4061
7254	10433 CCS2 BX4 X3	F4820	96
	27606 IX7 X6/X4	F4820	97
7256	67702 SB7 -B2	F4820	98
	42673 DX6 X7*X3	F4820	99
	73667 SX6 X6+B7	F4820	100
7257	5150003151 SA5 CT	CPSA281	49
	7255777722 SX5 X5-45	CPSA281	50
7260	0315007262 NZ X5,CCS IF NOT 8-BIT ASCII	CPSA281	51
	7130000006 SX3 6 6 CHARACTERS PER WORD	CPSA281	52
7261	7266777773 SX6 X6-4	CPSA281	53
		COMPASS	4071
7262	0000000000 CCS PS 0 ENTRY/EXIT	COMPASS	4072
7263	43700 MX7 0 CLEAR JUSTIFICATION	COMPASS	4073
	5170006552 SA7 SF	COMPASS	4074
7264	5130003127 SA3 NCHARS	COMPASS	4075
	0331007270 NG X1,CCS1 IF NOT ADDRESS FIELD	COMPASS	4076
7265	7130000012 SX3 10	COMPASS	4077
	5140003116 SA4 PPTYPE	F4820	101
7266	0324007270 PL X4,CCS1	F4820	102
	7244000002 SX4 X4+2	CPSA197	10
7267	0334007270 MI X4,CCS1 IF NOT BCU/MCU.	CPSA197	11
	7130000006 SX3 6	F4820	103
7270	73762 CCS1 SX7 X6+B2	COMPASS	4078
	36673 IX6 X7+X3	COMPASS	4079
	23713 AX7 X3,B1 TRUNCATE TO MULTIPLE OF NCHARS	F4820	104
	67702 SB7 -B2	F4820	105
7271	0307007273 ZR X7,CCS1.1 IF MCU DATA	F4820	106
	21701 AX7 1	F4820	107
7272	0317007254 NZ X7,CCS2 IF ADDRESS OR CENTRAL DATA	F4820	108
	21601 AX6 1	F4820	109
	36666 IX6 X6+X6	F4820	110
7273	73667 CCS1.1 SX6 X6+B7	F4820	111
	0400007262 EQ CCS RETURN	F4820	112

**	STC - STORE CHARACTER.	COMPASS	4089
*		CPSA293	35
*	ENTRY (X3) = CHARACTER MASK FOR 6 OR 8 BIT CHARACTER.	CPSA293	36
*	(X5) = STORE ADDRESS.	CPSA293	37
*	(X6) = CHARACTER TO BE STORED.	CPSA293	38
*	(X7) = ACCUMULATION WORD.	CPSA293	39
*	(B2) = DATA CHARACTER COUNT.	F4820	114
*	(B3) = LEADING FILL CHARACTER COUNT.	F4820	115
*	(B4) = CHARACTER TYPE SHIFT.	F4820	116
*	(B5) = LIMITING WORD COUNT.	F4820	117
*	(B6) = EFFECTIVE CHARACTER COUNT.	F4820	118

* (B7) = CHARACTER COUNT.

F4820	119
COMPASS	4090
COMPASS	4091
COMPASS	4092
COMPASS	4093
COMPASS	4094
COMPASS	4095
COMPASS	4096
CPSA293	40
CPSA293	41
CPSA293	42
CPSA293	43
CPSA293	44
CPSA293	45
CPSA293	46
CPSA293	47
CPSA293	48
CPSA293	49
CPSA293	50
CPSA281	60
CPSA281	61
CPSA281	62
CPSA281	63
COMPASS	4103
CMP64G	8
CPSA293	51
CPSA293	52
COMPASS	4107
COMPASS	4108
COMPASS	4110
COMPASS	4111
COMPASS	4112
COMPASS	4113
COMPASS	4114
COMPASS	4115
COMPASS	4116
CPSA293	53
CPSA293	54
CPSA293	55
CPSA293	56
CPSA293	57
CPSA293	58
CPSA293	59
CPSA293	60
CPSA293	61
CPSA293	62
CPSA293	63
CPSA293	64
CPSA293	65
CPSA293	66
COMPASS	4118
COMPASS	4119
COMPASS	4120

7274	53750	STC1	SA7	X5	STORE COMPLETED WORD
	73551		SX5	X5+B1	INCREMENT STORE ADDRESS
	43700		MX7	0	CLEAR CUMULATING WORD
7275	0400407275	STC	EQ	++1S17	ENTRY/EXIT
* THE FOLLOWING WORD *STC0* IS MODIFIED FROM VARIOUS PLACES TO					
* MAKE *STC* STORE EITHER 6 OR 8-BIT CHARACTERS, AND TO					
* SELECTIVELY HANDLE ASCII CONVERSION.					
7276	7120000000	STC0	SX2	0	SET FOR NO ASCII CONVERSION
	20706		LX7	6	SHIFT ASSEMBLY FOR 6-BIT CHARS
	67771		SB7	B7-B1	DECREMENT CHARACTER COUNT
7277	0336007301		MI	X6,STC2	
	5216007312		SA1	X6+STCA	
7300	23141		AX1	X1,B4	
	15613		BX6	-X3*X1	
	36662		IX6	X6+X2	
	12776		BX7	X7+X6	OR IN CHARACTER
7301	0570007275	STC2	NZ	B7,STC	RETURN IF NOT END OF WORD
	5110006540		SA1	SI	COMPLEMENT ON SIGN
7302	13771		BX7	X7-X1	
	67551		SB5	B5-B1	
	66760		SB7	B6	RESET CHARACTER COUNTER
7303	0650007274		PL	B5,STC1	IF STILL IN RANGE
	76710		SX7	B1	SET A-ERROR
7304	5170006302		SA7	EXERR	
	5170003322		SA7	AERR	
7305	5170003345		SA7	EFLG	
	43700		MX7	0	
7306	0400007275		EQ	STC	RETURN
* CODE-MODIFICATION WORDS FOR *STC0*.					
7307	7120000000	STCW	SX2	0	SET FOR NO ASCII CONVERSION
	20706		LX7	6	SHIFT ASSEMBLY FOR 6-BIT CHARS
	67771		SB7	B7-B1	DECREMENT CHARACTER COUNT
7310	7120000000	STCX	SX2	0	SET FOR NO ASCII CONVERSION
	20710		LX7	8	SHIFT ASSEMBLY FOR 8-BIT CHARS
	67771		SB7	B7-B1	DECREMENT CHARACTER COUNT
7311	7120000040	STCZ	SX2	ASC6T8	SET FOR ASCII CONVERSION
	20710		LX7	8	SHIFT ASSEMBLY FOR 8-BIT CHARS
	67771		SB7	B7-B1	DECREMENT CHARACTER COUNT
** CHAR - CHARACTER SET CODES.					
* CHAR A,B,C,D					
* ENTRY (A) = DISPLAY CODE.					

* (B) = EXTERNAL BCD.
* (C) = INTERNAL BCD.
* (D) = USASCII.

COMPASS 4121
COMPASS 4122
COMPASS 4123
COMPASS 4124
COMPASS 4125
CPS011 6
CPS011 7
COMPASS 4126
CPSA281 64
COMPASS 4128
CMP64G 9
CMP64G 10
CPSA281 65
CMP64G 12

PURGMAC CHAR

CHAR MACRO A,B,C,D
CON ;D0;A0;D0;C0;B0;A

ENDM

CHAR* MACRO A,B,C,D CHARACTERS OF SPECIAL INTEREST TO *SQUEEZE*
CON 1S59+;D0;A0;D0;C0;B0;A
ENDM

D_0

7312
L 0

STCA

BASE 0
BSS 0
LOC 0

IFEQ IP.CSET,IP.C63,2
CHAR* 00,20,60,00 UNDEFINED FOR 63 CSET --> SPACE

SKIP 1

CHAR* 00,00,12,32 COLON

L 0 40032000032012000000
L 1 00041001041021061001
L 2 00042002042022062002
L 3 00043003043023063003
L 4 00044004044024064004
L 5 00045005045025065005
L 6 00046006046026066006
L 7 00047007047027067007
L 10 00050010050030070010
L 11 00051011051031071011
L 12 00052012052041041012
L 13 00053013053042042013
L 14 00054014054043043014
L 15 00055015055044044015
L 16 00056016056045045016
L 17 00057017057046046017
L 20 00060020060047047020
L 21 00061021061050050021
L 22 00062022062051051022
L 23 00063023063062022023
L 24 00064024064063023024
L 25 00065025065064024025
L 26 00066026066065025026
L 27 00067027067066026027
L 30 00070030070067027030
L 31 00071031071070030031
L 32 00072032072071031032
L 33 00020033020000012033
L 34 00021034021001001034
L 35 00022035022002002035
L 36 00023036023003003036
L 37 00024037024004004037

CHAR 01,61,21,41 A
CHAR 02,62,22,42 B
CHAR 03,63,23,43 C
CHAR 04,64,24,44 D
CHAR 05,65,25,45 E
CHAR 06,66,26,46 F
CHAR 07,67,27,47 G
CHAR 10,70,30,50 H
CHAR 11,71,31,51 I
CHAR 12,41,41,52 J
CHAR 13,42,42,53 K
CHAR 14,43,43,54 L
CHAR 15,44,44,55 M
CHAR 16,45,45,56 N
CHAR 17,46,46,57 O
CHAR 20,47,47,60 P
CHAR 21,50,50,61 Q
CHAR 22,51,51,62 R
CHAR 23,22,62,63 S
CHAR 24,23,63,64 T
CHAR 25,24,64,65 U
CHAR 26,25,65,66 V
CHAR 27,26,66,67 W
CHAR 30,27,67,70 X
CHAR 31,30,70,71 Y
CHAR 32,31,71,72 Z
CHAR 33,12,00,20 0
CHAR 34,01,01,21 1
CHAR 35,02,02,22 2
CHAR 36,03,03,23 3
CHAR 37,04,04,24 4

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L	40	00025040025005005040	CHAR	40,05,05,25	5	COMPASS	4166
L	41	00026041026006006041	CHAR	41,06,06,26	6	COMPASS	4167
L	42	00027042027007007042	CHAR	42,07,07,27	7	COMPASS	4168
L	43	00030043030010010043	CHAR	43,10,10,30	8	COMPASS	4169
L	44	00031044031011011044	CHAR	44,11,11,31	9	COMPASS	4170
L	45	00013045013020060045	CHAR	45,60,20,13	+	COMPASS	4171
L	46	00015046015040040046	CHAR	46,40,40,15	-	COMPASS	4172
L	47	00012047012054054047	CHAR	47,54,54,12	*	COMPASS	4173
L	50	00017050017061021050	CHAR	50,21,61,17	/	COMPASS	4174
L	51	00010051010074034051	CHAR	51,34,74,10	(	COMPASS	4175
L	52	00011052011034074052	CHAR	52,74,34,11	)	COMPASS	4176
L	53	00004053004053053053	CHAR	53,53,53,04	\$	COMPASS	4177
L	54	00035054035013013054	CHAR	54,13,13,35	=	COMPASS	4178
L	55	40000055000060020055	CHAR*	55,20,60,00	BLANK	CMP64G	14
L	56	00014056014073033056	CHAR	56,33,73,14	,	COMPASS	4180
L	57	00016057016033073057	CHAR	57,73,33,16	.	COMPASS	4181
L	60	00003060003076036060	CHAR	60,36,76,03	# NUMBER	COMPASS	4182
L	61	00073061073017017061	CHAR	61,17,17,73	[LEFT BRACKET	CMP069	5
L	62	00075062075072032062	CHAR	62,32,72,75	] RIGHT BRACKET	CMP069	6
			IFEQ	IP.CSET,IP.C63,2		CPS2628	7
			CHAR*	63,00,12,32	: COLON	CPS2628	8
			SKIP	1		CPS2628	9
L	63	00005063005016016063	CHAR	63,16,16,05	: PERCENT	COMPASS	4185
L	64	00002064002014014064	CHAR	64,14,14,02	" QUOTE	COMPASS	4186
L	65	00077065077075035065	CHAR	65,35,75,77	_ UNDERLINE	COMPASS	4187
L	66	00001066001052052066	CHAR	66,52,52,01	! EXCLAMATION	CMP069	7
L	67	00006067006077037067	CHAR	67,37,77,06	& AMPERSAND	COMPASS	4189
L	70	00007070007055055070	CHAR	70,55,55,07	' APOSTROPHE	CMP069	8
L	71	00037071037056056071	CHAR	71,56,56,37	? QUESTION	COMPASS	4191
L	72	00034072034032072072	CHAR	72,72,32,34	< LESS THAN	CMP069	9
L	73	00036073036057057073	CHAR	73,57,57,36	> GREATER THAN	CMP069	10
L	74	00040074040015015074	CHAR	74,15,15,40	@ AMOUNT	CMP069	11
L	75	00074075074035075075	CHAR	75,75,35,74	\ REVERSE /	COMPASS	4195
L	76	00076076076036076076	CHAR	76,76,36,76	^ HAT	COMPASS	4196
L	77	40033077033037077077	CHAR*	77,77,37,33	; SEMICOLON OR FORMAL PARAMETER MARK	CMP64G	15
						COMPASS	4198
	7412		LOC	*0		COMPASS	4199
		O_D	BASE	*		COMPASS	4200

			QUAL			COMPASS	4202
	6565	SCD	EQU	/DATA/SCD		COMPASS	4203
	7312	STCA	EQU	/DATA/STCA		COMPASS	4204

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** CONADD - CONVERT CROSS REFERENCE ADDRESS.
* ENTRY (X1) = (18/X,17/ADDR,25/Y)
* EXIT (X1) = (18/3R ,36/ADDRESS,6/SEPERATOR)

COMPASS 4206
COMPASS 4207
COMPASS 4208
COMPASS 4209
COMPASS 4210
CMP30 2051
COMPASS 4211
COMPASS 4212
COMPASS 4213
COMPASS 4214
COMPASS 4215
COMPASS 4216
COMPASS 4217
COMPASS 4218
COMPASS 4219
CMP042 74
COMPASS 4220
COMPASS 4221
COMPASS 4222
COMPASS 4223

USE LIST
SEG LISTING SUBROUTINES.
QUAL PASS2
PS 0 RETURN EXIT
7412 0000000000 CONADD AX1 25
7413 21131 43053 MX0 60-17
15110 BX1 -X0*X1
7414 0100005302 RJ CONOCT CONVERT ADDRESS
7415 10166 BX1 X6
5150004066 SA5 P2TEMP
20606 LX6 6
7416 0305007412 ZR X5,CONADD IF END OF STRING
76510 SX5 B1
36165 IX1 X6+X5 ADD SEPERATOR
7417 0400007412 EQ CONADD RETURN

** CONREF - CONVERT PAGE AND LINE NUMBER.
* ENTRY (X1) = (18/TABADD,17/LOCCTR,12/PAGE,7/LINE,6/LET)
* EXIT (X1) = DPC FORM (30/PAGE,6/1H/,12/LINE,6/1L,6/LET)

COMPASS 4245
COMPASS 4246
COMPASS 4247
COMPASS 4248
COMPASS 4249
COMPASS 4250
COMPASS 4251
COMPASS 4252
COMPASS 4253
COMPASS 4254
COMPASS 4255
COMPASS 4256
COMPASS 4257
COMPASS 4258
F4810A 150
F4810A 151
F4810A 152
COMPASS 4260
COMPASS 4261
COMPASS 4262
COMPASS 4263
COMPASS 4264
COMPASS 4265
COMPASS 4266
COMPASS 4267
COMPASS 4268
COMPASS 4269
COMPASS 4270
COMPASS 4271
COMPASS 4272
COMPASS 4273
COMPASS 4274
COMPASS 4275

CONREF PS 0 RETURN EXIT
7420 0000000000
7421 10511 20157 BX5 X1
43060 LX1 -13
11601 MX0 60-12
7422 21665 11601 BX6 X0*X1
15110 AX6 -7
43065 BX1 -X0*X1 CONVERT PAGE
15660 MX0 -7
7423 5120000123 43065 BX6 -X0*X6
37262 SA2 CP.PS PAGE SIZE
63721 IX2 X6-X2 CHECK IF AT START OF PAGE
7424 0770007425 73111 SB7 X2+B1
76611 NG B7,CONREF1 IF NOT START OF PAGE
5160007436 CONREF1 SA6 CONREFA
0100005270 RJ CONDEC
7426 54160 20636 SA1 A6 CONVERT LINE
43052 LX6 30
20014 MX0 42
11606 LX0 12
54660 BX6 X0*X6
7211777776 SA6 A6
0100005270 SX1 X1-1
0526007432 RJ CONDEC
7266775577 NE B2,B6,CONREF2 JUMP IF NOT 1-DIGIT LINE NUMBER
5110007436 CONREF2 SA1 CONREFA X6-2200B ADD LEADING ZERO

7433	43052	7266727777	SX6	X6-050000B	COMPASS	4276
			MX0	42	COMPASS	4277
		15660	BX6	-X0*X6	COMPASS	4278
		20614	LX6	12	COMPASS	4279
		36661	IX6	X6+X1	COMPASS	4280
7434	43066		MX0	54	COMPASS	4281
		11606	BX6	X0*X6	COMPASS	4282
		15150	BX1	-X0*X5	COMPASS	4283
		36161	IX1	X6+X1	COMPASS	4284
7435	0400007420		EQ	CONREF RETURN	COMPASS	4285
7436	00000000000000000000	CONREFA	DATA	0	COMPASS	4286
					COMPASS	4287
** CPL - CREATE PRINT LINE.						COMPASS 4289
						COMPASS 4290
7437	0000000000	CPL	PS	RETURN EXIT	COMPASS	4291
7440	5120004062		SA2	PLFLG	COMPASS	4292
					COMPASS	4293
		0312007437	NZ	X2,CPL IF PRINT LINE READY	COMPASS	4294
7441	76610		SX6	B1	COMPASS	4295
		54620	SA6	A2	COMPASS	4296
		5130003306	SA3	CCT SET LISTING CARD COUNT	COMPASS	4297
7442	5110003672		SA1	LINE-1 CREATE PRINT LINE	COMPASS	4298
		10733	BX7	X3	COMPASS	4299
		22601	LX6	X1	COMPASS	4300
7443	5170004056		SA7	LCCT	COMPASS	4301
		6120000006	SB2	6	COMPASS	4302
7444	5150004314		SA5	=206000000000000000056B	COMPASS	4303
		5140004315	SA4	=20660000000000000000B	COMPASS	4304
7445	5120030002		SA2	SEQ-1	COMPASS	4305
		54610	SA6	A1	COMPASS	4306
		63530	SB5	X3	COMPASS	4307
7446	26674		UX6	B7,X4	COMPASS	4308
		66620	SB6	B2	COMPASS	4309
		5110026437	SA1	CARD	COMPASS	4310
7447	22371	CPL1	LX3	X1,B7 ASSEMBLE CHARACTERS	COMPASS	4311
		67772	SB7	B7-B2	COMPASS	4312
		54111	SA1	A1+B1	COMPASS	4313
		12663	BX6	X6+X3	COMPASS	4314
7450	0670007447		PL	B7,CPL1 LOOP FOR 10 CHARACTERS	COMPASS	4315
		54661	SA6	A6+B1	COMPASS	4316
		67661	SB6	B6-B1	COMPASS	4317
7451	26674		UX6	B7,X4	COMPASS	4318
		0660007447	PL	B6,CPL1 LOOP FOR 70 CHARACTERS	COMPASS	4319
		22321	LX3	X1,B2	COMPASS	4320
7452	54111		SA1	A1+B1	COMPASS	4321
		12631	BX6	X3+X1	COMPASS	4322
		54221	SA2	A2+B1	COMPASS	4323
		20660	LX6	48	COMPASS	4324
7453	54111		SA1	A1+B1	COMPASS	4325
		36762	IX7	X6+X2	COMPASS	4326
		54221	SA2	A2+B1	COMPASS	4327
		10622	BX6	X2	COMPASS	4328
7454	67551		SB5	B5-B1	COMPASS	4329

54761
54671
66620SA7 A6+B1
SA6 A7+B1
SB6 B2COMPASS 4330
COMPASS 4331
COMPASS 43327455 26675
20666
0550007447UX6 B7,X5
LX6 54
NZ B5,CPL1 LOOP FOR CONTINUATION CARDSCOMPASS 4333
COMPASS 4334
COMPASS 43357456 74661
5160004065
7457 5150030003SX6 A6+B1
SA6 LLINE
SA5 SEQCOMPASS 4336
COMPASS 4337
CMP24 395110003306
7460 0315007437
54551SA1 CCT
NZ X5,CPL IF NOT MODIFY-STYLE SEQUENCE FIELD
SA5 A5+B1CMP24 40
CMP24 41
CMP24 427461 6130003702
63410
7462 5120004316

CPL2

SB3 LINE+7
SB4 X1
SA2 =404040404040404040BCMP24 43
CMP24 44
CMP24 4543052
15150
7463 11505MX0 42 BLANK FILL NAME
BX1 -X0*X5
BX5 X0*X5COMPASS 4342
CMP24 46
CMP24 4743060
36705
15775MX0 48
IX7 X0+X5
BX7 -X5*X7COMPASS 4345
COMPASS 4346
CMP041 17464 11727
22607
5120004317BX7 X2*X7
LX6 X7
SA2 =8LCOMPASS 4348
COMPASS 4349
CMP24 487465 20767
56330
37767LX7 60-5
SA3 B3
IX7 X6-X7COMPASS 4350
CMP24 49
COMPASS 435212767
7466 11672
12665BX7 X6+X7
BX6 X7*X2
BX6 X6+X5COMPASS 4353
CMP041 2
CMP041 320660
12636
7467 54630LX6 -12
BX6 X3+X6
SA6 A3STORE NAME IN COLUMNS 73-79, BLANK IN 80
CONVERT NUMBERCMP041 4
CMP24 50
CMP24 510100005270
7470 20630
5055000002RJ CONDEC
LX6 24
SA5 A5+2CMP24 52
CMP24 53
CMP24 5456631
7471 67441
6133000011SA6 B3+B1 STORE NUMBER IN COLUMNS 81-86,
SB4 B4-B1 BLANKS IN COLUMNS 87-90
SB3 B3+9CMP24 55
CMP24 56
CMP24 577472 0540007462
0400007437NZ B4,CPL2 LOOP IF CONTINUATION CARDS
EQ CPLCMP24 58
CMP24 59

** CUL - CLEAN UP LISTING AREA.

COMPASS 4371
COMPASS 4372
COMPASS 43737473 0000000000 CUL
7474 5110004061
0311007501PS RETURN EXIT
SA1 DLFLG
NZ X1,CUL1 IF DEFERRED LIST IN EFFECTCOMPASS 4374
COMPASS 4375
COMPASS 43767475 76610
5160004056
7476 5160003605SX6 B1
SA6 LCCT
SA6 DETFLGCOMPASS 4377
COMPASS 4378
COMPASS 43795160004062
7477 5110004270
7120003673SA6 PLFLG
SA1 =1H CLEAR LINE
SX2 LINEF4820 127
COMPASS 4380
COMPASS 4381

COMPASS 4382
COMPASS 4383

COMPASS 4384

COMPASS	4385
COMPASS	4386
COMPASS	4387

COMPASS	4388
COMPASS	4389
COMPASS	4390

COMPASS	4391
COMPASS	4392
COMPASS	4393

COMPASS	4395
COMPASS	4396

COMPASS 4399

CMP30	2052
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COMPASS 4401

COMPASS	4402
COMPASS	4402

COMPASS 4403

COMPASS 4404
COMPASS 4405

COMPASS	4405
F4810A	153

F4810A	153
F4810A	154

F4810A	154
COMPASS	4408

COMPASS	4408
E4810A	155

F4810A	155
CMP30	2053

CMP30	2053
CMP30	2054

CMP30	2034
CMP30	2055

COMPASS	4410
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CMP30	2056
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COMPASS	4412
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CMP30 2057

CMP30	2058
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CMP30	2059
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CMP30 2060

CMP30	2061
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CMP30	2062
CMP30	2062

CMP30	2063
CMP30	2064

CMP30	2064
CMP30	2065

CMP30	2065
CMP30	2066

CMP30	2066
CMP30	2067

CMP30	2067
CMP30	2068

CMP30	2068
COMPASS	4413

COMPASS 4415

COMPASS 4416

COMPASS 4417

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7543	0312007546		NZ	X2,LHD0	IF LONG LIST HEADER BEING PRINTED	CPSA142	48
	5120000120		SA2	CP.EPAG		CPSA142	49
7544	22212		LX2	B1		CPS236	25
	0322007546		PL	X2,LHD0	TEST *WRITTEN TO* FLAG (BIT 58)	CPS236	26
7545	5140003065		SA4	SHORTEJ	SHORT EJECT CARRIAGE CONTROL CHARACTER	CPSA142	52
7546	12646	LHD0	BX6	X4+X6	OR IN CARRIAGE CONTROL CHARACTER	CPSA142	53
	54650		SA6	A5		CPSA142	54
	5120004056		SA2	LCCT	INCREMENT LINE NUMBER	COMPASS	4463
7547	36621		IX6	X2+X1		COMPASS	4464
	54610		SA6	A1		COMPASS	4465
	5140000123		SA4	CP.PS	PAGE SIZE	F4810A	156
7550	37464		IX4	X6-X4		F4810A	157
	0334007540		NG	X4,LHD	IF NOT AT END OF PAGE	F4810A	158
7551	7262000002		SX6	X2+2	RESET LINE NUMBER	COMPASS	4468
	54610		SA6	A1		COMPASS	4469
	74630		SX6	A3	SAVE FET ADDRESS	COMPASS	4470
7552	5160007607		SA6	LHDA		COMPASS	4471
	54761		SA7	A6+B1	SAVE PAGE NUMBER ADDRESS	COMPASS	4472
7553	7266777546		SX6	X6-E		COMPASS	4473
	0306007555		ZR	X6,LHD1	IF ERROR FILE	COMPASS	4474
7554	0100010014		RJ	PET	PROCESS ERROR TABLE	COMPASS	4475
7555	5120007610	LHD1	SA2	LHDA+1	INCREMENT PAGE NUMBER	COMPASS	4476
	53120		SA1	X2		COMPASS	4477
	73611		SX6	X1+B1		COMPASS	4478
7556	53620		SA6	X2		COMPASS	4479
	73111		SX1	X1+B1	CONVERT PAGE NUMBER	COMPASS	4480
	0100005270		RJ	CONDEC		COMPASS	4481
7557	20630		LX6	24		COMPASS	4483
	5160003215		SA6	PAGENO		COMPASS	4484
7560	5120007607		SA2	LHDA		CMP27	6
						CMP30	2076
		RM	IFNE	CP#RM,7		CPSA266	8
						F4810A	160
	7262777546		SX6	X2-E	DECIDE WHICH FILE WE ARE WRITING TO.	CPS236	27
7561	5150000120		SA5	CP.EPAG		CPS236	28
	0306007563		ZR	X6,LHD1X		CPS236	29
7562	5150000117		SA5	CP.PAGE		CPS236	30
7563	22615	LHD1X	LX6	X5,B1	TEST *WRITTEN TO* FLAG (BIT 58).	CPS236	31
	0336007571		MI	X6,LDH1A	IF WRITTEN TO, DO NOT PRINT PD CONTROL.	CPS236	32
	43001		MX0	1		CPS236	33
7564	20073		LX0	-1		CPS236	34
	12605		BX6	X0+X5		CPS236	35
	54650		SA6	A5	SET *WRITTEN TO* FLAG (BIT 58)	CPS236	36
7565	0100004712		RJ	STF	SET TERMINAL FILE	CPSA265	49
7566	0306007571		ZR	X6,LDH1A	IF TERMINAL FILE	CPSA265	50
	5110003074		SA1	FRSTLIN		F4810A	161
7567	0301007571		ZR	X1,LDH1A	IF NO NEED TO RESET PRINTER DENSITY	F4810A	162
	6160003074		WRITEH	X2,FRSTLIN,1	ELSE RESET PRINTER DENSITY	F4810A	163
7571		LDH1A	BSS	0		F4810A	166
7571	6160003201		WRITEH	X2,TITBUF,PAGENO+1-TITBUF		COMPASS	4488
						F4810A	167
		RM	ELSE			F4810A	168
						F4810A	169
			SX6	X2-E	DECIDE WHICH FILE WE ARE WRITING TO.	CPS236	37
			SA5	CP.EPAG		CPS236	38
			ZR	X6,LHD1X		CPS236	39
			SA5	CP.PAGE		CPS236	40

		LHD1X	LX6	X5,B1	TEST *WRITTEN TO* FLAG (BIT 58).	CPS236	41
			MI	X6,LDH1A	IF WRITTEN TO, DO NOT PRINT PD CONTROL.	CPS236	42
			MX0	1		CPS236	43
1			LX0	-1		CPS236	44
2			BX6	X0+X5		CPS236	45
3			SA6	A5	SET *WRITTEN TO* FLAG (BIT 58)	CPS236	46
4			SA1	FRSTLIN	CHECK IF NEED TO RESET PRINTER DENSITY	F4810A	170
5			ZR	X1,LDH1A	IF NOT	F4810A	171
6			PUT	X2,FRSTLIN,10	RESET PRINTER DENSITY	F4810A	172
7		LDH1A	BSS	0		F4810A	175
8		L.	SET	PAGENO+1-TITBUF		CMP30	2079
9			PUT	X2,TITBUF,L.*10		CMP30	2080
10						F4810A	176
11		RM	ENDIF			F4810A	177
12						F4810A	178
13	7573	0100007575	RJ	LHDS	DO SUBTITLE LINE	CPSA208	5
14	7574	0400007540	EQ	LHD	RETURN	CPSA208	6
15						CPSA208	7
16						CMP30	2081
17							
18							
19							
20							
21		**		LHDS - LIST HEADER SUBTITLE		CPSA208	9
22		*				CPSA208	10
23	7575	0000000000	LHDS	PS	RETURN EXIT	CPSA208	11
24	7576	5110003622	SA1	SUBNAME		COMPASS	4489
25		43006	MX0	6		CMP039	1
26		11201	BX2	X0*X1		CMP039	2
27	7577	22601	LX6	X1		CMP039	3
28		0312007601	NZ	X2,LHD2		CMP039	4
29	7600	0100006262	RJ	LJUST		COMPASS	4490
30	7601	5160003617	LHD2	SA6	SBNAME	CMP039	5
31		5120007607	SA2	LHDA		COMPASS	4492
32						CMP30	2082
33			RM	IFEQ	CP#RM,0	CMP30	2083
34	7602	6160003610		WRITEH	X2,SUBTIT,SUBL	COMPASS	4493
35	7604	6160004320		WRITEW	X2,(=2L),1 LIST BLANK LINE UNDER TITLES	COMPASS	4494
36			RM	ELSE		CMP30	2084
37				PUT	X2,SUBTIT,SUBL*10	CMP30	2085
38				SA2	LHDA	CMP30	2086
39				PUT	X2,BLANKS,10	CMP30	2087
40			RM	ENDIF		CMP30	2088
41						CMP30	2089
42	7606	0400007575	EQ	LHDS	RETURN	CPSA208	12
43						COMPASS	4496
44	7607	00000000000000000000	LHDA	DATA	0 FET ADDRESS	COMPASS	4497
45	7610	00000000000000000000		DATA	0 PAGE NUMBER ADDRESS	COMPASS	4498
46							
47							
48							
49							
50		**		LISTER - LIST LINE.		COMPASS	4500
51		*		LISTER WILL LIST:		COMPASS	4501
52		*		1. ERROR LINES.		COMPASS	4502
53		*		2. IF FLIST " 0.		COMPASS	4503
54		*		3. IF NONE OF THE FOLLOWING CARD TYPES = 1 AND LIST		COMPASS	4504
55							
56							
57							
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COMPASS	4505
COMPASS	4506
COMPASS	4507
COMPASS	4508
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COMPASS	4561

7631	0100007437		RJ	CPL	CREATE PRINT LINE	COMPASS	4562
7632	0100007530		RJ	LEL	LIST ERROR LINE	COMPASS	4563
7633	5110003320		SA1	ERFLAGS		COMPASS	4564
	6170000012		SB7	NFERS-1		COMPASS	4565
7634	5120007667		SA2	LSLB		COMPASS	4566
	6160000011		SB6	LEFLG-NFERS-1		COMPASS	4567
7635	5130003147		SA3	ERCNT		COMPASS	4568
	5140003150		SA4	WECNT		COMPASS	4569
7636	12612	LSL4	BX6	X1+X2	RECORD PAGE OCCURRENCE OF ERRORS	COMPASS	4570
	36331		IX3	X3+X1		COMPASS	4571
	54111		SA1	A1+B1		COMPASS	4572
	67771		SB7	B7-B1		COMPASS	4573
7637	54620		SA6	A2		COMPASS	4574
	54221		SA2	A2+B1		COMPASS	4575
	0670007636		PL	B7,LSL4	LOOP	COMPASS	4576
7640	12612	LSL5	BX6	X1+X2		COMPASS	4577
	36441		IX4	X4+X1		COMPASS	4578
	54111		SA1	A1+B1		COMPASS	4579
	67661		SB6	B6-B1		COMPASS	4580
7641	54620		SA6	A2		COMPASS	4581
	54221		SA2	A2+B1		COMPASS	4582
	0660007640		PL	B6,LSL5	LOOP	COMPASS	4583
7642	10633		BX6	X3		COMPASS	4584
	22704		LX7	X4		COMPASS	4585
	54630		SA6	A3		COMPASS	4586
7643	6170000024		SB7	LERFLAGS-2	CLEAR ERROR FLAGS	COMPASS	4587
	54740		SA7	A4		COMPASS	4588
	76600		SX6	B0		COMPASS	4589
7644	5160006302		SA6	EXERR		COMPASS	4590
	5160003320		SA6	ERFLAGS		COMPASS	4591
7645	67771	LSL6	SB7	B7-B1		COMPASS	4592
	54661		SA6	A6+B1		COMPASS	4593
	0670007645		PL	B7,LSL6	LOOP	COMPASS	4594
7646	0400007657		EQ	LSL10		COMPASS	4595
						COMPASS	4596
		*			NO ERRORS. CHECK FORCE LIST AND LIST OPTIONS.	COMPASS	4597
						COMPASS	4598
7647	5140004057	LSL7	SA4	FLIST		COMPASS	4599
	0314007654		NZ	X4,LSL9	IF FORCE LIST	COMPASS	4600
7650	6170000036		SB7	30		COMPASS	4601
	5110007662		SA1	LSLA	PROCESS LIST OPTION TABLE	COMPASS	4602
7651	23271	LSL8	AX2	X1,B7		COMPASS	4603
	53310		SA3	X1		COMPASS	4604
	53420		SA4	X2		COMPASS	4605
	15643		BX6	-X3*X4		COMPASS	4606
7652	54111		SA1	A1+B1		COMPASS	4607
	0306007651		ZR	X6,LSL8	IF LINE WILL LIST	COMPASS	4608
7653	7061770110		SX6	A1-LSLA-LSLAL		COMPASS	4609
	0316007657		NZ	X6,LSL10	IF NO LIST	COMPASS	4610
7654	5110003602	LSL9	SA1	LPCNT		CMP30	2090
	7170003216		SX7	PGCNT	CHECK FOR END OF PAGE	CMP30	2091
7655	5130000221		SA3	0		CMP30	2092
	0100007540		RJ	LHD	LIST HEADER	CMP30	2093
7656	7100000000		SX0	0		CMP30	2094
	0100007744		RJ	LTX	LIST TEXT	CMP30	2095
						COMPASS	4612
		*			CLEAN UP LINE FOR NEXT LISTING ENTRY.	COMPASS	4613

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7734	0100007437		RJ	CPL	CREATE PRINT LINE	COMPASS	4662
7735	5110000116		SA1	CP.LISTF		CMP30	2096
	73610		SX6	X1		COMPASS	4664
7736	0400007731		EQ	LISTL1		COMPASS	4665
** LIST2L - LIST 2 LINES IF EXTERNAL LIST SELECTED.						COMPASS	4667
						COMPASS	4668
						COMPASS	4669
7737	0000000000	LIST2L	PS		RETURN EXIT	COMPASS	4670
7740	0100007732		RJ	LISTL		COMPASS	4671
7741	5110000116		SA1	CP.LISTF		CMP30	2097
	0301007737		ZR	X1,LIST2L	IF EXTERNAL LIST IS OFF	COMPASS	4673
7742	76010		SX0	B1		COMPASS	4674
	0100007505		RJ	LBL		COMPASS	4675
7743	0400007737		EQ	LIST2L	RETURN	COMPASS	4676
** LTX - LIST TEXT.						COMPASS	4691
* ENTRY (X0) = 0 IF NO ERROR LIST.						COMPASS	4692
* (X0) = ADDRESS OF ERROR FILE FET IF ERROR LIST.						COMPASS	4693
* (LCCT) = NUMBER OF LINES TO LIST.						COMPASS	4694
						COMPASS	4695
						COMPASS	4696
7744	0000000000	LTX	PS		RETURN EXIT	COMPASS	4697
7745	5120004061		SA2	DLFLG		COMPASS	4698
	0302007751		ZR	X2,LTX1	IF NOT DEFERRED LIST	COMPASS	4699
7746	5110004270		SA1	=1H	CLEAR OCTAL AREA	COMPASS	4700
	10611		BX6	X1		COMPASS	4701
7747	5160003672		SA6	LINE-1		COMPASS	4702
	55661		SA6	A6-B1		COMPASS	4703
	55661		SA6	A6-B1		COMPASS	4704
7750	55661		SA6	A6-B1		COMPASS	4705
	0400007757		EQ	LTX3		COMPASS	4706
7751	5110003673	LTX1	SA1	LINE	COMPRESS OCTAL LINE INTO 4 WORDS	COMPASS	4707
	10611		BX6	X1		COMPASS	4708
	54610		SA6	A1		COMPASS	4709
7752	5130004323		SA3	=20120000000000000000B		COMPASS	4710
	6160000004		SB6	4		COMPASS	4711
7753	26673		UX6	B7,X3		COMPASS	4712
7754	55111	LTX2	SA1	A1-B1		COMPASS	4713
	67771		SB7	B7-B1		COMPASS	4714
	12661		BX6	X6+X1		COMPASS	4715
	20666		LX6	54		COMPASS	4716
7755	0570007754		NZ	B7,LTX2	LOOP FOR 10 CHARACTERS	COMPASS	4717
	55661		SA6	A6-B1		COMPASS	4718
	67661		SB6	B6-B1		COMPASS	4719
7756	26673		UX6	B7,X3		COMPASS	4720
	0560007754		NZ	B6,LTX2	LOOP FOR 40 CHARACTERS	COMPASS	4721
						CMP30	2098
RM IFEQ CP#RM,0						CMP30	2099
						CMP30	2100
7757	54060	LTX3	SA0	A6		COMPASS	4722

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* (X3) = COLUMN COUNT.
* (X3) = 0 IF LEADING ZERO SUPPRESSION.
* SAVES A - 0, 1.

F4820 132

F4820 133

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F4820 136

7773	0000000000	PACK0	PS		RETURN EXIT	CPSA198	5
7774	43070		MX0	60-4	HEX DIGITS	CPSA198	6
	6130000004		SB3	4	SIZE OF SHIFT	CPSA198	7
7775	7140000033		SX4	1R0	CONVERSION FACTOR	CPSA198	8
	6273777776		SB7	X3-1	COLUMN COUNTER	CPSA198	9
7776	7170000055		SX7	1R	BLANK	CPSA198	10
	67601		SB6	-B1		CPSA198	11
7777	6150003622		SB5	OCTAL-1		CPSA198	12
	0321010002		PL	X1,PACK01	IF POSITIVE NUMBER	CPSA198	13
10000	0313010002		NZ	X3,PACK01	IF NO LEADING ZERO SUPPRESSION	CPSA198	14
	14111		BX1	-X1	REVERSE NEGATIVE NUMBER	CPSA198	15
10001	7170000046		SX7	1R-	SAVE A MINUS SIGN	CPSA198	16
10002	5150003116	PACK01	SA5	PPTYPE		CPSA198	17
	73551		SX5	X5+B1		CPSA198	18
10003	0305010006		ZR	X5,PACK02	HEX (BCU PPTYPE = -1)	CPSA198	19
	73551		SX5	X5+B1		CPSA198	20
10004	0305010006		ZR	X5,PACK02	HEX (MCU PPTYPE = -2)	CPSA198	21
	43071		MX0	60-3	OCTAL DIGITS	CPSA198	22
10005	6130000003		SB3	3	SIZE OF SHIFT	CPSA198	23
10006	15510	PACK02	BX5	-X0*X1	MASK OFF LOWER NUMBER	CPSA198	24
	36645		IX6	X4+X5	ADD CONVERSION FACTOR	CPSA198	25
	6245777765		SB4	X5-10	HEX NUMBERS GET LARGER THAN 10.	CPSA198	26
10007	0740010010		NG	B4,PACK03	IF NOT NUMERIC	CPSA198	27
	76641		SX6	B4+B1	10=A,11=B,ETC.	CPSA198	28
10010	23131	PACK03	AX1	B3	SHIFT	CPSA198	29
	53625		SA6	X2+B5	STORE DISPLAY VALUE	CPSA198	30
	67771		SB7	B7-B1	DECREMENT COLUMN NUMBER	CPSA198	31
	73226		SX2	X2+B6	DECREMENT COLUMN COUNTER	CPSA198	32
10011	0670010006		PL	B7,PACK02	LOOP.	CPSA198	33
	0313007773		NZ	X3,PACK0	NO LEADING ZERO SUPPRESSION.	CPSA198	34
10012	0311010006		NZ	X1,PACK02	NOT END OF NUMBER.	CPSA198	35
	55761		SA7	A6-B1	STORE MINUS SIGN IF NECESSARY.	CPSA198	36
10013	0400007773		EQ	PACK0	RETURN.	CPSA198	37

** PET - PROCESS ERROR TABLE.
* RECORDS ERRORS IN ERRTAB. CLEARS LSLB.

COMPASS 4746

COMPASS 4747

COMPASS 4748

10014	0000000000	PET	PS		RETURN EXIT	COMPASS	4749
10015	43600		MX6	0		COMPASS	4750
	5160010025		SA6	PETA		COMPASS	4751
10016	5120010025	PET1	SA2	PETA		COMPASS	4752
	5212007667		SA1	LSLB+X2		COMPASS	4753
10017	0301010023		ZR	X1,PET2	IF NO ERROR	COMPASS	4754
	76600		SX6	B0		COMPASS	4755
	54610		SA6	A1		COMPASS	4756
10020	20236		LX2	30		COMPASS	4757
	5130003216		SA3	PGCNT		COMPASS	4758
	12132		BX1	X3+X2		COMPASS	4759
10021	5100000033		ADDWORD	ERRTAB		COMPASS	4760

10022	5120010025		SA2	PETA		COMPASS	4761
10023	73621	PET2	SX6	X2+B1		COMPASS	4762
	6276777752		SB7	X6-LEFLG		COMPASS	4763
		54620	SA6	A2		COMPASS	4764
10024	0570010016		NZ	B7,PET1	LOOP	COMPASS	4765
	0400010014		EQ	PET	RETURN	COMPASS	4766
						COMPASS	4767
10025	00000000000000000000	PETA	DATA	0	ERROR INDEX	COMPASS	4768

1412THE

* PRT - PROCESS CROSS-REFERENCE TABLE.

CPSA097 6

COMPASS 4771

COMPASS 4772

COMPASS 4775

COMPASS 4776

COMPASS 4777

COMPASS 4778

CMP30 2139

CMP30 2140

CMP30 2141

COMPASS 4780

COMPASS 4781

COMPASS 4782

CPS064 122

CPS064 123

CPS064 124

CMP30 2143

CMP30 2144

CMP30 2145

CMP30 2150

CMP30 2152

CMP30 2160

CPS064 129

CMP30 2161

CMP30 2162

CMP30 2163

CMP30 2164

CMP30 2165

CPS064 130

CPS064 131

CPS064 132

CPS064 133

CPS064 134

CPS064 135

COMPASS 4785

COMPASS 4786

CPS010 31

COMPASS 4788

COMPASS 4789

COMPASS 4790

COMPASS 4791

COMPASS 4792

CMP041 5

COMPASS 4793

CPS2667 9

CPS2667 10

CMP19 79

CMP042 75

CMP042 76

CMP042 77

CMP30 2166

CMP30 2167

CMP30 2168

CMP042 78

CPS2659 9

CPS2659 10

CPS2659 11

10026 76600

PRTX

SX6

B0

CLEAR REFTAB

5160003475

SA6

L.REFTAB

10027 5110010561

SA1

PRTA

CHECK OVERFLOW

0301010036

ZR

X1,PRT

IF NO OVERFLOW

RM

IFEQ

CP#RM,0

10030 5110000245

SA1

B+4

73110

SX1

X1

10031 0100004724

RJ

ACL

ADJUST CORE LIMITS

IFEQ

OVERLAY,0,1

READ

C,R

10032 7120003020

REWIND

R

RM

ELSE

SX1

BUFFERS

RJ

ACL

ADJUST CORE LIMITS

IFEQ

OVERLAY,0,1

GET

R,CBUF

REWINDM

R

RM

ENDIF

OVL

IFNE

OVERLAY,0

10034 5110005567

SA1

OVLA

RELOAD SECONDARY OVERLAY

54211

SA2

A1+B1

10035 0100005544

RJ

OVL

OVL

ENDIF

10036 0000000000

PRT

PS

RETURN EXIT

10037 5130003606

SA3

LXRF

CHECK IF REFERENCE TABLE REQUIRED

0303010036

ZR

X3,PRT

10040 7160000003

SX6

3

SET PASS TO 3

5160003260

SA6

PASS

10041 43600

MX6

0

CLEAR QUAL VALUE

5160003112

SA6

QVAL

10042 5160003622

SA6

SUBNAME

AND SUB-SUBTITLE

5160010561

SA6

PRTA

10043 7170000221

SX7

0

SET FOR *LHDS* TO ALWAYS USE LISTING FILE

5170007607

SA7

LHDA

AND NOT ERROR FILE

10044 5110004054

SA1

REFIO

0311010046

NZ

X1,PRT1

IF REFTAB OVERFLOWED

10045 5160004053

SA6

LOSTREF

0400010110

EQ

PRT7

RM

IFEQ

CP#RM,0

10046 7120003020

PRT1

WRITER

R

10050 5110000231

SA1

E

GET STATUS OF ERROR FILE

5120000233

SA2

E+2

IN POINTER

10051 54321

SA3

A2+B1

OUT POINTER

20170		LX1	59-3		CPS2659	12
37423		IX4	X2-X3		CPS2659	13
10052	0331010053	MI	X1,PRT1.1	IF ANYTHING WAS WRITTEN	CPS2659	14
	0304010055	ZR	X4,PRT1.2	IF BUFFER EMPTY	CPS2659	15
10053	7120000231	PRT1.1	WRITER	E	CPS2659	16
10055		PRT1.2	BSS	0	CPS2659	17
					CPS2659	18
10055	7120003000		RECALL	S	COMPASS	4818
10056	7120000241		RECALL	B	CPS064	137
10057	7120000231		RECALL	E	CPS064	138
10060	7120003020		RECALL	R	CPS064	139
10061	7160010562		SX6	CBUF	CPS064	140
	5160010561		SA6	PRTA	CPS064	141
					CPS064	142
		OVL	IFEQ	OVERLAY,0	CPS064	143
			SA1	R+1	COMPASS	4823
			SX7	X1	COMPASS	4824
			SA6	C+3	COMPASS	4826
			SA7	A6-B1	COMPASS	4827
		OVL	ENDIF		CPS064	144
					CPS064	145
10062	7120003030		REWIND	T	CPS064	146
					CMP30	2174
		RM	ELSE		CMP30	2175
					CMP30	2176
		PRT1	WEOR	R	CMP30	2177
			SX6	BUFFERS	CMP30	2191
			SA6	PRTA	CPS064	148
					CPS064	149
		OVL	IFEQ	OVERLAY,0	CPS064	150
			SX3	X6-CBUF	CMP30	2193
			IX4	X3+X3	CMP30	2195
			LX3	3	CMP30	2196
			IX5	X3+X4	CMP30	2197
			PUT	R,CBUF,X5	CPS028	273
		OVL	ENDIF		CPS064	151
					CMP30	2198
			REWINDM	R	CMP30	2204
					CMP30	2205
		RM	ENDIF		CMP30	2206
					CMP30	2207
10064	7110011563		SX1	PRTB	COMPASS	4830
	0100004724		RJ	ACL	COMPASS	4831
10065	0100005523		RJ	MTD	COMPASS	4832
10066		PRT1A	BSS	0	CPSA129	4
10066	5110003436		SA1	0.REFTAB	COMPASS	4833
	5120003440		SA2	0.ENDTAB	COMPASS	4834
10067	5130004053		SA3	LOSTREF	CMP042	79
	37421		IX4	X2-X1	CMP042	80
10070	7274777677		SX7	X4-100B	CMP042	81
	37637		IX6	X3-X7	CMP042	82
10071	0336010075		NG	X6,PRT1B	CPSA129	5
	5140003055		SA4	LSTTHOU	CPSA129	6
10072	0314010076		NZ	X4,PRT2	CPSA129	7
	10166		BX1	X6	CPSA129	8
10073	0100005705		RJ	RFL	CPSA129	9
10074	0400010066		EQ	PRT1A	CPSA129	10

	10075		PRT1B	BSS	0		CPSA129	11
	10075	10733		BX7	X3		CPSA129	12
		43600		MX6	0		CMP042	84
	10076	5170003475	PRT2	SA7	L.REFTAB		CMP042	85
		54630		SA6	A3	RESET LOSTREF	CMP042	86
		10622		BX6	X2		CMP042	87
	10077	5160003437		SA6	0.MEMORY		CMP042	88
							COMPASS	4839
							CMP30	2208
			RM	IFEQ	CP#RM,0		CMP30	2209
		63610		SB6	X1	READ REFERENCE TABLE	CMP30	2210
		63770		SB7	X7		COMPASS	4840
	10100	7120003030		READ	T		COMPASS	4841
	10102	7120003030		READW	T,B6,B7		COMPASS	4842
	10103	0311010107		NZ	X1,PRT5	IF ROOM FOR REFERENCE TABLE	COMPASS	4843
	10104	6160010561	PRT4	READW	X2,PRTA,1	COUNT LOST REFERENCES	COMPASS	4844
	10106	0301010104		ZR	X1,PRT4	LOOP	CMP19	81
	10107	7110010562	PRT5	SX1	TBUF		CMP19	83
		0100004724		RJ	ACL	ADJUST CORE LIMITS	CMP30	2211
							CMP30	2212
							CMP30	2213
			RM	ELSE			CMP30	2214
							CMP30	2215
				IX5	X7+X7		CMP30	2216
				LX7	3		CMP30	2217
				IX4	X5+X7		CMP30	2218
				GETP	R,X1,X4	READ REFERENCE TABLE	CPS028	274
				FETCH	R,FP,X3		CMP30	2220
			PRT4	NZ	X3,PRT7	IF ROOM FOR REFERENCE TABLE	CMP30	2221
				GETP	R,T6RM1,10		CMP30	2222
				FETCH	R,FP,X3		CMP30	2223
				SX0	#E0I#++#EOP#++#EOS#++#EOR#		CMP30	2224
				BX4	X0*X3		CMP30	2225
				ZR	X4,PRT4	IF MORE REFERENCES	CMP30	2226
							CMP30	2227
			RM	ENDIF			CMP30	2228
							CMP30	2229
	10110	5110003410	PRT7	SA1	0.SYMTAB	PREPARE SYMBOL TABLE BY CLEARING OUT	COMPASS	4856
		5120003447		SA2	L.SYMTAB	BITS 42-59	COMPASS	4857
	10111	43022		MX0	18		COMPASS	4858
		66211		SB2	B1+B1		COMPASS	4859
		6272777775		SB7	X2-2		COMPASS	4860
	10112	63310		SB3	X1		CP096A	259
		73111		SX1	X1+B1		CP096A	260
		53510		RX5	X1		CP096A	261
		15650		BX6	-X0*X5		COMPASS	4862
	10113	6160000052		SB6	42		COMPASS	4863
	10114	53610	PRT8	WX6	X1		CP096A	262
		73112		SX1	X1+B2		CP096A	263
		67772		SB7	B7-B2		COMPASS	4865
		53510		RX5	X1		CP096A	264
	10115	15650		BX6	-X0*X5		COMPASS	4867
		0670010114		PL	B7,PRT8		COMPASS	4868
	10116	5150003475		SA5	L.REFTAB	CONSTRUCT REFERENCE LINK	COMPASS	4869
		0305010125		ZR	X5,PRT10	IF REFERENCE TABLE EMPTY	COMPASS	4870
	10117	5120003436		SA2	0.REFTAB		COMPASS	4871
		6275777776		SB7	X5-1		COMPASS	4872

10120	53227		SA2	X2+B7		COMPASS	4874
	23362		AX3	X2,B6		COMPASS	4875
	15520		BX5	-X0*X2		COMPASS	4876
10121	73333	PRT9	SX3	X3+B3	FETCH SYMBOL TABLE ENTRY	CP096A	265
	53130		RX1	X3		CP096A	266
	55221		SA2	A2-B1	REFERENCE ENTRY FOR NEXT ITERATION	COMPASS	4878
	11401		BX4	X0*X1	ISOLATE LINK FROM SYMBOL TABLE	COMPASS	4879
10122	36645		IX6	X4+X5	ADD SYMBOL T. LINK TO REF ENTRY	COMPASS	4880
	76571		SX5	B7+B1	REFTAB ORDINAL	COMPASS	4881
	22765		LX7	X5,B6		CP096A	267
	67771		SB7	B7-B1		COMPASS	4883
10123	15110		BX1	-X0*X1		COMPASS	4884
	36771		IX7	X7+X1	ADD REFTAB ORDINAL TO SYMTAB ENTRY	CP096A	268
	54621		SA6	A2+B1		COMPASS	4887
	53730		WX7	X3		CP096A	269
10124	23362		AX3	X2,B6	ISOLATE SYMBOL INDEX FOR NEXT PASS	CP096A	270
	15520		BX5	-X0*X2		COMPASS	4889
	0670010121		PL	B7,PRT9		COMPASS	4890
10125	5120003447	PRT10	SA2	L.SYMTAB	CLEAR UNREFERENCED SST ENTRIES	COMPASS	4891
	5110003410		SA1	O.SYMTAB		COMPASS	4892
10126	66211		SB2	B1+B1		COMPASS	4893
	63720		SB7	X2		COMPASS	4894
	7241000001		SX4	X1+1		CP096A	271
10127	5120003377		SA2	LT+1		CMP19	86
	5150003371		SA5	LN+1		CMP19	87
10130	6160000030		SB6	59-35		CMP19	91
	7170000000		SX7	0		CMP19	92
10131	14222		BX2	-X2		CMP26	12
	73621		SX6	X2+B1		CMP26	13
	10266		BX2	X6		CMP26	14
	20202		LX2	34-32		CMP26	15
10132	12226		BX2	X2+X6	$X2 = 5 * (1 - (LT))$	CMP26	16
	20240		LX2	32		CMP26	17
10133	53140	PRT11	RX1	X4	FETCH SYMTAB ENTRY	CP096A	272
	73442		SX4	X4+B2		CP096A	273
	0470010142		ZR	B7,PRT13	IF END OF SYMBOL TABLE	CMP19	94
10134	67772		SB7	B7-B2		CMP19	95
	22661		LX6	X1,B6		CMP19	96
	11301		BX3	X0*X1		CMP19	97
10135	0336010140		NG	X6,PRT12	IF NOREF ENTRY	CMP19	98
	11621		BX6	X2*X1		CP096A	274
10136	0313010133		NZ	X3,PRT11	IF REFERENCED ENTRY	CMP19	100
	0316010140		NZ	X6,PRT12	IF SST OR XTEXT, BUT NO LIST T	CP096A	275
10137	0315010133		NZ	X5,PRT11	IF LIST N	CMP19	102
10140	7264777774	PRT12	SX6	X4-3		CP096A	276
	53760		WX7	X6	CLEAR SYMTAB ENTRY	CP096A	277
	73661		SX6	X6+B1		CP096A	278
10141	53760		WX7	X6		CP096A	279
	0400010133		EQ	PRT11	LOOP	COMPASS	4913
						COMPASS	4914
10142	5120003447	PRT13	SA2	L.SYMTAB	LEFT JUSTIFY SYMBOLS	COMPASS	4915
	5130003410		SA3	O.SYMTAB		COMPASS	4916
10143	66211		SB2	B1+B1		COMPASS	4917
	43014		MX0	12		COMPASS	4918
	63720		SB7	X2		COMPASS	4919
	53130		RX1	X3		CP096A	280
10144	73430		SX4	X3		CP096A	281

	43522		MX5	18			CP096A	282
							COMPASS	4927
	10145	15610	PRT14	BX6	-X0*X1	LEFT JUSTIFY SYMBOLS AND	CP096A	283
		0306010152		ZR	X6,PRT16	ELIMINATE ZERO ENTRIES	CP096A	284
		73231		SX2	X3+B1		CP096A	285
	10146	11756	PRT15	BX7	X5*X6		CP096A	286
		20606		LX6	6		COMPASS	4935
		0307010146		ZR	X7,PRT15		CP096A	287
	10147	53220		RX2	X2		CP096A	288
		21606		AX6	6		COMPASS	4937
		11101		BX1	X0*X1		COMPASS	4938
		36661		IX6	X6+X1		COMPASS	4939
	10150	10722		BX7	X2	MOVE SYMTAB ENTRY	CP096A	289
		53640		WX6	X4		CP096A	290
		73441		SX4	X4+B1		CP096A	291
		53740		WX7	X4		CP096A	292
	10151	73441		SX4	X4+B1		CP096A	293
	10152	73332	PRT16	SX3	X3+B2		CP096A	294
		67772		SB7	B7-B2		CP096A	295
		53130		RX1	X3		CP096A	296
	10153	0570010145		NZ	B7,PRT14		COMPASS	4946
		5130003410		SA3	0.SYMTAB	UPDATE SYMBOL TABLE SIZE	COMPASS	4947
	10154	37743		IX7	X4-X3		CP096A	297
		5170003447		SA7	L.SYMTAB		CP096A	299
	10155	0307010026		ZR	X7,PRTX	IF NO SYMBOLS	CP096A	300
		5110004270		SA1	=1H	PREPARE SUBTITLE	COMPASS	4951
	10156	7120003610		SX2	SUBTIT		COMPASS	4952
		7130003622		SX3	SUBTIT+SUBL		COMPASS	4953
	10157	0100005600		RJ	PRESET		COMPASS	4954
	10160	5110004324		SA1	=H*	SYMBOLIC REFERENCE TABLE.*	COMPASS	4955
		54211		SA2	A1+B1		COMPASS	4956
		10611		BX6	X1		COMPASS	4957
	10161	22702		LX7	X2		COMPASS	4958
		5160003610		SA6	SUBTIT		COMPASS	4959
		54761		SA7	A6+B1		COMPASS	4960
	10162	54121		SA1	A2+B1		COMPASS	4961
		54211		SA2	A1+B1		COMPASS	4962
		10711		BX7	X1		COMPASS	4963
		22602		LX6	X2		COMPASS	4964
	10163	54771		SA7	A7+B1		COMPASS	4965
		54671		SA6	A7+B1		COMPASS	4966
		5110003602		SA1	LPCNT	CAUSE PAGE EJECT	COMPASS	4967
	10164	5120003073		SA2	PSIZE		COMPASS	4968
		36712		IX7	X1+X2		COMPASS	4969
		54710		SA7	A1		COMPASS	4970
	10165	0312010173		NZ	X2,PRT16.1	IF PAGE EJECT NOT SUPPRESSED	CPSA208	13
		7100000002		SX0	2	ELSE PRINT SOME BLANK LINES	CPSA208	14
	10166	0100007505		RJ	LBL		CPSA208	15
	10167	5110003602		SA1	LPCNT		CPSA208	16
		7100000002		SX0	2		CPSA208	17
	10170	5120000123		SA2	CP.PS	CHECK FOR END OF PAGE	CPSA208	18
		36610		IX6	X1+X0		CPSA208	19
		37262		IX2	X6-X2		CPSA208	20
	10171	54610		SA6	A1	INCREMENT LINE COUNT	CPSA208	21
		0322010173		PL	X2,PRT16.1		CPSA208	22
	10172	0100007575		RJ	LHDS	AND PRINT SUBTITLE LINE	CPSA208	23

10173		PRT16.1	BSS	0		CPSA208	24
10173	5110004053		SA1	LOSTREF		COMPASS	4971
	0301010206		ZR	X1,PRT17	IF NO LOST REFERENCES	COMPASS	4972
10174	0100005270		RJ	CONDEC		COMPASS	4973
10175	5160003614		SA6	SUBTIT+4		CMP042	89
	5110004330		SA1	=20H LOST REFERENCES IN		CMP042	90
10176	54211		SA2	A1+B1		CMP042	91
	10611		BX6	X1		CMP042	92
	22702		LX7	X2		CMP042	93
10177	5110003226		SA1	ASMM+1		CMP042	94
	7120000055		SX2	1R		CMP042	95
10200	54661		SA6	A6+B1		CMP042	96
	54761		SA7	A6+B1		CMP042	97
	20106		LX1	6		CMP042	98
	13612		BX6	X1-X2		CMP042	99
10201	54671		SA6	A7+B1		CMP042	100
	7110003614		MESSAGE	SUBTIT+4,,R		CMP30	2230
10203	5110004332		SA1	=10HRENCES.		CMP042	102
	5120004270		SA2	=10H		CMP042	103
10204	10611		BX6	X1		CMP042	104
	22702		LX7	X2		CMP042	105
	5160003616		SA6	SUBTIT+6		CMP042	106
10205	54761		SA7	A6+B1		CMP042	107
						COMPASS	4995
		*		SHELL SORT OF SYMBOL TABLE.		COMPASS	4996
						COMPASS	4997
10206	5130003447	PRT17	SA3	L.SYMTAB		COMPASS	4998
	5120003410		SA2	O.SYMTAB		COMPASS	4999
10207	0303010026		ZR	X3,PRTX	IF SYMBOL TABLE IS NOW EMPTY	COMPASS	5000
	5202777775		SA0	X2-2	(A0) = TABLE ADDRESS	COMPASS	5001
10210	63730		SB7	X3	N = LENGTH	COMPASS	5002
	63630		SB6	X3	M = N	COMPASS	5003
	7150000002		SX5	2		CP096A	301
10211	76060	PRT18	SX0	B6	M = M/2	COMPASS	5004
	21002		AX0	2		COMPASS	5005
	20001		LX0	1		COMPASS	5006
	63600		SB6	X0		COMPASS	5007
10212	0460010224		ZR	B6,PRT22	IF M = 0	COMPASS	5008
	67476		SB4	B7-B6	K = N - M	COMPASS	5009
	66311		SB3	B1+B1	J = 1	COMPASS	5010
10213	6123000000		SB2	B3+	I = J	COMPASS	5011
10214	66526	PRT20	SB5	B2+B6	L = I + M	CP096A	302
	74102		SX1	A0+B2		COMPASS	5013
	74205		SX2	A0+B5		CP096A	303
	53310		RX3	X1	A(I)	CP096A	304
10215	53420		RX4	X2	A(L)	CP096A	305
	37643		IX6	X4-X3		CP096A	306
	0326010222		PL	X6,PRT21	IF A(L) \ A(I)	CP096A	307
10216	10644		BX6	X4	INTERCHANGE A(L) AND A(I)	COMPASS	5017
	22703		LX7	X3		CP096A	308
	53610		WX6	X1		CP096A	309
	53720		WX7	X2		CP096A	310
10217	73111		SX1	X1+B1	INTERCHANGE SECOND WORDS OF ENTRIES	CP096A	311
	73221		SX2	X2+B1		CP096A	312
	53310		RX3	X1		CP096A	313
	53420		RX4	X2		CP096A	314
						CP096A	315

10220	67226		SB2	B2-B6	I = I - M	COMPASS	5028	
	10633		BX6	X3		CP096A	316	
	22704		LX7	X4		CP096A	317	
		53620	WX6	X2		CP096A	318	
10221	53710		WX7	X1		CP096A	319	
	07020	10214	GT	B2,PRT20	IF I > 0	COMPASS	5029	
10222	63353		PRT21	SB3	B3+X5	J = J + 1	CP096A	320
	66230		SB2	B3	I = J	CP096A	321	
	06430	10214	LE	B3,B4,PRT20	IF J @ K	CP096A	322	
10223	04000	10211	EQ	PRT18	LOOP	COMPASS	5032	
						COMPASS	5033	
	*			OUTPUT	CROSS REFERENCE TABLE.	COMPASS	5034	
						COMPASS	5035	
10224	76600		PRT22	SX6	B0	QUAL VALUE	COMPASS	5036
	51600	03112	SA6	QVAL			COMPASS	5037
							COMPASS	5038
10225	51300	03447	PRT23	SA3	L.SYMTAB		COMPASS	5039
	51200	03410	SA2	O.SYMTAB			COMPASS	5040
10226	43600		MX6	0		CMP042	108	
	51600	03476	SA6	L.MEMORY		CMP042	109	
10227	51600	04053	SA6	LOSTREF		CMP042	110	
	03030	10026	ZR	X3,PRTX	IF SYMBOL TABLE EMPTY	COMPASS	5041	
10230	72737	77775	SX7	X3-2		COMPASS	5042	
	72620	00002	SX6	X2+2		COMPASS	5043	
10231	54730		SA7	A3		COMPASS	5044	
	54620		SA6	A2		COMPASS	5045	
	51000	00055	SA0	1R		COMPASS	5046	
10232	43014		MX0	12		COMPASS	5047	
	53120		RX1	X2		CP096A	323	
	51400	03112	SA4	QVAL	CHECK FOR QUALIFIER CHANGE	COMPASS	5049	
10233	11601		BX6	X0*X1		COMPASS	5050	
	13446		BX4	X4-X6		COMPASS	5051	
	03040	10257	ZR	X4,PRT27	IF NO CHANGE	COMPASS	5052	
						COMPASS	5053	
	*			INDICATE	QUALIFIER CHANGE.	COMPASS	5054	
						COMPASS	5055	
10234	54640		SA6	A4		COMPASS	5056	
	51200	03412	SA2	O.QVTAB	SET QUALIFIER NAME	COMPASS	5057	
	20614		LX6	12		COMPASS	5058	
10235	36126		IX1	X2+X6		COMPASS	5059	
	03060	10237	ZR	X6,PRT24	IF QUAL = 0	COMPASS	5060	
10236	52117	77776	SA1	X1-1		COMPASS	5061	
	43614		MX6	-48		CMP19	105	
	15616		BX6	-X6*X1		CMP19	106	
10237	51600	03622	PRT24	SA6	SUBNAME	COMPASS	5063	
	10166		BX1	X6		COMPASS	5064	
10240	01000	06262	RJ	LJUST		COMPASS	5065	
10241	51600	03676	SA6	LINE+3		COMPASS	5066	
	74661		SX6	A6+B1		COMPASS	5067	
10242	51600	04065	SA6	LLINE		COMPASS	5068	
	51100	04333	SA1	=H*SYMBOL	QUALIFIER =*	COMPASS	5069	
10243	54211		SA2	A1+B1		COMPASS	5070	
	10611		BX6	X1		COMPASS	5071	
	22702		LX7	X2		COMPASS	5072	
10244	51600	03674	SA6	LINE+1		COMPASS	5073	
	54761		SA7	A6+B1		COMPASS	5074	
10245	51100	03602	SA1	LPCNT	CHECK LINE NUMBER	COMPASS	5075	

10246	37212	5120000123	SA2	CP.PS	PAGE SIZE	CPSA125	52
			IX2	X1-X2	CHECK IF END OF PAGE	F4810A	180
		6272000007	SB7	X2+7		F4810A	181
10247	0770010252		NG	B7,PRT25	IN NOT END OF PAGE	COMPASS	5077
		5120003073	SA2	PSIZE	FORCE EJECT	COMPASS	5078
10250	0302010252		ZR	X2,PRT25	IF NO EJECT	COMPASS	5079
		36712	IX7	X1+X2		COMPASS	5080
		54710	SA7	A1		COMPASS	5081
10251	0400010253		EQ	PRT26		COMPASS	5082
10252	7100000004	PRT25	SX0	4	LIST 4 BLANK LINES	COMPASS	5083
		0100007505	RJ	LBL		COMPASS	5084
10253	0100007732	PRT26	RJ	LISTL		COMPASS	5085
10254	7100000002		SX0	2	LIST 2 BLANK LINES	COMPASS	5086
		0100007505	RJ	LBL		COMPASS	5087
10255	5120003410		SA2	O.SYMTAB		COMPASS	5088
		7222777775	SX2	X2-2		CP096A	324
10256	53120		RX1	X2		CP096A	325
		5100000055	SA0	1R		COMPASS	5090
		43014	MX0	12		COMPASS	5091
						COMPASS	5092
		*		LIST SYMBOL AND VALUE.		COMPASS	5093
						COMPASS	5094
10257	15110	PRT27	BX1	-X0*X1		COMPASS	5095
		43066	MX0	54		COMPASS	5096
		20122	LX1	18		COMPASS	5097
		74600	SX6	A0		COMPASS	5098
10260	5160003632		SA6	OCTAL+7		COMPASS	5099
		15610	BX6	-X0*X1	STORE SYMBOL NAME	COMPASS	5100
10261	20106	PRT28	LX1	6		COMPASS	5101
		54661	SA6	A6+B1		COMPASS	5102
		15610	BX6	-X0*X1		COMPASS	5103
10262	0316010261		NZ	X6,PRT28	STOP AT END OF SYMBOL	COMPASS	5104
		73221	SX2	X2+B1		CP096A	326
		53120	RX1	X2	FETCH EQUIVALENT	CP096A	327
10263	10611		BX6	X1		COMPASS	5106
		20635	LX6	29		COMPASS	5107
		0326010320	PL	X6,PRT32	IF SYMBOL IS UNDEFINED	COMPASS	5108
10264	10722		BX7	X2	SAVE CONTENTS OF X2	CPSA200	6
		5170004066	SA7	P2TEMP		CPSA200	7
		43047	MX0	-21	STORE 21-BIT DEFINITION	F4820	177
10265	15110		BX1	-X0*X1	CALL PACK0(VALUE,23,0)	F4820	178
		7120000031	SX2	25		CPS0325	6
		43300	MX3	0		F4820	180
10266	0100007773		RJ	PACK0		F4820	181
10267	5120004066		SA2	P2TEMP		CPSA200	8
		53120	RX1	X2		CPSA200	9
		43066	MX0	54		COMPASS	5124
10270	10211		BX2	X1		COMPASS	5125
		20234	LX2	28		COMPASS	5126
		74600	SX6	A0		COMPASS	5127
10271	5150004335		SA5	=9REXT*EXTERNAL*		COMPASS	5128
		0332010310	NG	X2,PRT31	IF EXTERNAL	COMPASS	5129
10272	20273		LX2	59		COMPASS	5130
		0322010276	PL	X2,PRT30A	IF NOT SYSTEXT	CMP30	2231
		43371	MX3	-3		CMP30	2232
10273	21203		AX2	3		CMP30	2233
		15323	BX3	-X3*X2	EXTRACT SYSTEXT ORDINAL	CMP30	2234

	10274	11502	5223000161		SA2	CP.STEXT+X3		CMP30	2235
					BX5	X0*X2	GET OVERLAY NAME	CMP30	2236
			0315010310		NZ	X5,PRT31		CMP30	2237
1	10275	5253000171			SA5	CP.LIB+X3	IF NONE, USE FILE NAME	CMP30	2238
2			0400010310		EQ	PRT31		CMP30	2239
3	10276	21125		PRT30A	AX1	21	FIND RELOCATION	CMP30	2240
4			43264		MX2	52		COMPASS	5134
5			15312		BX3	-X2*X1		COMPASS	5135
6			20163		LX1	51		COMPASS	5136
7	10277	0321010300		+	PL	X1,*+1		COMPASS	5137
8			7160000046		SX6	1R-		COMPASS	5138
9	10300	74500			SX5	A0		COMPASS	5139
10			0303010310		ZR	X3,PRT31	IF ABSOLUTE	COMPASS	5140
11	10301	5140003166			SA4	LLB		CMP30	2241
12			5150004336		SA5	=9RLCMLOCAL*		CMP30	2242
13	10302	5120003411			SA2	0.USETAB		COMPASS	5141
14			5110003153		SA1	UI		RSM4159	5
15	10303	36221			IX2	X2+X1	BASE ADDRESS OF BLOCK GROUP	RSM4159	6
16			20330		LX3	24		COMPASS	5142
17			13443		BX4	X4-X3		CMP30	2243
18	10304	0304010310			ZR	X4,PRT31	IF LCM LOCAL	CMP30	2244
19			43163		MX1	-9		CMP30	2245
20	10305	5222000002			SA2	X2+2		COMPASS	5144
21			20130		LX1	24		CMP30	2246
22	10306	15421		+	BX4	-X1*X2	SEARCH USE TABLE	CMP30	2247
23			37743		IX7	X4-X3		COMPASS	5147
24			5022000004		SA2	A2+4		CMP30	2248
25	10307	0317010306			NZ	X7,*-1		COMPASS	5149
26			5052777771		SA5	A2-6	GET BLOCK NAME	CMP30	2249
27	10310	5160003656		PRT31	SA6	OCTAL+27		COMPASS	5150
28			43306		MX3	6	LEFT JUSTIFY BLOCK NAME	COMPASS	5151
29			74200		SX2	A0		COMPASS	5152
30	10311	0315010312		+	NZ	X5,*+1		COMPASS	5153
31			7150005050		SX5	2R//		COMPASS	5154
32	10312	10755			BX7	X5		COMPASS	5155
33			21774		AX7	60		COMPASS	5156
34			13557		BX5	X5-X7		COMPASS	5157
35	10313	11735		+	BX7	X3*X5		COMPASS	5158
36			20506		LX5	6		COMPASS	5159
37			0307010313		ZR	X7,*		COMPASS	5160
38	10314	15650			BX6	-X0*X5		COMPASS	5161
39	10315	54661		+	SA6	A6+B1		COMPASS	5162
40			20506		LX5	6		COMPASS	5163
41			15650		BX6	-X0*X5		COMPASS	5164
42	10316	0316010315			NZ	X6,*-1		COMPASS	5165
43			5110003410		SA1	0.SYMTAB		CP096A	331
44	10317	7221777776			SX2	X1-1		CP096A	332
45			0400010321		EQ	PRT33		COMPASS	5166
46								COMPASS	5167
47	10320	7160000025		PRT32	SX6	1RU		COMPASS	5168
48			5160003625		SA6	OCTAL+2		COMPASS	5169
49	10321	53120		PRT33	RX1	X2	SYMBOL EQUIVALENCE	CP096A	333
50			21152		AX1	42		COMPASS	5171
51			10611		BX6	X1		COMPASS	5172
52	10322	5160004066			SA6	P2TEMP	CHAIN ADDRESS	COMPASS	5174
53								COMPASS	5176
54	10323	5150004066		PRT34	SA5	P2TEMP		COMPASS	5177
55									
56									
57									
58									
59									
60									

	10324	0305010343	5120003436	SA2	0.REFTAB		COMPASS	5178
			36325	ZR	X5,PRT38	IF END OF CHAIN	COMPASS	5179
	10325	5213777776	22701	IX3	X2+X5		COMPASS	5180
			21752	SA1	X3-1		COMPASS	5181
				LX7	X1	SET NEXT LINK	COMPASS	5182
	10326	54750		AX7	42		COMPASS	5183
		0307010331		SA7	A5		COMPASS	5184
		36327		ZR	X7,PRT35	IF END OF CHAIN	COMPASS	5185
	10327	5233777776		IX3	X2+X7	READ NEXT ENTRY	COMPASS	5186
		13631		SA3	X3-1		COMPASS	5187
		43022		BX6	X3-X1	COMPARE ENTRIES	COMPASS	5188
	10330	15660		MX0	18		COMPASS	5189
		0306010323		BX6	-X0*X6		COMPASS	5190
	10331	5120003176	PRT35	ZR	X6,PRT34	IF IDENTICAL ENTRIES	COMPASS	5191
				SA2	XR		COMPASS	5192
		0302010336		ZR	X2,PRT36	IF ONLY ADDRESS TO XREF	COMPASS	5193
	10332	10711		BX7	X1		COMPASS	5194
		54751		SA7	A5+B1	SAVE ENTRY (P2TEMPA)	COMPASS	5195
		0100007420		RJ	CONREF	CONVERT PAGE/LINE	COMPASS	5196
	10333	5100000035		ADDWORD	MEMORY		COMPASS	5197
	10334	5120003176		SA2	XR		COMPASS	5198
		0332010323		NG	X2,PRT34	IF ONLY PAGE/LINE	COMPASS	5199
	10335	5110004067		SA1	P2TEMPA		COMPASS	5200
		0400010340		EQ	PRT37	MAKE ADDRESS XREF ENTRY	COMPASS	5201
	10336	43066	PRT36	MX0	54		COMPASS	5202
		15310		BX3	-X0*X1		COMPASS	5203
		7223777763		SX2	X3-1RL		COMPASS	5204
	10337	0302010323		ZR	X2,PRT34	IF DEFINING ENTRY, LOOP	COMPASS	5205
	10340	0100007412	PRT37	RJ	CONADD	CONVERT ADDRESS	COMPASS	5206
	10341	5100000035		ADDWORD	MEMORY		COMPASS	5207
	10342	0400010323		EQ	PRT34	LOOP	COMPASS	5208
							COMPASS	5209
	10343	5110003476	PRT38	SA1	L.MEMORY	PRINT TABLE OF ENTRIES	COMPASS	5210
		0311010346		NZ	X1,PRT39	IF ENTRIES IN TABLE	COMPASS	5211
	10344	0100007732		RJ	LISTL		COMPASS	5212
	10345	0400010225		EQ	PRT23	LOOP	COMPASS	5213
							COMPASS	5214
			*		LIST TABLE OF REFERENCES.		COMPASS	5215
							COMPASS	5216
	10346	7261000007	PRT39	SX6	X1+7	CALCULATE NUMBER OF ROWS	COMPASS	5217
		21603		AX6	3		COMPASS	5218
	10347	5160004066		SA6	P2TEMP	NROWS	COMPASS	5219
		54661		SA6	A6+B1	INCREMENT	COMPASS	5220
		43700		MX7	0		COMPASS	5221
	10350	54761		SA7	A6+B1	INDEX	COMPASS	5222
		5110003602		SA1	LPCNT	CHECK IF ROOM ON PAGE	COMPASS	5223
		36216		IX2	X1+X6		COMPASS	5224
	10351	5130000123		SA3	CP.PS	PAGE SIZE	F4810A	182
		37123		IX1	X2-X3		F4810A	183
	10352	0331010354		NG	X1,PRT40	IF ROOM ON PAGE	F4810A	184
		7263000005		SX6	X3+5	ELSE, FORCE EJECT	F4810A	185
	10353	54610		SA6	A1		COMPASS	5228
							COMPASS	5229
	10354	5110004066	PRT40	SA1	P2TEMP	DECREMENT ROW COUNT	COMPASS	5230
		7261777776		SX6	X1-1		COMPASS	5231
	10355	0301010374		ZR	X1,PRT44	IF END OF TABLE	CMP042	111
		54610		SA6	A1		COMPASS	5233

		54211	SA2	A1+B1		COMPASS	5234
10356	54321		SA3	A2+B1		COMPASS	5235
	73631		SX6	X3+B1	INCREMENT INDEX	COMPASS	5236
		5140003437	SA4	O.MEMORY		COMPASS	5237
10357	5150003476		SA5	L.MEMORY		COMPASS	5238
		54630	SA6	A3		COMPASS	5239
		63640	SB6	X4	TABLE ADDRESS	COMPASS	5240
10360	63756		SB7	X5+B6	TABLE END	COMPASS	5241
	63520		SB5	X2	INCREMENT	COMPASS	5242
		63636	SB6	X3+B6	ENTRY ADDRESS	COMPASS	5243
		66400	SB4	B0	LINE INDEX	COMPASS	5244
10361	5110003176		SA1	XR		COMPASS	5245
		63310	SB3	X1		COMPASS	5246
		73661	SX6	X6+B1	INCREMENT INDEX	COMPASS	5247
10362	0531010367		NE	B3,B1,PRT42	IF NOT BOTH	COMPASS	5248
		54660	SA6	A6		COMPASS	5249
		66555	SB5	B5+B5		COMPASS	5250
10363	56160	PRT41	SA1	B6	READ ENTRIES	COMPASS	5251
	56261		SA2	B6+B1		COMPASS	5252
	10611		BX6	X1		COMPASS	5253
	22702		LX7	X2		COMPASS	5254
10364	5164003673		SA6	LINE+B4		COMPASS	5255
	54761		SA7	A6+B1		COMPASS	5256
	66665		SB6	B6+B5		COMPASS	5257
10365	6144000002		SB4	B4+2		COMPASS	5258
	0767010363		LT	B6,B7,PRT41	LOOP	COMPASS	5259
10366	74671		SX6	A7+B1		COMPASS	5260
	0400010372		EQ	PRT43		COMPASS	5261
10367	56160	PRT42	SA1	B6	READ ENTRY	COMPASS	5262
	10611		BX6	X1		COMPASS	5263
		5164003673	SA6	LINE+B4		COMPASS	5264
10370	66665		SB6	B6+B5		COMPASS	5265
	66441		SB4	B4+B1		COMPASS	5266
		0767010367	LT	B6,B7,PRT42	LOOP	COMPASS	5267
10371	74661		SX6	A6+B1		COMPASS	5268
10372	5160004065	PRT43	SA6	LLINE		COMPASS	5269
	0100007732		RJ	LISTL	LIST LINE	COMPASS	5270
10373	0400010354		EQ	PRT40	LOOP FOR NEXT LINE	COMPASS	5271
10374	5110004053	PRT44	SA1	LOSTREF		CMP042	112
		5120003476	SA2	L.MEMORY		CMP042	113
10375	0301010225		ZR	X1,PRT23	IF NO LOST REFERENCES	CMP042	114
	36612		IX6	X1+X2		CMP042	115
		54620	SA6	A2		CMP042	116
10376	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042	117
10377	0400010225		EQ	PRT23		CMP042	118

1412THE

* COMPASS - MAIN CONTROL

CPSA097 7

CMP30 2252

CMP30 2253

CMP30 2254

CMP30 2255

CPS064 152

CP139CP 158

CMP30 2257

CPSA141 6

CPSA141 7

CPSA141 8

CMP30 2259

CMP30 2260

CPSA125 53

CMP30 2261

CMP30 2262

CMP30 2263

CMP30 2264

CMP30 2265

CMP30 2266

CMP30 2267

CMP30 2268

CMP30 2269

CMP30 2270

CP139CP 159

CMP30 2271

CMP30 2272

CMP30 2273

CMP30 2274

CMP30 2275

CMP30 2276

CMP30 2277

CMP30 2278

CPSA138 5

CMP30 2280

CPSA138 6

CPSA138 7

CPSA138 8

CPSA138 9

CPSA138 10

CPSA138 11

CPSA138 12

CPSA138 15

CPS0338 8

CPSA138 16

CPSA138 17

CPS0338 9

CPSA138 20

CPS0338 10

CPSA138 21

CPS0338 11

CPSA138 22

CMP30 2283

CPSA168 11

CMP30 2284

CP139CP 160

CPSA168 12

* TEST FOR END OF ASSEMBLY BATCH.

SA1 EOFINP

SA2 CP.BATCH

NZ X1,CMP2 IF END OF SOURCE INPUT

LX2 59-11

PL X2,CMP1 IF NOT CALLED BY A COMPILER

SA1 CP.CARD

SA2 =1H

SA3 A1+B1 CHECK FOR *IDENT*

MX0 36

SA4 =6LIDENT

IX6 X1-X2

BX7 X0*X3

NZ X6,CMP1A IF COLUMNS 1-10 NOT ALL BLANKS

BX7 X7-X4

NZ X7,CMP1A IF COLUMNS 11-16 NOT *IDENT*

EQ CMP1

CMP1A SA1 CP.LISTF

ZR X1,CMP3 IF NO LISTING

RM IFEQ CP#RM,0

WEOR 0

CHECK 0

EQ CMP3

RM ELSE

WEOR 0

CHECK 0

EQ CMP3

RM ENDIF

CMP2 MX6 0 SIGNAL END OF SOURCE INPUT

SA2 CP.BATCH

SA6 CP.CARD

MX7 1

LX2 59-11

10426	5170000130		SA7	CP.IFORM		CP139CP	161
	0332010417		MI	X2,CMP1A	IF CALLED BY FTN, DONT CLOSE EVERYTHING.	CPSA168	13
						CMP30	2285
			IFNE	CP#RM,0,1		CMP30	2286
			CLOSEM	I,N	CLOSE INPUT FILE	CMP30	2287
						CMP30	2288
10427	5110000116		SA1	CP.LISTF		CMP30	2289
	0301010437		ZR	X1,CMP3	IF NO LISTING	CMP30	2290
		RM	IFEQ	CP#RM,0		F4810A	186
10430	5110003074		SA1	FRSTLIN	CHECK IF PRINT DENSITY WAS CHANGED	CPS236	47
	0301010434		ZR	X1,CMP2B	IF PRINT DENSITY=DEFAULT	CPSA117	5
10431	5110003075		SA1	LASTLIN		CPS236	48
	0301010434		ZR	X1,CMP2B	IF PRINT DENSITY AT DEFAULT	CPSA265	53
10432	64610		WRITEH	0,A1,1	ELSE RESTORE PRINT DENSITY TO DEFAULT	F4810A	189
10434		CMP2B	BSS	0		CPSA117	6
10434	7120000221		WEOR	0		CMP30	2291
						CMP30	2292
		RM	ELSE			F4810A	191
			SA1	FRSTLIN		CPS236	49
			ZR	X1,CMP2A	IF PRINT DENSITY=DEFAULT	F4810A	193
			SA1	LASTLIN		CPSA265	54
			ZR	X1,CMP2A	IF PRINT DENSITY AT DEFAULT	CPSA265	55
			PUT	0,LASTLIN,10	ELSE,RESTORE PRINT DENSITY TO DEFAULT	F4810A	194
		CMP2A	BSS	0		F4810A	195
			CLOSEM	0,N	CLOSE OUTPUT FILE	CMP30	2294
		RM	ENDIF			F4810A	196
						CMP30	2295
10436	7120000221		CHECK	0		CMP30	2296
10437	5110000117		SA1	CP.PAGE		CMP30	2297
	0331010441	CMP3	MI	X1,CMP4	IF NOT PROPAGATING PAGE NUMBERING	CMP30	2298
10440	5120003216		SA2	PGCNT		CMP30	2299
	10622		BX6	X2	UPDATE COMMUNICATION WORD	CMP30	2300
	54610		SA6	A1		CMP30	2301
						CMP30	2302
		*	CLOSE	FILES.		CMP30	2303
						CMP30	2304
		RM	IFEQ	CP#RM,0		CMP30	2305
						CMP30	2306
10441	5110003001		SA1	S+1		CMP30	2307
	0321010445	CMP4	PL	X1,CMP4A	IF SCRATCH IS MASS STORAGE	CMP30	2308
10442	7120003000		REWIND	S		CMP30	2309
10444	0400010447		EQ	CMP5		CMP30	2310
10445	7120003000		RETURN	S		CMP30	2311
10447	5110003021		SA1	R+1		CMP30	2312
	0321010453	CMP4A CMP5	PL	X1,CMP5A	IF REFERENCE IS MASS STORAGE	CMP30	2313
10450	7120003020		REWIND	R		CMP30	2314
10452	0400010455		EQ	CMP6		CMP30	2315
10453	7120003020		RETURN	R		CMP30	2316
10455	5110000231		SA1	E		CMP30	2317
	5120000233	CMP6	SA2	E+2	CHECK ERROR LISTING FILE	CPS009	1
10456	54321		SA3	A2+B1		CPS009	2
	20170		LX1	59-3		CPS009	3
	37423		IX4	X2-X3		CPS009	4
10457	0331010460		MI	X1,*+1	IF ANYTHING WAS WRITTEN	CPS009	5
	0304010466	+	ZR	X4,CMP7	IF BUFFER EMPTY	CPS009	6
10460	5110003074		SA1	FRSTLIN		CPS236	50
	0301010464		ZR	X1,CMP6A	IF PRINT DENSITY IS NOT 8 LPI	CPS236	51

10461	5110003075		SA1	LASTLIN		CPS236	52
	0301010464		ZR	X1,CMP6A	IF PRINT DENSITY AT DEFAULT	CPSA265	56
10462	64610		WRITEH	E,A1,1	RESTORE PRINT DENSITY TO DEFAULT	F4810A	199
10464		CMP6A	BSS	0		F4810A	200
10464	7120000231		WRITER	E,RECALL		CMP30	2319
10466	7120000241	CMP7	RECALL	B	WAIT FOR BINARY OUTPUT COMPLETE	CMP30	2320
10467	7120003000		RECALL	S		CPS110	5
10470	7120003020		RECALL	R		CPS110	6
						CMP30	2321
		RM	ELSE			CMP30	2322
						CMP30	2323
		CMP4	FETCH	S,OC,X1		CMP30	2324
			SX6	X1-#YES#		CMP30	2325
			NZ	X6,CMP5	IF SCRATCH FILE NOT OPEN	CMP30	2326
			SA1	SCR+1		CMP30	2327
			PL	X1,CMP4A	IF SCRATCH IS MASS STORAGE	CMP30	2328
			CLOSEM	S,R		CMP30	2329
			EQ	CMP5		CMP30	2330
		CMP4A	CLOSEM	S,U		CMP30	2331
		CMP5	FETCH	R,OC,X1		CMP30	2332
			SX6	X1-#YES#		CMP30	2333
			NZ	X6,CMP6	IF REFERENCE FILE NOT OPEN	CMP30	2334
			SA1	REF+1		CMP30	2335
			PL	X1,CMP5A	IF REFERENCE IS MASS STORAGE	CMP30	2336
			CLOSEM	R,R		CMP30	2337
			EQ	CMP6		CMP30	2338
		CMP5A	CLOSEM	R,U		CMP30	2339
		CMP6	SA1	E		CMP30	2340
			ZR	X1,CMP7	IF NO ERROR FILE	CMP30	2341
			SA1	CP.BATCH		CPSA168	14
			LX1	59-11		CPSA168	15
			MI	X1,CMP7	IF CALLED BY FTN, DONT CLOSE E FILE.	CPSA168	16
			SA1	FRSTLIN		CPS236	53
			ZR	X1,CMP6A	IF PRINT DENSITY IS NOT 8 LPI	CPS236	54
			SA1	LASTLIN		CPSA265	57
			ZR	X1,CMP6A	IF PRINT DENSITY AT DEFAULT	CPSA265	58
			PUT	E,LASTLIN,10	ELSE, RESTORE PRINT DENSITY TO DEFAULT	F4810A	203
		CMP6A	BSS	0		F4810A	204
			CLOSEM	E,N		CMP30	2342
			CHECK	E		CMP30	2343
			SA1	EOFINP		CPS028	275
			SA2	E		CPS028	276
			SA3	0		CPS028	277
			BX6	X2-X3		CPS028	278
			NZ	X1,CMP7	IF END OF INPUT	CPS028	279
			NZ	X6,CMP7	IF LISTING FILES NOT SAME FILE NAMES	CPS028	280
			OPENM	0,OUTPUT,N	RE-OPEN LONG LISTING FILE	CPS028	281
		CMP7	FETCH	B,OC,X1		CMP30	2344
			SB7	X1-#YES#		CMP30	2345
			NZ	B7,CMP7A	IF BINARY NOT OPEN	CMP30	2346
			SA2	CP.BATCH		CPSA168	17
			LX2	59-11		CPSA168	18
			MI	X2,CMP7A	IF CALLED BY FTN, LET FTN CLOSE THIS FILE.	CPSA168	19
			SA1	EOFINP		CMP30	2349
			ZR	X1,CMP7A	IF NOT END OF SOURCE INPUT	CMP30	2350
			CLOSEM	B,N		CMP30	2352
			CHECK	B		CMP30	2353

CMP7A BSS 0
RM ENDIF

CMP30 2354
CMP30 2355
CMP30 2356

10471 5110003070 SA1 COMPPS
10611 BX6 X1
10472 5160000123 SA6 CP.PS RESTORE COMPILER PAGE SIZE
5110003067 SA1 COMPPD
10473 10611 BX6 X1
5160000122 SA6 CP.PD RESTORE COMPILER PRINT DENSITY
10474 5110003071 SA1 COMPPW
10611 BX6 X1
10475 5160000124 SA6 CP.PW RESTORE COMPILER PRINT WIDTH
* RESTORE ECS/LCM FIELD LENGTH.
5110000204 SA1 CP.NFLL NOMINAL FL
10476 5120000203 SA2 CP.AFLL ACTUAL FL
37712 IX7 X1-X2
10611 BX6 X1
10477 0307010505 ZR X7,CMP7B IF NO CHANGE
54620 SA6 A2 UPDATE (CP.AFLL)
20636 LX6 30
10500 0311010501 + NZ X1,*+1
43636 MX6 30 -0 = ZERO FIELD LENGTH
10501 5160003054 + SA6 LCMEND
7160150515 MEMORY ECS,LCMEND,R REQUEST FIELD LENGTH
10505 CMP7B BSS 0
10505 0100005656 RJ RCS RESTORE COMPILER SPACE IF NECESSARY
10506 0400000114 EQ CP.STOP EXIT TO (0,0) OVERLAY

CPS028 282
F4810A 205
F4810A 206
F4810A 207
F4810A 208
F4810A 209
F4810A 210
CPSA265 59
CPSA265 60
CPSA265 61
CPSA265 62
CPS028 283
CPS028 284
CPS028 285
CPS028 286
CPS028 287
CPS028 288
CPS028 289
CPS028 290
CPS028 291
CPS028 292
CPS028 293
CPS028 294
CPS028 295
CPS028 296
CMP30 2377
F4810B 163
CMP30 2378

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			RM	ZR OPENM ENDIF	X1,CMP9 0,I-0,N	IF NO LONG LISTING	CPS064 CPSA119 CPS064	192 5 194
1							CPS064	195
2	10533	0100010607	CMP9	RJ	IOT	INITIALIZE OP CODE TABLE	CPS064	196
3	10534	0100010723		RJ	LST	LOAD SYSTEM TEXT	CPS064	197
4	10535	0100011174		RJ	OPF	OPEN FILES	CPS064	198
5							CPS064	199
6			OVL	IFNE	OVERLAY,0		CPS064	200
7	10536	5110005567		SA1	OVLA	LOAD SECONDARY OVERLAY	CPS064	201
8		54211		SA2	A1+B1		CPS064	202
9	10537	0100005544		RJ	OVL		CPS064	203
10			OVL	ENDIF			CPS064	204
11							CPS064	205
12	10540	5110000141		SA1	CP.CARD		CPS064	206
13		7120000211		SX2	I		CPS064	207
14	10541	0311010401		NZ	X1,CMP1	IF SOURCE CARD READY	CPS064	208
15		0331010401		MI	X1,CMP1		CPS064	209
16	10542	54010		SA0	A1		CPS064	210
17		0100005223		RJ	CIF	CHECK INPUT FORMAT	CPS064	211
18	10543	5110003060		SA1	EOFINP		CPS064	212
19		0301010401		ZR	X1,CMP1	IF INPUT PRESENT	CPS064	213
20	10544	7110010551		MESSAGE	CPMA,,R		CPS064	214
21	10546	76610		SX6	B1	SET ERR FLAG	CPSA141	9
22		5160003147		SA6	ERCNT		CPSA141	10
23	10547	0400010404		EQ	EXITP2	QUIT	CPSA141	11
24	10550	00000000000000000000	INPRES	DATA	0	INPUT PRESENCE FLAG	CPSA141	12
25							CPS064	216
26	10551	55551116202524550611	CPMA	DATA	C* INPUT FILE EMPTY OR MISPOSITIONED.*		CPS064	217
27	10555	55111620252455061114	CPMB	DATA	C* INPUT FILE RECORD TYPE NOT ALLOWED.*		CPSA229	15
28								
29								
30								
31								
32			**		WHEN THE CROSS-REFERENCE TABLE HAS OVERFLOWED, THE		CPS064	219
33			*		FOLLOWING SPACE IS USED AS WORKING STORAGE DURING		CPS064	220
34			*		PRINTING OF THE CROSS-REFERENCE TABLE, AND THEN THE		CPS064	221
35			*		SECONDARY OVERLAY IS RELOADED. SEE SUBROUTINE *PRT*.		CPS064	222
36							CPS064	223
37							CPS064	224
38	10561	00000000000000000000	PRTA	DATA	0	OVERFLOW TO DISK FLAG	CPS064	225
39	10562		CBUF	BSS	0	END OF NON-OVERLAID AREA	CPS064	226
40	10562		TBUF	BSS	0	BUFFER FOR READING CROSS-REFERENCE TABLE	CPS064	227
41		11563	PRTB	EQU	TBUF+RBUFL	ORIGIN OF MANAGED TABLE AREA	CPS064	228
42			RM	IFNE	CP#RM,7		CPSA266	9
43				LIST	X		CPSA266	10
44								
45								
46								
47								
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** IOT - INITIALIZE OPCODE TABLE.

CPS064 261

CPS064 262

CPS064 263

10607	0000000000	IOT	PS	RETURN EXIT	CPS064	264	
10610	7110000400		MANAGE	OPTAB,2*NOPCT	ALLOCATE BASIC TABLE AREA	CPS064	265
10612	36323		IX3	X2+X3		CPS064	266
	0100005250		RJ	CLS	CLEAR IT	CPS064	267
10613	7160001536		SX6	LGOPS-2		CPS064	268
	5130003254		SA3	EXVAL		CPS064	269
10614	5216011672	IOT1	SA1	OPS+X6	GET NEXT ENTRY	CPS064	270
	54211		SA2	A1+B1		CPS064	271
	54630		SA6	A3		CPS064	272
10615	0100005374		RJ	ENTOP	ENTER OPCODE TABLE	CPS064	273
10616	5130003254		SA3	EXVAL		CPS064	274
	7263777775		SX6	X3-2		CPS064	275
10617	0326010614		PL	X6,IOT1	LOOP	CPS064	276
	0400010607		EQ	IOT	RETURN	CPS064	277

** LGT - LOAD SYSTEM TEXT FROM A NON-LIBRARY FILE.

CPS064 279

* ENTRY (X7) = SYSTEM TEXT ORDINAL.

CPS064 280

* (X1) = OVERLAY NAME.

CPS064 281

* (X2) = BITS 17-00 OF (X1).

CPS064 282

* EXIT (X0) = 0 IF TEXT LOADED.

CPS064 283

CPS064 284

10620	0000000000	LGT	PS	RETURN EXIT	CPS064	285	
		RM	IFEQ	CP#RM,0	CPS064	286	
					CPS064	287	
			SA3	CP.LIB+X7	CPS064	288	
10621	5237000171		SX4	3	CPS064	289	
	7140000003		BX6	X1-X2	CPS064	290	
10622	13612		IX7	X3+X4	CPS064	291	
	36734		SA6	EXVAL	SAVE OVERLAY NAME	CPS064	292
	5160003254		SA7	G	STORE FILE NAME IN FET	CPS064	293
10623	5170010662		REWIND	G		CPS064	294
	7120010662		RJ	MTD	MOVE TABLES DOWN TO GET ROOM	CPS064	295
10625	0100005523		SA1	O.MEMORY		CPS064	296
10626	5110003437		SA2	O.ENDTAB		CPS064	297
	5120003440		SX0	X1	PRESET FAILURE RETURN	CPS064	298
10627	73010		IX6	X2-X1		CPS064	299
	37621		SA0	X6	AVAILABLE MEMORY	CPS064	300
	53060		READ	G		CPS064	301
10630	7120010662	LGT1	READW	G,X0,1	READ 7700 TABLE	CPS064	302
10632	63600	LGT2	MI	X1,LGT	IF EOF	CPS064	303
10634	0331010620		NZ	X1,LGT1	IF EOR	CPS064	304
	0311010630		SA2	X0		CPS064	305
10635	53200		LX2	18		CPS064	306
	20222		SX6	X2-770000B		CPS064	307
	7262007777		ZR	X6,LGT4	IF 7700 TABLE	CPS064	308
10636	0306010642		READW	G,X0,A0	SKIP TO EOR	CPS064	309
10637	63600	LGT3	ZR	X1,LGT3		CPS064	310
10641	0301010637		EQ	LGT1	TRY NEXT RECORD	CPS064	311
	0400010630		LX2	6		CPS064	312
10642	20206	LGT4				CPS064	313

CPS064 314

	7252777776		SX5	X2-1		CPS064	315
10643	0335010637		MI	X5,LGT3	IF ZERO-LENGTH TABLE	CPS064	316
	63600		READW	G,X0,1	GET RECORD NAME	CPS064	317
10645	5110003254		SA1	EXVAL		CPS064	318
	53200		SA2	X0		CPS064	319
	13612		BX6	X1-X2		CPS064	320
10646	0301010647		ZR	X1,LGT5	IF NO OVERLAY NAME SPECIFIED	CPS064	321
	0316010637		NZ	X6,LGT3	IF WRONG NAME	CPS064	322
10647	63600	LGT5	READW	G,X0,1		CPS064	323
10651	7255777776		SX5	X5-1	SKIP 7700 TABLE	CPS064	324
	0325010647		PL	X5,LGT5		CPS064	325
10652	53100		SA1	X0	CHECK OVERLAY HEADER	CPS064	326
	5120004340		SA2	=50000101BS36		CPS064	327
	13612		BX6	X1-X2		CPS064	328
10653	0316010637		NZ	X6,LGT3	IF NOT A (1,1) OVERLAY	CPS064	329
10654	63601	LGT6	READW	G,X0+B1,A0-B1	READ REMAINDER OF OVERLAY	F4810B	166
10656	76000		SX0	B0	INDICATE TEXT LOADED	F4810B	167
	0311010620		NZ	X1,LGT	IF ALL OF OVERLAY READ, RETURN	F4810B	168
	77061		SX0	B6-B1	(B6) = ADDRESS OF LAST WORD TRANSFERED	F4810B	169
10657	43100		MX1	0		F4810B	170
	0100005705		RJ	RFL	REQUEST FLINC WORDS MORE CENTRAL MEMORY	F4810B	171
10660	0303011116		ZR	X3,LST7A	IF REQUEST NOT COMPLETED, ABORT	F4810B	172
	5120003440		SA2	O.ENDTAB	ELSE SET UP TO CONTINUE	F4810B	173
10661	37120		IX1	X2-X0	AMOUNT OF SPACE AVAILABLE	F4810B	174
	53011		SA0	X1+B1	ADD 1 WORD	F4810B	175
	0400010654		EQ	LGT6	GO GET REST OF TEXT	F4810B	176
						CPS064	331
		RM	ELSE			CPS064	332
						CPS064	333
			SA3	CP.LIB+X7		CPS064	334
			BX6	X1-X2		CPS064	335
			LX7	X3		CPS064	336
			SA6	EXVAL	SAVE OVERLAY NAME	CPS064	337
			SA7	GDUM	STORE FILE NAME IN FIT	CPS064	338
			RJ	MTD	MOVE TABLES DOWN TO GET ROOM	CPS064	339
			SX1	LGDUM		CPS064	340
			SX2	GDUM		CPS064	341
			SX3	G	RE-INITIALIZE FIT	CPS064	342
			RJ	MOVE		CPS064	343
			SA1	O.MEMORY		CPS064	344
			SA2	O.ENDTAB		CPS064	345
			IX3	X2-X1	AVAILABLE WORDS	CPS064	346
			IX4	X3+X3		CPS064	347
			LX3	3	MULTIPLY BY 10	CPS064	348
			IX4	X3+X4		CPS064	349
			STORE	G,MRL=X4	SET MAXIMUM RECORD LENGTH	CPS064	350
			STORE	G,WSA=X1	WORKING STORAGE ADDRESS	CPS064	351
			STORE	G,DX=LGT8	END OF DATA EXIT	CPS064	352
			OPENM	G,INPUT,R	OPEN THE FILE WITH REWIND	CPS064	353
			FETCH	G,RT,X2		CPS064	354
			SB7	X2-#ST#		CPS064	355
			SX6	#EOS#		CPS064	356
		+	NZ	B7,*+1	IF NOT *S* RECORDS	CPS064	357
			SX6	X6+#EOR#		CPS064	358
			SA6	G-1		CPS064	359
						CPS064	360
		LGT1	GETP	G,,10	GET FIRST WORD OF SECTION	CPS064	361

		SA1	O.MEMORY		CPS064	362
		SA2	X1		CPS064	363
		LX2	18		CPS064	364
1		SX6	X2-770000B		CPS064	365
2		ZR	X6,LGT5	IF 7700 TABLE	CPS064	366
3	LGT2	GETP	G,,10	SKIP REST OF RECORD	CPS064	367
4	LGT3	FETCH	G,FP,X2		CPS064	368
5		SX0	#EOI##EOP#		CPS064	369
6		BX3	X0*X2		CPS064	370
7		SA1	G-1		CPS064	371
8		NZ	X3,LGT4	IF EOI OR EOF	CPS064	372
9		BX4	X1*X2		CPS064	373
10		ZR	X4,LGT2	IF NOT END OF SECTION	CPS064	374
11		EQ	LGT1		CPS064	375
12	LGT4	CLOSEM	G,R	CLOSE WITH REWIND	CPS064	376
13		SX0	B1	INDICATE FAILURE	CPS064	377
14		EQ	LGT	RETURN	CPS064	378
15	LGT5	LX2	6		CPS064	379
16		SX7	X2	WORD COUNT	CPS064	380
17		IX0	X7+X7		CPS064	381
18		LX7	3	MULTIPLY BY 10	CPS064	382
19		IX4	X0+X7		CPS064	383
20		GETP	G,,X4	SKIP THE 7700 TABLE	CPS064	384
21		SA1	EXVAL		CPS064	385
22		SA2	O.MEMORY		CPS064	386
23		ZR	X1,LGT6	IF NO OVERLAY NAME SPECIFIED	CPS064	387
24		SA3	X2		CPS064	388
25		BX6	X3-X1		CPS064	389
26		NZ	X6,LGT2	IF WRONG NAME	CPS064	390
27	LGT6	GETP	G,,10	READ 5000 TABLE	CPS064	391
28		SA3	O.MEMORY		CPS064	392
29		SA2	=50000101BS36		CPS064	393
30		SA1	X3		CPS064	394
31		BX6	X1-X2		CPS064	395
32		NZ	X6,LGT2	IF NOT A (1,1) OVERLAY	CPS064	396
33		SX3	X3+B1		CPS064	397
34		SX4	10		CPS064	398
35		STORE	G,DX=LGT9	SET NEW DATA EXIT	CPS064	399
36		STORE	G,WSA=X3		CPS064	400
37		FETCH	G,MRL,X2		CPS064	401
38		IX1	X2-X4		CPS064	402
39		STORE	G,MRL=X1		CPS064	403
40	LGT6A	GETP	G,,X1	GET REMAINDER OF RECORD	F4810B	177
41		FETCH	G,FP,X1		CPS064	405
42		SX0	#EOR#		CPS064	406
43		BX6	X0*X1		CPS064	407
44		ZR	X6,LGT9+1	IF NOT AT EOR, CHECK FOR EOP OR EOI	F4810B	178
45		FETCH	G,PTL,X2		CPS064	409
46	LGT7	SX1	1S20/10+1		CPS064	410
47		BX4	X2	RECORD LENGTH IN CHARACTERS	CPS064	411
48		IX3	X1*X2		CPS064	412
49		AX3	20	RECORD LENGTH IN WORDS	CPS064	413
50		FETCH	G,WSA,X1		CPS064	414
51		IX3	X1+X3	ADJUST WSA FOR NEXT GET	CPS064	415
52		STORE	G,WSA=X3		CPS064	416
53		FETCH	G,MRL,X2		CPS064	417
54		IX1	X2-X4	REDUCE MRL	CPS064	418
55						
56						
57						
58						
59						
60						

		MI	X1,LGT10	IF NO MORE ROOM, GO GET MORE FL	F4810B	179	
		STORE	G,MRL=X1		CPS064	420	
		EQ	LGT6A		CPSA169	6	
1					CPS064	424	1
2	LGT8	PS		DATA EXIT FOR SKIPPING TO END OF SECTION	CPS064	425	2
3		EQ	LGT3	PROCESS OF END OF DATA	CPS064	426	3
4					CPS064	427	4
5	LGT9	PS		DATA EXIT FOR READING OVERLAY	CPS064	428	5
6		SA2	G-1		CPS064	429	6
7		FETCH	G,FP,X1		CPS064	430	7
8		SX0	#EOI#+#EOP#+X2		CPS064	431	8
9		BX6	X0*X1		CPS064	432	9
10		ZR	X6,LGT10	IF NOT THROUGH	F4810B	180	10
11		SX0	B0	INDICATE TEXT LOADED	F4810B	181	11
12		SA6	EXVAL		CPS064	433	12
13		CLOSEM	G,R	CLOSE THE FILE	CPS064	434	13
14		EQ	LGT	RETURN	F4810B	182	14
15					F4810B	183	15
16	LGT10	MX1	0		F4810B	184	16
17		RJ	RFL	REQUEST FLINC WORDS MORE CENTRAL MEMORY	F4810B	185	17
18		ZR	X3,LST7A	IF ALREADY AT MAXFL, ABORT	F4810B	186	18
19		FETCH	G,PTL,X2	GET NUMBER OF CHARACTERS TRANSFERED	F4810B	187	19
20		SX1	1S20/10+1		F4810B	188	20
21		BX4	X2	LENGTH IN CHARACTERS	F4810B	189	21
22		IX3	X1*X2		F4810B	190	22
23		AX3	20	LENGTH IN WORDS	F4810B	191	23
24		FETCH	G,WSA,X1	GET PREVIOUS WORKING STORAGE AREA ADDRESS	F4810B	192	24
25		IX3	X1+X3	ADJUST WORKING STORAGE AREA FOR NEXT READ	F4810B	193	25
26		STORE	G,WSA=X3	STORE NEW WSA IN FIT	F4810B	194	26
27		SA2	0.ENDTAB	END OF TABLE SPACE	F4810B	195	27
28		IX3	X2-X3	WORDS AVAILABLE	F4810B	196	28
29		IX4	X3+X3	MULTIPLY BY 10 TO GET NUMBER OF CHARACTERS	F4810B	197	29
30		LX3	3		F4810B	198	30
31		IX1	X3+X4		F4810B	199	31
32		STORE	G,MRL=X1	STORE NEW MAXIMUM RECORD LENGTH IN FIT	F4810B	200	32
33		EQ	LGT6A	GO GET REST OF RECORD	F4810B	201	33
34					F4810B	202	34
35	RM	ENDIF			F4810B	203	35
36					CPS064	442	36
37					CPS064	443	37
38	**			FET/FIT FOR SYSTEM TEXT LOADING FROM FILES.	CPS064	444	38
39					CPS064	445	39
40					CPS064	446	40
41	10662	0000000000000000000003	GET	FET ,GBUF,GBUFL,3	CPS064	447	41
42					CPS064	448	42
43		RM	IFEQ	CP#RM,0	CPS064	449	43
44	10662	G	EQU	GET	CPS064	450	44
45		RM	ELSE		CPS064	451	45
46			IFEQ	CP#RM,6,1	CPS064	452	46
47		G	FILE	F0=SQ,BT=C,RT=S,CM=NO,LT=UL,FET=GET,FWB=GBUF,BFS=GBUFL,	CPS064	453	47
48		,ERL=1			CPS064	454	48
49			IFEQ	CP#RM,7,1	CPS064	455	49
50		G	FILE	F0=SQ,BT=,RT=W,CM=NO,PD=INPUT	CPS064	456	50
51			BSSZ	GET+40B-*	CPS064	457	51
52					CPS064	458	52
53			IFEQ	CP#RM,6,1	CPS064	459	53
54							54
55							55
56							56
57							57
58							58
59							59
60							60

			GDUM ,ERL=1	FILE	F0=SQ,BT=C,RT=S,CM=NO,LT=UL,FET=GET,FWB=GBUF,BFS=GBUFL,	CPS064	460
						CPS064	461
				IFEQ	CP#RM,7,1	CPS064	462
1			GDUM	FILE	F0=SQ,BT=,RT=W,CM=NO,PD=INPUT	CPS064	463
2			LGDUM	EQU	*-GDUM	CPS064	464
3						CPS064	465
4			RM	ENDIF		CPS064	466
5							
6							
7							
8							
9			**	LLT -	LOAD LIBRARY TEXT.	CPS064	468
10			*	ENTRY	(X7) = SYSTEM TEXT ORDINAL.	CPS064	469
11			*		(X1) = OVERLAY NAME.	CPS064	470
12			*	EXIT	(X0) = 0 IF TEXT LOADED.	CPS064	471
13						CPS064	472
14						CPS064	473
15	10672	0000000000	LLT	PS	RETURN EXIT	CPS064	474
16	10673	5237000171		SA3	CP.LIB+X7	CPS064	475
17		10611		BX6	X1	CPS064	476
18		22703		LX7	X3	CPS064	477
19	10674	5160010720		SA6	LLTA	CPS064	478
20		5170010722		SA7	LLTA+2	CPS064	479
21	10675		LLT0	BSS	0	F4810B	204
22	10675	0100005523		RJ	MTD	CPS064	480
23	10676	5110003440		SA1	0.ENDTAB	F4810B	205
24		5120003437		SA2	0.MEMORY	F4810B	206
25	10677	37112		IX1	X1-X2	F4810B	207
26		7130020000		SX3	TXTFL	F4810B	208
27		37113		IX1	X1-X3	F4810B	209
28	10700	0321010703		PL	X1,LLT0A	F4810B	210
29		36123		IX1	X2+X3	F4810B	211
30	10701	7211000012		SX1	X1+10D	F4810B	212
31		14111		BX1	-X1	F4810B	213
32	10702	0100005705		RJ	RFL	F4810B	214
33	10703		LLT0A	BSS	0	F4810B	215
34	10703	5110010722		SA1	LLTA+2	CPS064	481
35		7150101014		SX5	0101014B	CPS064	482
36	10704	0301010707		ZR	X1,LLT1	CPS064	483
37		5120010720		SA2	LLTA	CPS064	484
38	10705	10611		BX6	X1	CPS064	485
39		22702		LX7	X2	CPS064	486
40		7150101214		SX5	0101214B	CPS064	487
41	10706	54620		SA6	A2	CPS064	488
42		54710		SA7	A1	CPS064	489
43	10707	5110003440	LLT1	SA1	0.ENDTAB	CPS064	490
44		5120003437		SA2	0.MEMORY	CPS064	491
45	10710	20547		LX5	39	CPS064	492
46		20122		LX1	18	CPS064	493
47		12352		BX3	X5+X2	CPS064	494
48		76600		SX6	B0	CPS064	495
49	10711	12731		BX7	X3+X1	CPS064	496
50		5160000067		SA6	RA.LDR	CPS064	497
51	10712	5170010721		SA7	LLTA+1	CPS064	498
52		7160140426		LOADREQ	LLTA	CPS064	499
53					REQUEST OVERLAY LOAD	CPS064	500
54			RM	IFNE	CP#RM,7	CPS064	501
55							
56							
57							
58							
59							
60							

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2

10740	53231		SA2	X3+B1	SYSTEM SYMBOL TABLE LENGTH	CPS064	548
	10122		BX1	X2		CPS064	549
	21222		AX2	18	VERIFY SYSTEXT FORMAT	CPS064	550
		63211	SB2	X1+B1		CPS064	551
10741	0312011126		NZ	X2,LST8	IF BAD SYSTEXT	CPS064	552
		5140003440	SA4	O.ENDTAB		CPS064	553
10742	63340		SB3	X4	FIND END OF OVERLAY	CPS064	554
	64222		SB2	A2+B2		CPS064	555
		0623011126	GE	B2,B3,LST8	IF BAD SYSTEXT	CPS064	556
10743	0720011126		MI	B2,LST8		CPS064	557
		56220	SA2	B2	SYSTEM MICRO TABLE LENGTH	CPS064	558
		63221	SB2	X2+B1		CPS064	559
10744	64222		SB2	A2+B2		CPS064	560
		0623011126	GE	B2,B3,LST8	IF BAD SYSTEXT	CPS064	561
10745	0720011126		MI	B2,LST8		CPS064	562
		56220	SA2	B2	SYSTEM MACRO DEFINITION TABLE LENGTH	CPS064	563
		63221	SB2	X2+B1		CPS064	564
10746	64222		SB2	A2+B2		CPS064	565
		0623011126	GE	B2,B3,LST8	IF BAD SYSTEXT	CPS064	566
10747	0720011126		MI	B2,LST8		CPS064	567
		56220	SA2	B2	SYSTEM OP CODE TABLE LENGTH	CPS064	568
		63221	SB2	X2+B1		CPS064	569
10750	64222		SB2	A2+B2		CPS064	570
		0623011126	GE	B2,B3,LST8	IF BAD SYSTEXT	CPS064	571
10751	0720011126		MI	B2,LST8		CPS064	572
		76620	SX6	B2	LWA+1 OF OVERLAY	CPS064	573
		37663	IX6	X6-X3		CPS064	574
10752	5160003476		SA6	L.MEMORY		CPS064	575
		5100000003	MANAGE	SSYMS,X1	ALLOCATE SYSTEM SYMBOL TABLE	CPS064	576
10754	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CPS064	577
10755	5120000171		SA2	CP.LIB		CPS064	578
		5130003437	SA3	O.MEMORY		CPS064	579
10756	5140003444		SA4	L.SSYMS		CPS064	580
		5110003405	SA1	O.SSYMS		CPS064	581
10757	20244		LX2	36	POSITION SYSTEM TEXT ORDINAL	CPS064	582
		53531	SA5	X3+B1		CPS064	583
		66211	SB2	B1+B1		CPS064	584
		64451	SB4	A5+B1		CPS064	585
10760	6255777775		SB5	X5-2	NUMBER OF SYMBOLS * 2 - 2	CPS064	586
		37645	IX6	X4-X5		CPS064	587
		63360	SB3	X6		CPS064	588
10761	63613		SB6	X1+B3		CPS064	589
		0400010763	EQ	LST2A		CPS064	590
10762	22604		LX6	X4	STORE NEW SYMBOL	CPS064	591
		56660	SA6	B6		CPS064	592
		56761	SA7	B6+B1		CPS064	593
		66662	SB6	B6+B2		CPS064	594
10763	0750010770		MI	B5,LST2C	IF END OF TABLE	CPS064	595
		56440	SA4	B4		CPS064	596
		56541	SA5	B4+B1	GET NEXT SYMBOL	CPS064	597
10764	66442		SB4	B4+B2		CPS064	598
		67552	SB5	B5-B2		CPS064	599
		67732	SB7	B3-B2		CPS064	600
		12752	BX7	X5+X2		CPS064	601
10765	53317		SA3	X1+B7	CHECK FOR DUPLICATE SYMBOL	CPS064	602
		0770010762	MI	B7,LST2	IF NOT FOUND	CPS064	603
		13043	BX0	X4-X3		CPS064	604

10766	67772		SB7	B7-B2		CPS064	605
	0310010765		NZ	X0,LST2B		CPS064	606
	54731		SA7	A3+B1	LOOP	CPS064	607
					REDEFINE SYMBOL		
10767	0400010763		EQ	LST2A		CPS064	608
10770	76660	LST2C	SX6	B6	REDUCE SSYMS LENGTH IF ANY	CPS064	609
	37761		IX7	X6-X1	DUPLICATE SYMBOLS WERE FOUND	CPS064	610
	5170003444		SA7	L.SSYMS		CPS064	611
10771	5110003476		SA1	L.MEMORY		CPS064	612
	5120003437		SA2	O.MEMORY	REDUCE MEMORY	CPS064	613
10772	76740		SX7	B4		CPS064	614
	36312		IX3	X1+X2		CPS064	615
	37637		IX6	X3-X7		CPS064	616
	54720		SA7	A2		CPS064	617
10773	54610		SA6	A1		CPS064	618
	53170		SA1	X7		CPS064	619
	5100000004		MANAGE	SYSMIC,X1		CPS064	620
10775	5140003437		SA4	O.MEMORY	LOAD SYSTEM MICROS	CPS064	621
	53140		SA1	X4		CPS064	622
	36323		IX3	X2+X3		CPS064	623
10776	0301011001		ZR	X1,LST3	IF LENGTH IS ZERO	CPS064	624
	73241		SX2	X4+B1		CPS064	625
	37331		IX3	X3-X1		CPS064	626
10777	0100005515		RJ	MOVE		CPS064	627
11000	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CPS064	628
11001	5140003437	LST3	SA4	O.MEMORY	REDUCE MEMORY	CPS064	629
	5150003476		SA5	L.MEMORY		CPS064	630
11002	53340		SA3	X4		CPS064	631
	73631		SX6	X3+B1		CPS064	632
	36746		IX7	X4+X6		CPS064	633
	37656		IX6	X5-X6		CPS064	634
11003	54740		SA7	A4		CPS064	635
	54650		SA6	A5		CPS064	636
	53170		SA1	X7		CPS064	637
	56011		MANAGE	MACDEF,X1		CPS064	638
11005	5140003437		SA4	O.MEMORY	LOAD MACRO DEFINITION SKELETONS	CPS064	639
	53140		SA1	X4		CPS064	640
	36323		IX3	X2+X3		CPS064	641
11006	0301011011		ZR	X1,LST4	IF LENGTH IS ZERO	CPS064	642
	73241		SX2	X4+B1		CPS064	643
	37331		IX3	X3-X1		CPS064	644
11007	0100005515		RJ	MOVE		CPS064	645
11010	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CPS064	646
11011	5140003437	LST4	SA4	O.MEMORY	REDUCE MEMORY	CPS064	647
	5150003476		SA5	L.MEMORY		CPS064	648
11012	53340		SA3	X4		CPS064	649
	7263000002		SX6	X3+2		CPS064	650
	36746		IX7	X4+X6		CPS064	651
11013	37656		IX6	X5-X6		CPS064	652
	54740		SA7	A4		CPS064	653
	54650		SA6	A5		CPS064	654
11014	0306011034		ZR	X6,LST6	IF NO SYSTEM OPCODES	CPS064	655
11015	53170	LST5	SA1	X7	LOOK UP OPCODE	CPS064	656
	0100006166		RJ	TLUOP		CPS064	657
11016	5140003437		SA4	O.MEMORY		CPS064	658
	53541		SA5	X4+B1	GET EQUIVALENT	CPS064	659
	10755		BX7	X5		CPS064	660
11017	21571		AX5	57		CPS064	661

73051				SX0	X5+B1		CPS064	662
5130003040				SA3	LSYSMAC		CPS064	663
11020	0310011021	+		NZ	X0,*+1	IF NOT A MACRO	CPS064	664
	36773			IX7	X7+X3		CPS064	665
11021	21501	+		AX5	1		CPS073	1
	0305011025			ZR	X5,LST5C	IF NOT PSEUDO OP	CPS073	2
	43063			MX0	-9		CPS073	3
11022	10577			BX5	X7		CPS073	4
	21544			AX5	36		CPS073	5
	15550			BX5	-X0*X5		CPS073	6
11023	0305011025			ZR	X5,LST5C	IF OLD TYPE PSEUDO OP ENTRY	CPS073	7
	20501			LX5	1		CPS073	8
11024	5235013061			SA3	X5+POPS-1	GET EQUIVALENT FROM OPS	CPS073	9
	10733			BX7	X3		CPS073	10
11025	0316011030		LST5C	NZ	X6,LST5A	IF OP CODE FOUND IN OPTAB	CPS073	11
	53140			SA1	X4		CPS064	667
	10277			BX2	X7		CPS064	668
11026	0100005374			RJ	ENTOP	ENTER OP CODE TABLE	CPS064	669
11027	5140003437			SA4	0.MEMORY		CPS064	670
	0400011031			EQ	LST5B		CPS064	671
11030	54720		LST5A	SA7	A2	REPLACE EQUIVALENT	CPS064	672
11031	5150003476		LST5B	SA5	L.MEMORY	REDUCE MEMORY	CPS064	673
	7274000002			SX7	X4+2		CPS064	674
11032	7265777775			SX6	X5-2		CPS064	675
	54740			SA7	A4		CPS064	676
	54650			SA6	A5		CPS064	677
11033	0316011015			NZ	X6,LST5	IF MORE SYSTEM OPCODES	CPS064	678
							CPS064	679
11034	5130003443		LST6	SA3	L.MACDEF		CPS064	680
	5120000171			SA2	CP.LIB		CPS064	681
11035	5110000161			SA1	CP.STEXT		CPS064	682
	10633			BX6	X3		CPS064	683
11036	5160003040			SA6	LSYSMAC		CPS064	684
	73721			SX7	X2+B1	BUMP SYSTEM TEXT ORDINAL	CPS064	685
	37612			IX6	X1-X2		CPS064	686
11037	0316010733			NZ	X6,LST1	IF MORE TO LOAD	CPS064	687
	54620			SA6	A2		CPS064	688
11040	5120000203		LST6A	SA2	CP.AFLL		CPS064	689
	0302011106			ZR	X2,LST6F	IF NO LCM	CPS064	690
11041	5110003445			SA1	L.SYSMIC		CPS064	691
	0301011047			ZR	X1,LST6B	IF NO SYSTEM MICROS	CPS064	692
11042	0100005450			RJ	ILF	INCREASE LCM FIELD LENGTH	CPS064	693
11043	0336011047			MI	X6,LST6B	IF NO ROOM IN LCM	CPS064	694
	5130003445			SA3	L.SYSMIC		CPS064	695
11044	43700			MX7	0		CPS064	696
	37161			IX1	X6-X1		CPS064	697
	54730			SA7	A3	CLEAR SCM COPY OF SYSMIC TABLE	CPS064	698
	20336			LX3	30		CPS064	699
11045	12631			BX6	X3+X1		CPS064	700
	20336			LX3	30	SET LCM TABLE POINTER	CPS064	701
	5160003046			SA6	LCMMIC		CPS064	702
11046	5120003406			SA2	0.SYSMIC		CPS064	703
	0100006245			RJ	WLC	WRITE SYSMIC TO LCM	CPS064	704
11047	5110003444		LST6B	SA1	L.SSYMS		CPS064	705
	0301011055			ZR	X1,LST6C	IF NO SYSTEM SYMBOLS	CPS064	706
11050	0100005450			RJ	ILF	INCREASE LCM FIELD LENGTH	CPS064	707
11051	0336011055			MI	X6,LST6C	IF NO ROOM IN LCM	CPS064	708

11052	43700	5130003444	SA3	L.SSYMS		CPS064	709
			MX7	0		CPS064	710
		37161	IX1	X6-X1		CPS064	711
		54730	SA7	A3	CLEAR SCM COPY OF SSYMS TABLE	CPS064	712
		20336	LX3	30		CPS064	713
11053	12631		BX6	X3+X1		CPS064	714
		20336	LX3	30	SET LCM TABLE POINTER	CPS064	715
		5160003047	SA6	LCMSYM		CPS064	716
11054	5120003405		SA2	O.SSYMS		CPS064	717
		0100006245	RJ	WLC	WRITE SSYMS TO LCM	CPS064	718
11055	5110003442	LST6C	SA1	L.OPTAB		CPS064	719
		0100005450	RJ	ILF	INCREASE LCM FIELD LENGTH	CPS064	720
11056	0336011062		MI	X6,LST6D	IF NO ROOM IN LCM FOR OPCODE TABLE	CPS064	721
		5130003442	SA3	L.OPTAB		CPS064	722
11057	43700		MX7	0		CPS064	723
		37161	IX1	X6-X1		CPS064	724
		54730	SA7	A3	CLEAR SCM COPY OF OPCODE TABLE	CPS064	725
		20336	LX3	30		CPS064	726
11060	12631		BX6	X3+X1		CPS064	727
		20336	LX3	30	SET LCM TABLE POINTER	CPS064	728
		5160003050	SA6	LCMOPC		CPS064	729
11061	5120003403		SA2	O.OPTAB		CPS064	730
		0100006245	RJ	WLC	WRITE OPTAB TO LCM	CPS064	731
11062	5110003054	LST6D	SA1	LCMEND		CPS064	732
		10611	BX6	X1	SAVE ORIGIN OF LCM MACROS	CPS064	733
11063	5160003052		SA6	LCMSYS		CPS064	734
		5110003443	SA1	L.MACDEF		CPS064	735
11064	0301011106		ZR	X1,LST6F	IF NO SYSTEM MACROS	CPS064	736
		0100005450	RJ	ILF	INCREASE LCM FIELD LENGTH	CPS064	737
11065	0336011106		MI	X6,LST6F	IF NO ROOM IN LCM	CPS064	738
		5130003443	SA3	L.MACDEF		CPS064	739
11066	43700		MX7	0		CPS064	740
		37161	IX1	X6-X1		CPS064	741
		54730	SA7	A3	CLEAR SCM COPY OF MACDEF TABLE	CPS064	742
		20336	LX3	30		CPS064	743
11067	12631		BX6	X3+X1		CPS064	744
		20336	LX3	30	SET LCM TABLE POINTER	CPS064	745
		5160003051	SA6	LCMMAC		CPS064	746
11070	5120003404		SA2	O.MACDEF		CPS064	747
		0100006245	RJ	WLC	WRITE MACDEF TO LCM	CPS064	748
11071	5110003054		SA1	LCMEND		CPS064	749
		5120003052	SA2	LCMSYS		CPS064	750
11072	10611		BX6	X1	SAVE END OF LCM SYSTEM MACROS	CPS064	751
		54620	SA6	A2		CPS064	752
		43700	MX7	0	INDICATE NO SYSTEM MACROS IN SCM	CPS064	753
11073	5170003040		SA7	LSYSMAC		CPS064	754
		76010	SX0	B1		CPS064	755
		20045	LX0	37	ADJUST ALL OPTAB ENTRIES FOR	CPS064	756
11074	12220		BX2	X2+X0	SYSTEM MACROS TO POINT TO MACRO	CPS064	757
		5130003442	SA3	L.OPTAB	DEFINITION TEXT IN LCM	CPS064	758
11075	5140003050		SA4	LCMOPC		CPS064	759
		5110003403	SA1	O.OPTAB		CPS064	760
11076	0313011077	+	NZ	X3,*+1	IF OPCODE TABLE NOT IN LCM	CPS064	761
		21436	AX4	30		CPS064	762
		10344	BX3	X4		CPS064	763
11077	6120000002	+	SB2	2		CPS064	764
		6150000071	SB5	57	PREPARE TO SEARCH OPCODE TABLE	CPS064	765

11100	6160777776		SB6	-1		CPS064	766
	63730		SB7	X3		CPS064	767
	53111		SA1	X1+B1		CPS064	768
11101	23351	LST6E	AX3	X1,B5	EXTRACT OPCODE TYPE	CPS064	769
	36612		IX6	X1+X2		CPS064	770
	54112		SA1	A1+B2	FETCH NEXT ENTRY	CPS064	771
	63430		SB4	X3		CPS064	772
11102	67772		SB7	B7-B2		CPS064	773
	0546011103		NE	B4,B6,++1	IF NOT A SYSTEM MACRO	CPS064	774
	55612		SA6	A1-B2	STORE ADJUSTED EQUIVALENT	CPS064	775
11103	0570011101		NZ	B7,LST6E	LOOP TO END OF TABLE	CPS064	776
	5130003050		SA3	LCMOPC		CPS064	777
11104	5120003403		SA2	0.OPTAB		CPS064	778
	0303011106		ZR	X3,LST6F	IF OPCODE TABLE NOT IN LCM	CPS064	779
11105	10133		BX1	X3		CPS064	780
	21336		AX3	30		CPS064	781
	0100006245		RJ	WLC	RE-WRITE TO LCM	CPS064	782
						CPS064	783
11106	43600	LST6F	MX6	0	INDICATE SYSTEM TEXTS ALL LOADED	CPS064	784
	5160000171		SA6	CP.LIB		CPS064	785
						CPS064	786
			IFNE	OVERLAY,0,2		CPS064	787
11107	5110011151		SA1	LSTA	RESTORE NORMAL FWA OF MANAGED TABLE AREA	CPS064	788
	0100004724		RJ	ACL	(IF NO SPACE, GOES TO LST7A)	CPS064	789
						CPS064	790
11110	0100005102		RJ	ASU	ACCUMULATE STORAGE USED FOR PASS 0	CPS064	791
11111	0100005111		RJ	ATS	ACCUMULATE TOTAL STORAGE USED	CPS064	792
11112	0400010723		EQ	LST	RETURN	CPS064	793
						CPS064	794
		*		ERROR EXITS.		CPS064	795
						CPS064	796
11113	7110011152	LST7	MESSAGE	LSTN,,R	*SYSTEM TEXT NOT FOUND.*	CPS064	797
11115	0400011130		EQ	LST9		CPS064	798
11116	7110011155	LST7A	MESSAGE	LSTS,,R	*INSUFFICIENT STORAGE FOR SYSTEM TEXT.*	CPS064	799
11120	5110000171		SA1	CP.LIB		CPS064	800
	0311011130		NZ	X1,LST9	IF NOT AFTER LAST SYSTEM TEXT	CPS064	801
11121	7110011171		MESSAGE	LSTT		CPS064	802
11123	7160041121		ABORT	,NODUMP		CPS064	803
11126	7110011161	LST8	MESSAGE	LSTF,,R	*IMPROPER SYSTEM TEXT FORMAT.*	CPS064	804
11130	5110000171	LST9	SA1	CP.LIB		CPS064	805
	5221000161		SA2	CP.STEXT+X1	GET OVERLAY NAME	CPS064	806
11131	7160002354		SX6	2RS=		CPS064	807
	73320		SX3	X2		CPS064	808
	10522		BX5	X2		CPS064	809
11132	0313011134		NZ	X3,LST9A	IF *G* ARGUMENT	CPS064	810
	5241000171		SA4	CP.LIB+X1		CPS064	811
11133	0304011136		ZR	X4,LST9B	IF NO LIBRARY NAME	CPS064	812
	0400011140		EQ	LST9C		CPS064	813
11134	37223	LST9A	IX2	X2-X3	ISOLATE OVERLAY NAME	CPS064	814
	5241000171		SA4	CP.LIB+X1		CPS064	815
	10544		BX5	X4		CPS064	816
11135	7160000754		SX6	2RG=		CPS064	817
	0312011140		NZ	X2,LST9C	IF OVERLAY NAME SPECIFIED	CPS064	818
11136	12656	LST9B	BX6	X5+X6		CPS064	819
	76700		SX7	B0	SETUP MESSAGE -	CPS064	820
	20660		LX6	-12	S=OVL OR	CPS064	821
11137	0400011144		EQ	LST9E	G=FNAME	CPS064	822

11140	5110004341	LST9C	SA1	=8R	/	CPS064	823
	12664		BX6	X6+X4		CPS064	824
	43014		MX0	12		CPS064	825
11141	20660		LX6	-12		CPS064	826
11142	21006	LST9D	AX0	6	SETUP MESSAGE -	CPS064	827
	15360		BX3	-X0*X6	S=LIB/OVL OR	CPS064	828
	0313011142		NZ	X3,LST9D	G=FNAME/OVL	CPS064	829
11143	15310		BX3	-X0*X1		CPS064	830
	12663		BX6	X6+X3		CPS064	831
	22702		LX7	X2		CPS064	832
11144	5160011167	LST9E	SA6	LSTM+2		CPS064	833
	54761		SA7	A6+B1		CPS064	834
11145	7110011165		MESSAGE	LSTM,,R		CPS064	835
11147	43600		MX6	0		CPS064	836
	5160003476		SA6	L.MEMORY		CPS064	837
11150	0400011034		EQ	LST6		CPS064	838
						CPS064	839
11151	00000000000000000000	LSTA	DATA	0	STORAGE FOR (LOCORE)	CPS064	840
11152	55233123240515552405	LSTN	DATA	C*	SYSTEM TEXT NOT FOUND.*	CPS064	841
11155	55111623250606110311	LSTS	DATA	C*	INSUFFICIENT STORAGE FOR SYSTEM TEXT.*	CPS064	842
11161	55111520221720052255	LSTF	DATA	C*	IMPROPER SYSTEM TEXT FORMAT.*	CPS064	843
11165	55550201045523312324	LSTM	DATA	C*	BAD SYSTEM TEXT - S=LIBRARY/OVERLAY*	CPS064	844
11171	55550123230515021431	LSTT	DATA	C*	ASSEMBLY ABORTED.*	CPS064	845
** OPF - OPEN FILES.						CPS064	847
						CPS064	848
						CPS064	849
11174	0000000000	OPF	PS		RETURN EXIT	CPS064	850
		RM	IFEQ	CP#RM,0		CPS064	851
						CPS064	852
11175	7120003020		EVICT	R		CPS064	853
11177	7120003000		OPEN	S,WRITE		CPS064	854
11201	7120003000		REWIND	S		CPS064	855
11203	0400011174		EQ	OPF	RETURN	CPS064	856
						CPS064	857
						CPS064	858
RM ELSE						CPS064	859
						CPS064	860
			SA3	E		CPS064	861
			SA4	0		CPS064	862
			ZR	X3,OPF1	IF NO ERROR LISTING	CPS064	863
			BX6	X3-X4		CPS064	864
			NZ	X6,OPF0	IF NOT SAME FILE NAME AS LONG LISTING FILE	CPS064	865
			FETCH	0,0C,X3		CPS064	866
			SX3	X3-#YES#		CPS064	867
			NZ	X3,OPF0	IF LONG LISTING FILE NOT OPEN	CPS064	868
			CLOSEM	0,N		CPS064	869
		OPF0	OPENM	E,OUTPUT,N		CPS064	870
		OPF1	SA1	B		CPS064	871
			ZR	X1,OPF3	IF NO BINARY	CPS064	872
			FETCH	B,0C,X2		CPS064	873
			SB7	X2-#YES#		CPS064	874
			ZR	B7,OPF2	IF ALREADY OPEN	CPS064	875
			OPENM	B,OUTPUT,N		CPS064	876

	OPF2	FETCH	B,RT,X3		CPS064	877
		SX7	X3-#WT#		CPS064	878
		SA7	B-1	SAVE BINARY RECORD TYPE	CPS064	879
1	OPF3	OPENM	OPFA,I-0,N	RETURN SCRATCH FILES	CPS064	880
2		CLOSEM	OPFA,U		CPS064	881
3		OPENM	OPFB,I-0,N		CPS064	882
4		CLOSEM	OPFB,U		CPS064	883
5		EQ	OPF	RETURN	CPS064	884
6					CPS064	885
7	OPFA	FILE	LFN=ZZZZZRL,FET=SCR		CPS064	886
8	OPFB	FILE	LFN=ZZZZZRM,FET=REF		CPS064	887
9					CPS064	888
10	RM	ENDIF			CPS064	889
11						
12						
13						
14						
15	**	RDD	- READ DEBUGGING DIRECTIVES.		CPS064	891
16	*	READ	CARDS FROM FILE *PATCHES* AND COPY THEM		CPS064	892
17	*	TO FILE	*SNAPPER* IN LISTABLE FORM.		CPS064	893
18	*	*PATCH	CARDS ARE PROCESSED DIRECTLY.		CPS064	894
19	*	*SNAP	CARDS CAUSE CONSTRUCTION OF SNAP DESCRIPTOR		CPS064	895
20	*	ENTRIES	IN THE *SNAPBUF* TABLE AREA.		CPS064	896
21	*	ALL OTHER	CARDS ARE TREATED AS COMMENTS.		CPS064	897
22					CPS064	898
23					CPS064	899
24	DEBUG	IFNE	DEBUG,0		CPS064	900
25		QUAL	DEBUG		CPS064	901
26					CPS064	902
27	RDD	PS		RETURN EXIT	CPS064	903
28					CPS064	904
29	RM	IFEQ	CP#RM,0		CPS064	905
30					CPS064	906
31		REWIND	P		CPS064	907
32		READ	P	START READING	CPS064	908
33		READC	P,LINE+1,9	READ FIRST CARD	CPS064	909
34		NZ	X1,RDDX	IF NONE	CPS064	910
35		SA0	B6		CPS064	911
36		WRITEW	D,DHEAD,LDHEAD	WRITE HEADER LINE	CPS064	912
37		SB6	A0		CPS064	913
38	RDDC	SB5	B6-LINE-1	LENGTH OF CARD	CPS064	914
39					CPS064	915
40	RM	ELSE			CPS064	916
41					CPS064	917
42		OPENM	P,INPUT,N		CPS064	918
43		REWINDM	P		CPS064	919
44		GET	P,LINE+1,90		CPS064	920
45		FETCH	P,FP,X2		CPS064	921
46		SX0	EOD		CPS064	922
47		BX3	X0*X2		CPS064	923
48		NZ	X3,RDDX	IF NO DATA IN PATCHES FILE	CPS064	924
49		OPENM	D,I-0,N		CPS064	925
50		PUT	D,DHEAD,LDHEAD		CPS064	926
51		PUT	D,DHEAD1,10		CPS064	927
52	RDDC	FETCH	P,RL,X3	RECORD LENGTH	CPS064	928
53		SX2	X3+9		CPS064	929
54		SX1	52429		CPS064	930
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		IX4	X1*X2		CPS064	931
		AX4	19	RL/10	CPS064	932
		SB5	X4		CPS064	933
1					CPS064	934
2	RM	ENDIF			CPS064	935
3					CPS064	936
4		SB7	8		CPS064	937
5	+	SB6	B1		CPS064	938
6		GE	B5,B7,*+1	IF MORE THAN 8 WORDS	CPS064	939
7		SB7	B5		CPS064	940
8		SA1	LINE+1	CARD COLUMNS 1-10	CPS064	941
9		SA2	SNAPC		CPS064	942
10		SA3	A2+B1		CPS064	943
11		IX2	X1-X2		CPS064	944
12		BX3	X1-X3		CPS064	945
13		ZR	X2,RDDD	IF *SNAP	CPS064	946
14		NZ	X3,RDDW	IF NOT *PATCH	CPS064	947
15	RDDD	MX0	-6		CPS064	948
16		SB4	10	GET FIRST NUMBER, STARTING IN COLUMN 11	CPS064	949
17		SA1	A1+B1		CPS064	950
18		SX4	B0		CPS064	951
19		RJ	SCAN		CPS064	952
20		NZ	X3,RDDS	IF *SNAP	CPS064	953
21		SA0	X6		CPS064	954
22		RJ	SCAN	GET NEW VALUE	CPS064	955
23		SA6	A0	STORE IT	CPS064	956
24		EQ	RDDW		CPS064	957
25	RDDS	SA2	LSNAPBUF		CPS064	958
26		SA3	RJSNAP		CPS064	959
27		SA5	X6	FETCH INSTRUCTION WORD	CPS064	960
28		IX7	X3+X2		CPS064	961
29		BX6	X5	REPLACE WITH RJ SNAPPER	CPS064	962
30		SA7	A5		CPS064	963
31		SX7	X2+B1		CPS064	964
32		SA6	X2+SNAPBUF	SAVE REPLACED INSTRUCTION WORD	CPS064	965
33		SA7	A2		CPS064	966
34	RDDT	SX4	B1		CPS064	967
35		RJ	SCAN	GET FWA	CPS064	968
36		MI	X7,RDDU	IF TABLE NAME	CPS064	969
37		MX2	-17		CPS064	970
38		BX6	-X2*X6		CPS064	971
39		IX5	X6+X7		CPS064	972
40		LX5	30		CPS064	973
41		RJ	SCAN	GET WORD COUNT	CPS064	974
42		MX2	-17		CPS064	975
43		BX6	-X2*X6		CPS064	976
44		IX6	X6+X7		CPS064	977
45		IX6	X6+X5		CPS064	978
46	RDDU	LT	B6,B7,*+1	IF NOT END OF CARD	CPS064	979
47		MX2	1		CPS064	980
48		BX6	X6+X2		CPS064	981
49		SA2	LSNAPBUF		CPS064	982
50		SA6	X2+SNAPBUF	STORE SNAP DESCRIPTION	CPS064	983
51		SX7	X2+B1		CPS064	984
52		SA7	A2		CPS064	985
53		LT	B6,B7,RDDT	IF NOT END OF CARD	CPS064	986
54					CPS064	987
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	RM	IFEQ	CP#RM,0		CPS064	988
					CPS064	989
	RDDW	WRITEW	D,LINE,B5+B1		CPS064	990
1		READC	P,LINE+1,9	READ NEXT CARD	CPS064	991
2		ZR	X1,RDDC	IF NOT EOR/EOF	CPS064	992
3		WRITER	D,RECALL	FLUSH BUFFER	CPS064	993
4	RDDX	BSS	0		CPS064	994
5					CPS064	995
6	RM	ELSE			CPS064	996
7					CPS064	997
8	RDDW	FETCH	P,RL,X3		CPS064	998
9		SX4	X3+10		CPS064	999
10		PUT	D,LINE,X4		CPS064	1000
11		GET	P,LINE+1,90		CPS064	1001
12		FETCH	P,FP,X2		CPS064	1002
13		SX0	EOD		CPS064	1003
14		BX3	X0*X2		CPS064	1004
15		ZR	X3,RDDC	IF NOT END OF DATA	CPS064	1005
16		WEOR	D	FLUSH D	CPS064	1006
17	RDDX	CLOSEM	P,R		CPS064	1007
18					CPS064	1008
19	RM	ENDIF			CPS064	1009
20					CPS064	1010
21		EQ	RDD		CPS064	1011
22	SCAN	SPACE	4		CPS064	1012
23	**	SCAN - READ ONE OCTAL NUMBER OR TABLE NAME FROM DEBUG CARD.			CPS064	1013
24	*	STOPPED BY , OR . OR END OF CARD IMAGE.			CPS064	1014
25	*	ENTRY	(X0) = -77B.		CPS064	1015
26	*		(X1) = CURRENT WORD OF CARD IMAGE.		CPS064	1016
27	*		(A1) = ADDRESS OF (X1).		CPS064	1017
28	*		(B4) = NUMBER OF CHARACTERS REMAINING IN (X1).		CPS064	1018
29	*		(B6) = WORD NUMBER.		CPS064	1019
30	*		(B7) = WORD COUNT OF CARD IMAGE.		CPS064	1020
31	*		(X4) = 0 TO DISALLOW TABLE NAME AND IGNORE ALL		CPS064	1021
32	*		CHARACTERS OTHER THAN * , . AND 0-7.		CPS064	1022
33	*		= 1 TO ALLOW TABLE NAME.		CPS064	1023
34	*	EXIT	(X0), (B7) UNCHANGED.		CPS064	1024
35	*		(X1), (A1), (B4), (B6) UPDATED.		CPS064	1025
36	*		(B6) = (B7) IF . OR END OF CARD IMAGE ENCOUNTERED.		CPS064	1026
37	*		(X6) = NUMBER SCANNED, OR		CPS064	1027
38	*		= 13/1, 17/0.XXX, 13/1, 17/L.XXX		CPS064	1028
39	*		IF TABLE NAME XXX SCANNED.		CPS064	1029
40	*		(X7) = -1 IF A TABLE NAME SCANNED,		CP096A	334
41	*		= 1000000B IF A \$ SCANNED,		CP096A	335
42	*		= 0400000B IF AN * SCANNED, OR		CP096A	336
43	*		= 0 IF NONE OF THE ABOVE.		CP096A	337
44					CPS064	1033
45					CPS064	1034
46	SCAN	PS	RETURN EXIT		CPS064	1035
47		MX6	0		CPS064	1036
48		SX7	B0		CPS064	1037
49		GE	B6,B7,SCAN	IF CARD EXHAUSTED	CPS064	1038
50	SCAN0	NZ	B4,SCAN1	IF WORD NOT EXHAUSTED	CPS064	1039
51		SB6	B6+B1		CPS064	1040
52		SA1	A1+B1		CPS064	1041
53		SB4	10		CPS064	1042
54		GE	B6,B7,SCAN	IF CARD EXHAUSTED	CPS064	1043
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	SCAN1	LX1	6		CPS064	1044
		SB4	B4-B1		CPS064	1045
		BX2	-X0*X1		CPS064	1046
1		SX2	X2-1R0		CPS064	1047
2		SB3	X2-8		CPS064	1048
3		MI	X2,SCAN4	IF COLON OR A-Z	CPS064	1049
4		PL	B3,SCAN2	IF NOT 0-7	CPS064	1050
5		LX6	3		CPS064	1051
6		SX4	0		CPS064	1052
7		IX6	X6+X2		CPS064	1053
8		EQ	SCAN0		CPS064	1054
9	SCAN2	SB2	X2+1R0-1R*		CPS064	1055
10		SB3	X2+1R0-1R,		CPS064	1056
11		SB5	X2+1R0-1R\$		CP096A	338
12		NZ	B2,SCAN2A	IF NOT ASTERISK (INDIRECT)	CP096A	339
13		SX2	B1		CP096A	340
14		LX2	17		CP096A	341
15		BX7	X7+X2		CP096A	342
16	SCAN2A	NZ	B5,SCAN3	IF NOT DOLLAR (ECS/LCM)	CP096A	343
17		SX2	B1		CP096A	344
18		LX2	18		CP096A	345
19		BX7	X7+X2		CP096A	346
20	SCAN3	ZR	B3,SCAN	IF COMMA, RETURN	CPS064	1060
21		NE	B3,B1,SCAN0	IF NOT PERIOD	CPS064	1061
22		SB6	B7	SET END OF CARD	CPS064	1062
23		EQ	SCAN		CPS064	1063
24	SCAN4	ZR	X4,SCAN0	IF TABLE NAME NOT ALLOWED	CPS064	1064
25		SB2	60		CPS064	1065
26		SX2	X2+1R0	RESTORE CHARACTER	CPS064	1066
27		ZR	X2,SCAN6	IF COLON	CPS064	1067
28	SCAN5	SB2	B2-6		CPS064	1068
29		LX2	B2	APPEND CHARACTER TO NAME	CPS064	1069
30		BX6	X6+X2		CPS064	1070
31	SCAN6	NZ	B4,SCAN7	IF WORD NOT EXHAUSTED	CPS064	1071
32		SB6	B6+B1		CPS064	1072
33		SA1	A1+B1	FETCH NEXT WORD	CPS064	1073
34		SB4	10		CPS064	1074
35		GE	B6,B7,SCAN8	IF CARD EXHAUSTED	CPS064	1075
36	SCAN7	LX1	6		CPS064	1076
37		SB4	B4-B1		CPS064	1077
38		BX2	-X0*X1	EXTRACT NEXT CHARACTER	CPS064	1078
39		SB3	X2-1R,		CPS064	1079
40		ZR	X2,SCAN6	IF COLON	CPS064	1080
41		ZR	B3,SCAN8	IF COMMA	CPS064	1081
42		NE	B3,B1,SCAN5	IF NOT PERIOD	CPS064	1082
43		SB6	B7	SET END OF CARD	CPS064	1083
44	SCAN8	SA2	TABLES	SEARCH LIST OF TABLES	CPS064	1084
45		MX3	-18		CPS064	1085
46	SCAN9	ZR	X2,SCAN+1	IF NOT FOUND, IGNORE FIELD	CPS064	1086
47		BX4	X3*X2		CPS064	1087
48		SB3	X2	TABLE NUMBER	CPS064	1088
49		IX7	X6-X4		CPS064	1089
50		SA2	A2+B1		CPS064	1090
51		NZ	X7,SCAN9	LOOP	CPS064	1091
52		SX3	B1		CPS064	1092
53		SX4	ORIGINS+B3		CPS064	1093
54		LX3	17		CPS064	1094
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		BX4	X4+X3	SETUP (X6) FOR TABLE	CPS064	1095
		SX6	SIZES+B3		CPS064	1096
		LX4	30		CPS064	1097
1		BX6	X6+X3		CPS064	1098
2		SX7	-B1	(X7) = -1	CPS064	1099
3		BX6	X4+X6		CPS064	1100
4		EQ	SCAN	RETURN	CPS064	1101
5	DATA	SPACE	4		CPS064	1102
6	**	CONSTANTS AND WORKING STORAGE FOR *RDD*.			CPS064	1103
7					CPS064	1104
8					CPS064	1105
9	RJSNAP	RJ	SNAPPER		CPS064	1106
10	-	VFD	30/**		CPS064	1107
11					CPS064	1108
12	RM	IFEQ	CP#RM,0		CPS064	1109
13	DHEAD	DATA	C*1	COMPASS DEBUGGING OUTPUT.*,8L0	CPS064	1110
14	LDHEAD	EQU	*-DHEAD		CPS064	1111
15	RM	ELSE			CPS064	1112
16	DHEAD	DATA	H*1	COMPASS DEBUGGING OUTPUT.*	CPS064	1113
17	LDH	SET	*-DHEAD		CPS064	1114
18	LDHEAD	EQU	LDH*10		CPS064	1115
19	DHEAD1	DATA	1H0		CPS064	1116
20	RM	ENDIF			CPS064	1117
21					CPS064	1118
22	LINE	DATA	10H		CPS064	1119
23		BSS	9	DIRECTIVE CARD IMAGE	CPS064	1120
24					CPS064	1121
25	SNAPC	DATA	H *SNAP ,H *PATCH		CPS064	1122
26					CPS064	1123
27	TABLES	BSS	0		CPS064	1124
28	DEBUG	HERE		LIST OF TABLE NAMES AND NUMBERS	CPS064	1125
29		CON	0		CPS064	1126
30					CPS064	1127
31	LSNAPBUF	DATA	0	LENGTH OF SNAPBUF	CPS064	1128
32					CPS064	1129
33	PSD	FET	PATCHES,,BBUFL,1		CPS064	1130
34					CPS064	1131
35	RM	IFEQ	CP#RM,0		CPS064	1132
36	P	EQU	PSD		CPS064	1133
37	RM	ELSE			CPS064	1134
38		IFEQ	CP#RM,6,1		CPS064	1135
39	P	FILE	LFN=PATCHES,FO=SQ,BT=C,RT=Z,MRL=90,CM=YES,LT=UL,FET=PSD		CPS064	1136
40	,,BFS=BBUFL,ERL=1				CPS064	1137
41		IFEQ	CP#RM,7,1		CPS064	1138
42	P	FILE	LFN=PATCHES,FO=SQ,BT=,RT=W,MRL=90,PD=INPUT		CPS064	1139
43		BSSZ	PSD+40B-*		CPS064	1140
44	RM	ENDIF			CPS064	1141
45					CPS064	1142
46		QUAL	*		CPS064	1143
47	DEBUG	ENDIF			CPS064	1144
48						
49						
50						
51						
52	**	SBA - SET BUFFER ADDRESS.			CPS064	1146
53	*	ENTRY	(X0) = BUFFER FIRST WORD ADDRESS.		CPS064	1147
54	*		(X1) = FET/FIT ADDRESS.		CPS064	1148
55						
56						
57						
58						
59						
60						

* EXIT (X0) = BUFFER LAST WORD ADDRESS + 1.

CPS064 1149

CPS064 1150

CPS064 1151

CPS064 1152

CPS064 1153

CPS064 1154

CPS064 1155

CPS064 1156

CPS064 1157

CPS064 1158

CPS064 1159

CPS064 1160

CPS064 1161

CPS064 1162

CPS064 1163

CPS064 1164

CPS064 1165

CPS064 1166

CPS064 1167

CPS064 1168

CPS064 1169

CPS064 1170

CPS064 1171

CPS064 1172

CPS064 1173

CPS064 1174

CPS064 1175

CPS064 1176

RM
RM ELSE
IFEQ CP#RM,6STORE X1,FWB=X0 SET FWA BUFFER
FETCH X1,BFS,X2 READ BUFFER SIZE
IX0 X0+X2

RM ENDIF

EQ SBA RETURN

** SCS - SAVE COMPILER SPACE.

F4810B 223

* SAVES THE CONTENTS OF THE CELLS CP.NFLS AND CP.AFLS AND THE
* SPACE INCLUDED BETWEEN THE TWO ADDRESSES CONTAINED IN THESE
* CELLS WHEN COMPASS IS CALLED BY A COMPILER.

F4810B 224

F4810B 225

F4810B 226

F4810B 227

F4810B 228

F4810B 229

SCS PS RETURN EXIT

SA2 CP.BATCH
LX2 59-11

PL X2,SCS IF COMPASS NOT CALLED BY A COMPILER, RETURN

SA2 CP.NFLS FL AVAILABLE TO COMPASS

SA3 LOCORE SPACE NOT AVAILABLE TO TABLES

SX6 X2-10

IX6 X6-X3

SA6 SIZCORE TABLE SPACE = CP.NFLS-LOCORE-10(SLOP)

SA3 CP.AFLS ACTUAL FL

IX1 X3-X2

SX1 B1+X1

LX2 30-0

BX6 X2+X3

SA6 SCSFL

MANAGE CMPTAB,X1

SA4 SCSFL

BX6 X4

SA6 X2

STORE IN FIRST WORD OF CMPTAB

F4810B 230

F4810B 231

F4810B 232

F4810B 233

F4810B 234

F4810B 235

F4810B 236

F4810B 237

F4810B 238

F4810B 239

F4810B 241

F4810B 242

F4810B 243

F4810B 244

F4810B 245

F4810B 246

F4810B 247

F4810B 248

TEMP. SAVE COMPILER CP.NFLS AND CP.AFLS
REQUEST TABLE SPACE

GET SAVED COMPILER FIELD LENGTHS

11221	63340		SB3	X4	CP.AFLS	F4810B	249
	21436		AX4	30-0		F4810B	250
	63440		SB4	X4	CP.NFLS-FWA OF AREA TO BE SAVED	F4810B	251
11222	0643011210	SCS1	GE	B4,B3,SCS	IF THROUGH, RETURN	F4810B	252
	73221		SX2	X2+B1	DESTINATION OF WORD TO BE MOVED	F4810B	253
	56140		SA1	B4	CURRENT WORD TO BE MOVED	F4810B	254
11223	10611		BX6	X1		F4810B	255
	53620		SA6	X2		F4810B	256
	66441		SB4	B4+B1	INCREMENT SOURCE ADDRESS	F4810B	257
11224	0400011222		EQ	SCS1	CONTINUE	F4810B	258
11225	00000000000000000000	SCSFL	DATA	0	TEMP. STORES COMPILER CP.NFLS AND CP.AFLS	F4810B	259
							260
** SFL - SET FIELD LENGTH.							
						CPS064	1178
						CPS064	1179
						CPS064	1180
11226	0000000000	SFL	PS		RETURN EXIT	CPS064	1181
11227		SFL0	BSS	0		F4810B	261
11227	5110000202		SA1	CP.NFLS		CPS064	1182
	5120003041		SA2	LOCORE		CPS064	1183
11230	7261777765		SX6	X1-10	ALLOW TEN WORDS FOR SLOP	CPS064	1184
	37762		IX7	X6-X2		CPS064	1185
11231	6277776377		SB7	X7-NOPCT*2-NSYMT*2		CPS064	1186
	5160003440		SA6	0.ENDTAB	SAVE END OF MANAGED TABLE AREA	CPS064	1187
11232	5170003042		SA7	SIZCORE		CPS064	1188
	0670011246		PL	B7,SFL1	IF ENOUGH ROOM	CPS064	1189
11233	10611		BX6	X1	SAVE CURRENT FL	F4810B	262
	7252001511		SX5	X2+NOPCT*2+NSYMT*2+10D+77B	FL REQUIRED	F4810B	263
	14155		BX1	-X5		F4810B	264
11234	0100005705		RJ	RFL	REQUEST THE REQUIRED FIELD LENGTH	F4810B	265
11235	0313011227		NZ	X3,SFL0	IF REQUEST COMPLETE, TRY AGAIN	F4810B	266
	10155		BX1	X5	ELSE, PRINT MESSAGE AND ABORT	F4810B	267
	43066		MX0	-6		CPS064	1191
11236	11101		BX1	X0*X1		CPS064	1192
	0100005260		RJ	COCT	CONVERT TO OCTAL	CPS064	1193
11237	5110011256		SA1	SFLA+2		CPS064	1194
	43036		MX0	30		CPS064	1195
	11101		BX1	X0*X1	INSERT REQUIRED FIELD LENGTH INTO MESSAGE	CPS064	1197
11240	15660		BX6	-X0*X6		CPS064	1198
	12616		BX6	X1+X6		CPS064	1199
	54610		SA6	A1		CPS064	1200
11241	7110011254		MESSAGE	SFLA,,R		CPS064	1201
11243	7160041121		ABORT	,NODUMP		CPS064	1202
						CPS064	1203
11246		SFL1	BSS	0		CPS064	1204
		LCM	IFEQ	CP#RM,7		CPS064	1205
			MEMORY	LCM,SFLB,R	GET LCM FIELD LENGTH AND MODE	CPS064	1206
			SA1	SFLB		CPS064	1207
			LX1	59-1		CPS064	1208
			SX6	B0		CPS064	1209
			PL	X1,SFL2	IF NOT REDUCE MODE FOR LCM FIELD LENGTH	CPS064	1210
			SA6	FLLF	CLEAR FIXED FLL FLAG	CPS064	1211
			SA2	CP.STEXT		CPS064	1212
			SA3	CP.LIB	CHECK FOR SYSTEM TEXTS TO BE LOADED	CPS064	1213

			LX1	1-59		CPS064	1214
			AX1	30	CURRENT LCM FIELD LENGTH	CPS064	1215
			IX2	X2+X3		CPS064	1216
1			SX6	20000B		CPS064	1217
2		+	NZ	X2,*+1	IF NOT *S=0*	CPS064	1218
3			SX6	10000B		CPS064	1219
4		+	IX2	X1-X6		CPS064	1220
5			PL	X2,SFL2	IF ENOUGH ROOM	CPS064	1221
6			LX6	30		CPS064	1222
7			SA6	SFLB		CPS064	1223
8			MEMORY	LCM,SFLB,R	REQUEST MORE LCM FIELD LENGTH	CPS064	1224
9			SA1	SFLB		CPS064	1225
10			AX1	30		CPS064	1226
11			BX6	X1	UPDATE ACTUAL FIELD LENGTH	CPS064	1227
12			SA6	CP.AFLL		CPS064	1228
13		LCM	ENDIF			CPS064	1229
14						CPS064	1230
15	11246		SFL2	BSS	0	CPS064	1231
16			OVL	IFNE	OVERLAY,0	CPS064	1232
17	11246	5110000065	SA1	RA.LWP	INITIALIZE SUBROUTINE *OVL*	CPS064	1233
18		5120000114	SA2	CP.BATCH		CPS064	1234
19	11247	20151	LX1	59-18		CPS064	1235
20		20260	LX2	59-11		CP139CP	164
21		12112	BX1	X1+X2		CPS064	1236
22	11250	0331011253	MI	X1,SFL3	IF LOADED FROM A LIBRARY OR CALLED BY	CPS064	1237
23		5110000064	SA1	RA.PGN	A COMPILER	CPS064	1238
24	11251	43052	MX0	42		CPS064	1239
25		11601	BX6	X0*X1	STORE FILE NAME IN LOADER CALL	CPS064	1240
26		5160005573	SA6	OVLV		CPS064	1241
27	11252	7170002040	SX7	2040B	THREE-WORD CALL, LOAD OVERLAY FROM FILE	CPS064	1242
28		20744	LX7	36		CPS064	1243
29		54761	SA7	A6+B1		CPS064	1244
30			OVL	ENDIF		CPS064	1245
31						CPS064	1246
32	11253	0200011226	SFL3	JP	SFL RETURN	CPS064	1247
33						CPS064	1248
34	11254	55550317152001232355	SFLA	DATA	C* COMPASS NEEDS AT LEAST 00000B SCM.*	CPS064	1249
35	11260	00000000000000000000	SFLB	DATA	0	CPS064	1250
36							
37							
38							
39							
40		**	SFP	- SET FILE PARAMETERS.		CPS064	1252
41						CPS064	1253
42						CPS064	1254
43	11261	0000000000	SFP	PS	RETURN EXIT	CPS064	1255
44						CPS064	1256
45			IFNE	CP#RM,0,1		CPS064	1257
46			STORE	I,DX=0		CPS064	1258
47						CPS064	1259
48	11262	5130000231	SA3	E		CPS064	1260
49		10633	BX6	X3		CPSA168	20
50	11263	5160003063	SA6	FTNE	SAVE CONTENTS OF E FET FOR FTN'S SAKE.	CPSA168	21
51		5140000116	SA4	CP.LISTF		CPS064	1261
52	11264	7100030731	SX0	BUFFERS		CPS064	1262
53		0303011275	ZR	X3,SFP2	IF NO ERROR FILE	CPS064	1263
54	11265	0304011271	ZR	X4,SFP1	IF NO LONG LISTING WANTED	CPS064	1264
55							
56							
57							
58							
59							
60							

11266	43652	5140000221	SA4	0		CPS064	1265
			MX6	42		CPS064	1266
	13534		BX5	X3-X4	COMPARE ERROR AND MAIN LISTING FILE NAMES	CPS064	1267
		11665	BX6	X6*X5		CPS064	1268
11267	0316011271		NZ	X6,SFP1	IF NOT SAME FILE	CPS064	1269
		54630	SA6	A3	CLEAR ERROR FILE	CPS064	1270
11270	0400011275		EQ	SFP2		CPS064	1271
11271		SFP1	BSS	0		CPS064	1272
						CPS064	1273
			IFEQ	CP#RM,0,1		F7540CP	119
11271	5120000233		SA2	E+2		CPS064	1275
		74130	SX1	A3		CPS064	1280
11272	0312011275		NZ	X2,SFP2	IF BUFFERS HAVE BEEN SWITCHED	CPS064	1281
		5140000235	SA4	E+4		CPSA184	18
11273	10644		BX6	X4		CPSA184	19
		5160003064	SA6	FTNE+1	SAVE EBUFL	CPSA184	20
11274	0100011204		RJ	SBA	SET ERROR BUFFER ADDRESS	CPS064	1282
11275	5130000116	SFP2	SA3	CP.LISTF		CPS064	1283
		7110003020	SX1	R		CPS064	1284
11276	0303011277		ZR	X3,SFP3	IF NO LISTING	CPS064	1285
		0100011204	RJ	SBA	SET CROSS REFERENCE BUFFER ADDRESS	CPS064	1286
11277	7110003000	SFP3	SX1	S		CPS064	1287
		0100011204	RJ	SBA	SET SCRATCH BUFFER ADDRESS	CPS064	1288
						CPS064	1289
			IFNE	DEBUG,0,2		CPS064	1290
			SX1	D		CPS064	1291
			RJ	SBA	SET SNAPPER BUFFER ADDRESS	CPS064	1292
						CPS064	1293
		B	IFEQ	CP#RM,0		CPS064	1294
11300	5110000242		SA1	B+1	CHANGE *FET LG0,0BUF,0BUFL,7*	CPS064	1295
		7170001001	SX7	BBUFL	TO *FET LG0,,BBUFL,7*	CPS064	1296
11301	73210		SX2	X1	FOR SBA	CPS064	1297
		13612	BX6	X1-X2		CPS064	1298
		5170000245	SA7	B+4	LIMIT = BBUFL	CPS064	1299
11302	54610		SA6	A1	FIRST = 0	CPS064	1300
		B	ENDIF			CPS064	1306
						CPS064	1307
		7110000241	SX1	B		CPS064	1308
		73300	SX3	X0		CPS064	1309
11303	0100011204		RJ	SBA	SET BINARY BUFFER ADDRESS	CPS064	1310
						CPS064	1311
			IFEQ	CP#RM,0,2		CPS064	1312
11304	7110003010		SX1	X		CPS064	1313
			ELSE	1		CPS064	1314
			SX1	/PASS1/XDUM		CPS064	1315
						CPS064	1316
		73030	SX0	X3	BINARY BUFFER ADDRESS	CPS064	1317
11305	0100011204		RJ	SBA	SET XTEXT BUFFER ADDRESS	CPS064	1318
						CPS064	1319
			IFNE	DEBUG,0,3		CPS064	1320
			SX0	X3		CPS064	1321
			SX1	/DEBUG/P		CPS064	1322
			RJ	SBA	SET PATCHES BUFFER ADDRESS	CPS064	1323
						CPS064	1324
11306	10100		BX1	X0		CPS064	1325
		0100004724	RJ	ACL	ADJUST CORE LIMITS	CPS064	1326
						CPS064	1327

11307 0400011261

EQ

SFP

RETURN

CPSA142 1328

** SLF - SET LIST FLAGS.

CPSA142 62

* EXIT TO ARGV ON BAD *LO* ARGUMENT.

CPSA142 63

CPSA142 64

CPSA142 65

11310 0000000000

SLF

PS

RETURN EXIT

CPSA142 66

11311 5110011627

SA1

SLFA

CPSA142 67

5130011572

SA3

ABTF

CPSA142 68

11312 5140000114

SA4

CP.ABORT

CPSA142 69

10611

BX6

X1

CPSA142 70

20122

LX1

18

CPSA142 71

11313 5160003062

SA6

XLIST

CPSA142 72

12734

BX7

X3+X4

CPSA142 73

54740

SA7

A4

CPSA142 74

11314 76710

SX7

B1

CPSA142 75

43066

MX0

-6

CPSA142 76

7261447777

SX6

X1-1L0

CPSA142 77

11315 66211

SB2

B1+B1

CPSA142 78

20152

LX1

-18

CPSA142 79

0316011317

NZ

X6,SLF1

IF NOT *LO=0*

CPSA142 80

11316 43100

MX1

0

CPSA142 81

54660

SA6

A6

CPSA142 82

11317 0301011310

SLF1

ZR

X1,SLF

IF NO LIST FLAGS

CPSA142 83

20106

LX1

6

CPSA142 84

15210

BX2

-X0*X1

CPSA142 85

11320 63720

SB7

X2

CPSA142 86

37112

IX1

X1-X2

CPSA142 87

6167777724

SB6

B7-1R\$

CPSA142 88

11321 5130003346

SA3

LISTOPS

CHECK LIST OPTION TABLE

CPSA142 89

6150000034

SB5

LLISTOPS

CPSA142 90

11322 0460011330

ZR

B6,SLF4

IF \$

CPSA142 91

11323 26663

SLF2

UX6

B6,X3

CPSA142 92

67552

SB5

B5-B2

CPSA142 93

0467011327

EQ

B6,B7,SLF3

IF OPTION FOUND

CPSA142 94

11324 54332

SA3

A3+B2

CPSA142 95

0550011323

NZ

B5,SLF2

LOOP

CPSA142 96

11325 7160001417

SX6

2RLO

CPSA142 97

20660

LX6

-12

CPSA142 98

11326 5160011605

SA6

ARGM+3

BAD CONTROL CARD ARGUMENT - LO

CPSA142 99

0400000572

EQ

ARGE

CPSA142 100

11327 13637

SLF3

BX6

X3-X7

TOGGLE LIST FLAG

CPSA142 101

54630

SA6

A3

CPSA142 102

0400011317

EQ

SLF1

LOOP TO END OF FLAGS

CPSA142 103

11330 12637

SLF4

BX6

X3+X7

\$ FOUND, TURN ON ALL LIST FLAGS

CPSA142 105

54630

SA6

A3

CPSA142 106

67552

SB5

B5-B2

CPSA142 107

54332

SA3

A3+B2

CPSA142 108

11331 0550011330

NZ

B5,SLF4

LOOP

CPSA142 109

0400011317

EQ

SLF1

CPSA142 110

**	SMP - SET UP MEMORY REQUEST PARAMETERS	F4810B	269
*	OBTAINS THE MAXIMUM FL. AVAILABLE TO THE JOB.	CPSA125	54
*	DETERMINES WHETHER THE FL. AT WHICH TABLES ARE TO BE DUMPED	CPSA125	55
*	TO FILES (MIDFLN) IS VALID. THIS IS DONE BY CHECKING THE	CPSA125	56
*	CURRENT FL. TO SEE WHETHER IT IS LARGER THAN MIDFLN. IF IT	CPSA125	57
*	IS, COMPASS ASSUMES THAT THE PRESENT JOB STEP WAS PRECEDED	CPSA125	58
*	BY AN RFL STATEMENT AND SETS MIDFLN TO THE CURRENT FL ROUNDED	CPSA125	59
*	UP FOR SPEED (TABLES NOT DUMPED TO FILES). IF CP.NFLS IS LESS	CPSA125	60
*	THAN MIDFLN, COMPASS JUST INSURES THAT MIDFLN IS LESS THAN	CPSA125	61
*	MAXFL.	CPSA125	62
		F4810B	270
		F4810B	271
11332	0000000000 SMP PS RETURN EXIT	F4810B	272
11333	7160150515 MEMORY CM,MAXFL,RECALL GET MAXIMUM JOB FL	F4810B	273
11336	5110003056 SA1 MAXFL GET RETURNED MAXIMUM FL	F4810B	274
	21136 AX1 30-0 SHIFT INTO LOWER 30 BITS	F4810B	275
	10611 BX6 X1	F4810B	276
11337	54610 SA6 A1 STORE MAXIMUM FL	F4810B	277
	7110000004 SX1 4 K	F4810B	278
11340	7120004000 SX2 FLINC GET FL INCREMENT	F4810B	279
	42212 IX2 X1*X2 K*FLINC	F4810B	280
11341	5110003056 SA1 MAXFL GET MAX JOB FL	F4810B	281
	37212 IX2 X1-X2 MAXFL-K*FLINC	F4810B	282
11342	5110003057 SA1 MIDFLN GET FL AT WHICH TABLES DUMPED TO FILES	F4810B	283
	5130000202 SA3 CP.NFLS GET CURRENT FL	CPSA125	63
11343	37413 IX4 X1-X3	CPSA125	64
	0324011346 PL X4,SMP1 IF NO RFL OR RFL.LE.MIDFLN	CPSA125	65
	43466 MX4 -6 ELSE SET MIDFLN TO CURRENT FL	CPSA125	66
11344	37634 IX6 X3-X4 CP.NFLS+77B	CPSA125	67
	11664 BX6 X6*X4	CPSA125	68
	5160003057 SA6 MIDFLN STORE NEW VALUE OF MIDFLN	CPSA125	69
11345	0400011332 EQ SMP RETURN	CPSA125	70
		CPSA125	71
11346	SMP1 BSS 0	CPSA125	72
11346	37621 IX6 X2-X1 (MAXFL-K*FLINC)-MIDFLN	F4810B	284
	0326011332 PL X6,SMP IF MIDFLN.LE.(MAXFL-K*FLINC)	F4810B	285
	10622 BX6 X2 ELSE, RESET MIDFLN TO MAXFL-K*FLINC	F4810B	286
11347	5160003057 SA6 MIDFLN	F4810B	287
	0400011332 EQ SMP RETURN	F4810B	288

**	SPF - SET PRINTER FLAGS.	F4810A	213
		F4810A	214
		F4810A	215
11350	0000000000 SPF PS RETURN EXIT	F4810A	216
11351	5120000114 SA2 CP.BATCH	CPSA265	66
	20260 LX2 59-11	CPSA265	67
	43006 MX0 6	CPSA265	68
11352	0322011363 PL X2,SPF2 IF COMPASS WAS NOT CALLED BY COMPILER	CPSA265	69
	5110000123 SA1 CP.PS GET COMPILER PAGE SIZE	CPSA265	70
11353	5120000122 SA2 CP.PD GET COMPILER PRINT DENSITY	CPSA265	71
	10622 BX6 X2	CPSA265	72
11354	5130000124 SA3 CP.PW GET COMPILER PRINT WIDTH	CPSA265	73
	5160003067 SA6 COMPPD SAVE COMPILER PRINT DENSITY	CPSA265	74
11355	22703 LX7 X3	CPSA265	75

	10611			BX6	X1		CPSA265	76
		5170003071		SA7	COMPPW	SAVE COMPILER PRINT WIDTH	CPSA265	77
11356	5160003070			SA6	COMPPS	SAVE COMPILER PAGE SIZE	CPSA265	78
		14711		BX7	-X1	FTN PASSES COMPLIMENT OF PAGE SIZE	CPSA265	79
11357	5130011420			SA3	SPFB+1	8LPI	CPSA265	80
		7160000006		SX6	6D	PRESET 6LPI	CPSA265	81
11360	11303			BX3	X0*X3		CPSA265	82
		11202		BX2	X0*X2		CPSA265	83
		37332		IX3	X3-X2		CPSA265	84
11361	0313011362			NZ	X3,SPF1	IF 6LPI	CPSA265	85
		7160000010		SX6	8D	8LPI	CPSA265	86
11362	5160000122		SPF1	SA6	CP.PD	STORE NUMERICAL VALUE FOR PRINT DENSITY	CPSA265	87
		5170000123		SA7	CP.PS	STORE PAGE SIZE FROM COMPILER	CPSA265	88
							CPSA265	89
11363	7110011415		SPF2	GETPAGE	SPFA	GET CURRENT JOB/SYSTEM PAGE SIZE	CPSA265	90
11365	5110011415			SA1	SPFA	GET JOB VALUES	CPSA265	91
		43364		MX3	-8	*PS* FIELD WIDTH	CPSA265	92
		21114		AX1	12	POSITION FOR *PW*	CPSA265	93
11366	5120000124			SA2	CP.PW		CPSA265	94
		15613		BX6	-X3*X1		CPSA265	95
11367	0312011370			NZ	X2,SPF3	IF *PW* SPECIFIED	CPSA265	96
		54620		SA6	A2		CPSA265	97
11370	21110		SPF3	AX1	8	POSITION FOR *PS*	CPSA265	98
		5120000123		SA2	CP.PS		CPSA265	99
		15613		BX6	-X3*X1		CPSA265	100
11371	0312011372			NZ	X2,SPF4	IF *PS* SPECIFIED	CPSA265	101
		54620		SA6	A2		CPSA265	102
11372	21110		SPF4	AX1	8	POSITION FOR *PD*	CPSA265	103
		43370		MX3	-4		CPSA265	104
		5120000122		SA2	CP.PD		CPSA265	105
11373	15613			BX6	-X3*X1		CPSA265	106
		0312011374		NZ	X2,SPF5	IF *PD* SPECIFIED	CPSA265	107
		54620		SA6	A2		CPSA265	108
11374	21601		SPF5	AX6	1	DIVIDE BY 2	CPSA265	109
		54220		SA2	A2	GET CURRENT *PD*	CPSA265	110
		21201		AX2	1		CPSA265	111
11375	5242011414			SA4	SPFB-3+X2		CPSA265	112
		10744		BX7	X4		CPSA265	113
11376	5170003074			SA7	FRSTLIN	SET INITIAL *PD* (ALWAYS)	CPSA265	114
		37762		IX7	X6-X2		CPSA265	115
11377	0307011401			ZR	X7,SPF6	IF CC *PD* AND JOB *PD* ARE EQUAL	CPSA265	116
		5236011414		SA3	SPFB-3+X6	GET JOB DEFAULT *PD*	CPSA265	117
11400	10733			BX7	X3		CPSA265	118
11401	5170003075		SPF6	SA7	LASTLIN	SET EXIT *PD* (=0 IF NO CHANGE)	CPSA265	119
		5110000123		SA1	CP.PS	GET CURRENT *PS*	CPSA265	120
11402	7241777773			SX4	X1-4D		CPSA265	121
		7170000004		SX7	4	PRESET MIN = 4D	CPSA265	122
11403	0334011405			NG	X4,SPF7	IF *PS* .LT. 4 - USE MIN = 4	CPSA265	123
		7241777633		SX4	X1-100D		CPSA265	124
11404	0334011407			NG	X4,SPF8	IF 4.LE.PS.LT.100	CPSA265	125
		7170000143		SX7	99D	SET MAX = 99D	CPSA265	126
11405	5170000123		SPF7	SA7	CP.PS		CPSA265	127
		7110011576		MESSAGE	ARGA,,R	DIAGNOSE PAGE SIZE ADJUSTED	CPSA265	128
11407	5110000123		SPF8	SA1	CP.PS		CPSA265	129
		5120003072		SA2	NEJF		CPSA265	130
11410	0302011411			ZR	X2,SPF9	IF *N* NOT SPECIFIED	CPSA265	131
		36612		IX6	X1+X2		CPSA265	132

11411	5120000121	54620	SPF9	SA6	A2		CPSA265	133
				SA2	CP.BLF		CPSA265	134
		0302011413		ZR	X2,SPF10	IF *BL* NOT SPECIFIED	CPSA265	135
11412	7221000005			SX2	X1+5	ELSE, BL CONTROLLED PAGE SIZE = CP.PS+5	CPSA265	136
11413	10622		SPF10	BX6	X2		CPSA265	137
		5160003073		SA6	PSIZE		CPSA265	138
11414	0400011350			EQ	SPF		CPSA265	139
							CPSA265	140
11415		2	SPFA	BSSZ	2	GETPAGE RETURN DATA	CPSA265	141
11417	23555555411420115555		SPFB	DATA	10HS	6LPI	CPSA265	142
11420	24555555431420115555			DATA	10HT	8LPI	CPSA265	143
							CPSA265	144
							F4810A	261
			**	ZLC - ZERO FIRST 100B WORDS OF LCM FIELD LENGTH, IF ANY.			CPS064	1330
			*	THIS AREA IS USED BY *CLS* FOR RAPID CLEARING OF SCM AREAS.			CPS064	1331
							CPS064	1332
							CPS064	1333
11421	0000000000		ZLC	PS		RETURN EXIT	CPS064	1334
11422	5110000203			SA1	CP.AFLL		CPS064	1335
		0301011421		ZR	X1,ZLC	IF NO LCM FIELD LENGTH	CPS064	1336
11423	43100			MX1	0		CPS064	1337
		7120011426		SX2	ZLCA		CPS064	1338
11424	7130000100			SX3	100B		CPS064	1339
		0100006245		RJ	WLC	WRITE LCM	CPS064	1340
11425	0400011421			EQ	ZLC	RETURN	CPS064	1341
							CPS064	1342
11426		100	ZLCA	BSSZ	100B		CPS064	1343
			**	OPTS - TABLE OF CONTROL CARD OPTIONS.			F4810A	263
			*				F4810A	264
			*	BITS	CONTENTS		F4810A	265
			*	59-48	ARGUMENT		F4810A	266
			*	47-30	IF LT 0, -ADDRESS OF DEFAULT, = NOT ALLOWED.		F4810A	267
			*		IF GT 0, ADDRESS OF DEFAULT, = ALLOWED.		F4810A	268
			*	29	MULTIPLE OCCURRANCES ALLOWED		CPS214	15
			*	28	OPTION ENCOUNTERED		CPS214	16
			*	27-00	IF LT 0, -ADDRESS OF SPECIAL PROCESSOR.		CPS214	17
			*		IF GT 0, ADDRESS OF FLAG TO BE SET.		F4810A	270
							F4810A	271
							F4810A	272
11526			OPT	BSS	0		F4810A	273
11526	01007662260000011572			VFD	12/0LA,18/-OPTA,30/ABTF		CPS214	18
11527	02000115520000000241			VFD	12/0LB,18/OPTB,30/B		CPS214	19
11530	02140115530000000121			VFD	12/0LBL,18/OPTBL,30/CP.BLF		CPSA181	16
11531	04007662230000000115			VFD	12/0LD,18/-OPTD,30/CP.ERRCT		CPS214	20
11532	05000115551777777320			VFD	12/0LE,18/OPT E,2/0,28/-ARG7A		CPS214	21
11533	06000115560000011575			VFD	12/0LF,18/OPTF,30/FVAL		CPS214	22
11534	07000115575777777315			VFD	12/0LG,18/OPTG,1/1,1/0,28/-ARG8		CPS214	23
11535	11000115600000000211			VFD	12/0LI,18/OPTI,30/I		CPS214	24
11536	14000115610000000221			VFD	12/0LL,18/OPTL,30/0		CPS214	25

11537	14170115621777777267	VFD	12/0LLO,18/OPTLO,2/0,28/-ARG15	CPS214	26
11540	15140115631777777270	VFD	12/0LML,18/OPTML,2/0,28/-ARG14	CPS214	27
11541	16007662130000003072	VFD	12/0LN,18/-OPTN,30/NEJF	CPS214	28
11542	17000115651777777320	VFD	12/0LO,18/OPTO,2/0,28/-ARG7A	CPS214	29
11543	20007662110000000117	VFD	12/0LP,18/-OPTP,30/CP.PAGE	CPS214	30
11544	20030042701777777257	VFD	12/0LPC,18/BLANKS,2/0,28/-ARG19	CPS214	31
11545	23000115675777777307	VFD	12/0LS,18/OPTS,1/1,1/0,28/-ARG10	CPS214	32
		IFNE	SPY,0,1	CPS214	33
		VFD	12/0LW,18/OPTW,30/SPYPAR	CPS214	34
11546	30000115710000000127	VFD	12/0LX,18/OPTX,30/CP.XNAME	CPS214	35
11547	20040001221777777241	VFD	12/0LPD,18/CP.PD,2/0,28/-ARG24	CPS214	36
11550	20230001231777777220	VFD	12/0LPS,18/CP.PS,2/0,28/-ARG26	CPS214	37
	23	LOPT	EQU *-OPT	F4810A	293
				F4810A	294
				F4810A	295
11551	00000000004000000000	OPTA	DATA 1S29	F4810A	296
11552	14071700000000000000	OPTB	DATA 0LLG0	F4810A	297
11553	00000000000000000001	OPTBL	DATA 1	CPSA181	17
11554	40000000000000000000	OPTD	DATA 1BS59	F4810A	298
11555	05222230000000000000	OPTTE	DATA 0LERRS	CPSA142	113
11556	03171520012323000000	OPTTF	DATA 0LCOMPASS	F4810A	299
11557	23312324053024000000	OPTTG	DATA 0LSYSTEXT	F4810A	300
11560	03171520111405000000	OPTTI	DATA 0LCOMPILE	F4810A	301
11561	17252420252400000000	OPTTL	DATA 0LOUTPUT	F4810A	302
11562	03060730000000000000	OPTLO	DATA 0LCFGX	F4810A	303
11563	35373437440000000000	OPTML	DATA 0L"JDATE"	F4810A	304
11564	00000000000000000000	OPTN	DATA 0	F4810A	305
11565	17252420252400000000	OPTO	DATA 0LOUTPUT	F4810A	306
11566	00000000000000000000	OPTP	DATA 0	F4810A	307
11567	23312324053024000000	OPTS	DATA 0LSYSTEXT	F4810A	308
11570	34333300000000000000	OPTW	DATA 0L100	F4810A	309
11571	17201400000000000000	OPTX	DATA 0LOPL	F4810A	310
				F4810A	311
				F4810A	312
11572	00000000000000000000	ABTF	DATA 0	F4810A	313
11573	17252420252400000000	ELFN	DATA 0LOUTPUT	F4810A	314
11574	00000000000000000000	ERFFLG	DATA 0 RESET TO 1 WHEN O OR E PARAMETER FOUND	CPSA142	114
11575	00000000000000000000	FVAL	DATA 0	F4810A	315
11576	55200107055523113205	ARGA	DATA C* PAGE SIZE RANGE 4 - 99.*	CPSA265	145
11601	55555555555555555555	ARGL	DATA 10H	F4810A	316
11602	55550201045503171624	ARGM	DIS ,* BAD CONTROL CARD ARGUMENT - XXXXXXX*	F4810A	317
11606	55551517220555241001	ARGN	DIS ,* MORE THAN 7 SYSTEM TEXTS SPECIFIED.*	F4810A	318
11612	00000005300503252405	ARGQ	CON 0REXECUTE	F4810A	319
		*	+ - * / () \$ = BL ,	F4810A	320
11613	04201036007707400000	GACA	VFD 4/1,4/1,4/0,4/2,4/1,4/-1,4/0,4/3,4/-0,4/1,4/-1,16/0	F4810A	321
11614	00000000000000000000	GACB	CON 0 STORAGE FOR SAVING (X6)	F4810A	322
11615	00000000000000000000	GACC	CON 0 STATUS WORD FOR CONTRLC	F4810A	323
11616	40404040404040404040	GACD	CON 40404040404040404040B	F4810A	324
11617	55161755031716242217	GACE	DATA C* NO CONTROL CARD TERMINATOR.*	F4810A	325
11622	55555555555555555555	GACF	DATA 10H	F4810A	326
11623	03171520012323000000	FNAME	DATA 0LCOMPASS 0 TABLE OF NAMES FOR *F* PARAMETER	F4810A	327
11624	22251600000000000000		DATA 0LRUN 1	F4810A	328
11625	06241637000000000000		DATA 0LFTN4 2	CPSA240	8
11626	06241640000000000000		DATA 0LFTN5 3	CPSA240	9
	4	NFNAME	EQU *-FNAME	F4810A	330
11627	00000000000000000000	SLFA	DATA 0 LIST FLAG TEMPORARY	F4810A	331

1412THE

		CLFN	MACRO	F1,F2		CPS258	7
			LOCAL	EXIT		CPS258	8
			SA1	F1		CPS258	9
1			SA2	F2		CPS258	10
2			ZR	X1,EXIT		CPS258	11
3			ZR	X2,EXIT		CPS258	12
4			BX1	X1-X2		CPS258	13
5			ZR	X1,ARGF		CPS258	14
6		EXIT	BSS	0		CPS258	15
7		CLFN	ENDM			CPS258	16
8							
9							
10							
11							
12		**	DMF - DIAGNOSE MISUSED FILES. DIAGNOSES SAME FILE			CPS258	18
13		*	DECLARED FOR LIST/INPUT/BINARY/XTEXT COMBINATION.			CPS258	19
14		*				CPS258	20
15		*	ENTRY	NONE		CPS258	21
16		*	EXIT	NONE		CPS258	22
17		*	USES	A1,A2,X1,X2		CPS258	23
18						CPS258	24
19	11630	0000000000	DMF	PS		CPS258	25
20	11631	5110000221	CLFN	0,B		CPS258	26
21	11634	5110000221	CLFN	0,CP.XNAME		CPS258	27
22	11637	5110000221	CLFN	0,I		CPS258	28
23	11642	5110000241	CLFN	B,CP.XNAME		CPS258	29
24	11645	5110000241	CLFN	B,I		CPS258	30
25	11650	5110000241	CLFN	B,ELFN		CPS258	31
26	11653	5110000127	CLFN	CP.XNAME,I		CPS258	32
27	11656	5110000127	CLFN	CP.XNAME,ELFN		CPS258	33
28	11661	0400011630	EQ	DMF		CPS258	34
29						CPS258	35
30	11662	7110011667	ARGF	MESSAGE ARGLFN,,R		CPS258	36
31	11664	7160041121	ABORT	,NODUMP		CPS258	37
32						CPS258	38
33	11667	06111405552523055503	ARGLFN	DIS ,*FILE USE CONTRADICTION*		CPS258	39
34							
35							
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** OPCODE TABLE PROTOTYPE.

CPS064 1345
CPS064 1346
CPS064 1347
CPS064 1348
CPS064 1349
CPS064 1350

D_M

USE OPCODES
SEG OPCODE TABLE PROTOTYPE.
BASE MIXED

** FIELD DEFINITIONS FOR CENTRAL PROCESSOR OPERATIONS.

CPS064 1352
CPS064 1353
CPS064 1354
CPS064 1355
CPS064 1356
CPS064 1357
CPS064 1358
CPS064 1359
CPS064 1360
CPS064 1361
CPS064 1362
CPS064 1363
CPS064 1364
CPS064 1365
CPS064 1366
CPS064 1367
CPS064 1368
CPS064 1369
CPS064 1370
CPS064 1371
CPS064 1372
CPS064 1373
CPS064 1374
CPS064 1375
CPS064 1376
CPS064 1377
CPS064 1378
CPS064 1379

Q MICRO 1,,*001*
A MICRO 1,,*040*
AQ MICRO 1,,*041*
B MICRO 1,,*100*
BQ MICRO 1,,*101*
X MICRO 1,,*140*
XQ MICRO 1,,*141*
-B MICRO 1,,*300*
-X MICRO 1,,*340*
X+B MICRO 1,,*144*
B+X MICRO 1,,*106*
A+B MICRO 1,,*044*
B+A MICRO 1,,*102*
A-B MICRO 1,,*054*
B+B MICRO 1,,*104*
B-B MICRO 1,,*114*
-B+A MICRO 1,,*302*
-B+B MICRO 1,,*304*
X+X MICRO 1,,*146*
X-X MICRO 1,,*156*
X*X MICRO 1,,*166*
X/X MICRO 1,,*176*
-X+X MICRO 1,,*346*
-X-X MICRO 1,,*356*
-X*X MICRO 1,,*366*

** CPOPA - REMOVE ONE LEVEL OF MICRO.
* CPOPA P1
* ENTRY (P1) = MICRO NAME.
* EXIT (D) = MICRO NAME.

CPOPA MACRO P1
D MICRO 1,, "P1"
ENDM

** CPUOP - CENTRAL PROCESSER OPERATION MACRO.
* CPUOP CTL,VAL,REQ,N1,N2,N3

* ENTRY (CTL) = 4 - FORCE UPPER AFTER INSTRUCTION.	CPS064	1393
* 2 - FORCE UPPER BEFORE INSTRUCTION.	CPS064	1394
* 1 - 30-BIT INSTRUCTION.	CPS064	1395
* (VAL) = VALUE OF OPERATION CODE.	CPS064	1396
* (REG) = IJK. (I) = CODE FOR I-PORION.	CPS064	1397
* 1 - OP-CODE PORTION.	CPS064	1398
* 2 - 2ND OR ONLY ADDRESS REGISTER.	CPS064	1399
* 3 - 1ST OF 2 ADDRESS REGISTERS.	CPS064	1400
* (NI) = FIELD DEFINITION OF MNEMONIC.	CPS064	1401
	CPS064	1402
	CPS064	1403
CPUOP MACRO CTL,VAL,REG,N1,N2,N3	CPS064	1404
D MICRO 3,, \$N1\$	CPS064	1405
CPOPA "D"	CPS064	1406
MN MICRO 1,2, \$N1\$	CPS064	1407
VFD 24/2R"MN",8/"D",8/"N2",8/"N3",12/1R	CPS064	1408
VFD 12/VAL,18/M.,3/CTL,9/REG,18/	CPS064	1409
ENDM	CPS064	1410
** PPUOP - DEFINE PP INSTRUCTION MACRO.	CPS064	1412
* PPUOP NAME,CTL,VAL	CPS064	1413
* ENTRY (NAME) = MNEMONIC NAME.	CPS064	1414
* (CTL) = 1 - 24-BIT WITH 12-BIT ADDRESS AND NO INDEXING.	CPS064	1415
* 2 - 12-BIT WITH SIGNED RELATIVE ADDRESS	CPS064	1416
* OR ABSOLUTE ADDRESS (UJN).	CPS064	1417
* 3 - 24-BIT WITH 18-BIT ADDRESS (LDC).	CPS064	1418
* 4 - 12-BIT WITH 6-BIT ADDRESS (LDN).	CPS064	1419
* 5 - 24-BIT WITH 12-BIT ADDRESS AND OPTIONAL	CPS064	1420
* INDEXING (LDM).	CPS064	1421
* 6 - 12-BIT WITH SIGNED RELATIVE ADDRESS (SHN).	CPS064	1422
* 7 - 24-BIT WITH 12-BIT ADDRESS AND REQUIRED	CPS064	1423
* SECOND FIELD (FNC).	CPS064	1424
* (VAL) = 12-BIT OPERATION CODE VALUE.	CPS064	1425
	CPS064	1426
	CPS064	1427
PPUOP MACRO NAME,CTL,VAL PERIPHERAL MACHINE CODES	CPS064	1428
DATA R\$NAME\$	CPS064	1429
VFD 3/1,27/M.,3/CTL,27/VAL	CPS064	1430
ENDM	CPS064	1431
** PSEUDO - DEFINE PSEUDO INSTRUCTION MACRO.	CPS064	1433
* PSEUDO TYPE,NAME	CPS064	1434
* ENTRY (TYPE) = 2 - CAN NOT OCCUR IN THE FIRST CARD GROUP.	CPS064	1435
* 3 - PROCESS WHILE IF SKIPPING.	CPS064	1436
* 4 - PERMISSIBLE ANYWHERE.	CPS064	1437
* 5 - FIRST CARD GROUP ONLY.	CPS064	1438
* (NAME) = NAME OF PSEUDO OPERATION.	CPS064	1439
	CPS064	1440
	CPS064	1441
PSEUDO MACRO TYPE,NAME	CPS064	1442
DATA R\$NAME\$	CPS064	1443

N. VFD 3/TYPE,12/0,9/N.,18//PASS1/NAME,18//PASS2/NAME
SET N.+1
ENDM

CPS073 12
CPS073 13
CPS064 1445

** PSEUD - DEFINE PSEUDO INSTRUCTION MACRO.
* PSEUD TYPE,NAME,PASS1,PASS2
* ENTRY (TYPE) = PSEUDO INSTRUCTION TYPE.
* (NAME) = NAME OF PSEUDO OPERATION.
* (P1) = PASS1 ADDRESS.
* (P2) = PASS2 ADDRESS.

CPS064 1447
CPS064 1448
CPS064 1449
CPS064 1450
CPS064 1451
CPS064 1452
CPS064 1453
CPS064 1454

PSEUD MACRO TYPE,NAME,P1,P2
DATA R\$NAME\$
VFD 3/TYPE,12/0,9/N.,18//PASS1/P1,18//PASS2/P2
N. SET N.+1
ENDM

CPS064 1455
CPS064 1456
CPS073 14
CPS073 15
CPS064 1458

* 6600 AND 7600 PP OPCODES.
* 6600, 7600 AND V PP OPCODES.

CPS064 1460
F4830CP 10
CPS064 1461

11672 OPS BSS 0
0 M. SET 0

CPS064 1462
CPS064 1463
CPS064 1464

11672 000000000000000141215 LIST -R
11674 000000000000000221215 PPUOP LJM,5,0100
11676 000000000000000251216 PPUOP RJM,5,0200
11700 000000000000000321216 PPUOP UJN,2,0300
11702 000000000000000161216 PPUOP ZJN,2,0400
11704 000000000000000201216 PPUOP NJN,2,0500
11706 000000000000000201216 PPUOP PJN,2,0600
11710 000000000000000151216 PPUOP MJN,2,0700
11712 000000000000000231016 PPUOP SHN,6,1000
11714 000000000000000141516 PPUOP LMN,4,1100
11716 000000000000000142016 PPUOP LPN,4,1200
11720 000000000000000230316 PPUOP SCN,4,1300
11722 000000000000000140416 PPUOP LDN,4,1400
11724 000000000000000140316 PPUOP LCN,4,1500
11726 000000000000000230216 PPUOP ADN,4,1600
11730 000000000000000140403 PPUOP SBN,4,1700
11732 00000000000000010403 PPUOP LDC,3,2000
11734 000000000000000142003 PPUOP ADC,3,2100
11736 000000000000000141503 PPUOP LPC,3,2200
11740 000000000000000202316 PPUOP LMC,3,2300
11742 000000000000000140404 PPUOP PSN,4,2400
11744 00000000000000010404 PPUOP LDD,4,3000
11746 000000000000000230204 PPUOP ADD,4,3100
11750 000000000000000141504 PPUOP SBD,4,3200
11752 000000000000000232404 PPUOP LMD,4,3300
11754 000000000000000220104 PPUOP STD,4,3400
RAD,4,3500

CPS064 1465
CPS064 1466
CPS064 1467
CPS064 1468
CPS064 1469
CPS064 1470
CPS064 1471
CPS064 1472
CPS064 1473
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CPS064 1491

11756	000000000000000011704	PPUOP	AOD,4,3600	CPS064	1492
11760	0000000000000000231704	PPUOP	SOD,4,3700	CPS064	1493
11762	0000000000000000140411	PPUOP	LDI,4,4000	CPS064	1494
11764	000000000000000010411	PPUOP	ADI,4,4100	CPS064	1495
11766	0000000000000000230211	PPUOP	SBI,4,4200	CPS064	1496
11770	0000000000000000141511	PPUOP	LMI,4,4300	CPS064	1497
11772	0000000000000000232411	PPUOP	STI,4,4400	CPS064	1498
11774	0000000000000000220111	PPUOP	RAI,4,4500	CPS064	1499
11776	000000000000000011711	PPUOP	AOI,4,4600	CPS064	1500
12000	0000000000000000231711	PPUOP	SOI,4,4700	CPS064	1501
12002	0000000000000000140415	PPUOP	LDM,5,5000	CPS064	1502
12004	000000000000000010415	PPUOP	ADM,5,5100	CPS064	1503
12006	0000000000000000230215	PPUOP	SBM,5,5200	CPS064	1504
12010	0000000000000000141515	PPUOP	LMM,5,5300	CPS064	1505
12012	0000000000000000232415	PPUOP	STM,5,5400	CPS064	1506
12014	0000000000000000220115	PPUOP	RAM,5,5500	CPS064	1507
12016	000000000000000011715	PPUOP	AOM,5,5600	CPS064	1508
12020	0000000000000000231715	PPUOP	SOM,5,5700	CPS064	1509
12022	0000000000000000110116	PPUOP	IAN,4,7000	CPS064	1510
12024	0000000000000000110115	PPUOP	IAM,7,7100	CPS064	1511
12026	0000000000000000170116	PPUOP	OAN,4,7200	CPS064	1512
12030	0000000000000000170115	PPUOP	OAM,7,7300	CPS064	1513
* 6600 AND V PP OPCODES.				CPS064	1514
				F4830CP	11
				CPS064	1516
5 M. SET 5				F4830CP	12
12032	0000000000000000142204	PPUOP	LRD,4,2400	F4830CP	13
12034	0000000000000000232204	PPUOP	SRD,4,2500	F4830CP	14
12036	0000000000000000053016	PPUOP	EXN,4,2600	CPS064	1518
12040	0000000000000000153016	PPUOP	MXN,4,2610	CPS064	1519
12042	0000000000000000150116	PPUOP	MAN,4,2620	CPS064	1520
12044	0000000000000000222016	PPUOP	RPN,4,2700	CPS064	1521
12046	000000000000013053120	PPUOP	KEYP,4,2700	F4830CP	15
12050	0000000000000000032204	PPUOP	CRD,4,6000	CPS064	1522
12052	0000000000000000032215	PPUOP	CRM,7,6100	CPS064	1523
12054	0000000000000000032704	PPUOP	CWD,4,6200	CPS064	1524
12056	0000000000000000032715	PPUOP	CWM,7,6300	CPS064	1525
12060	0000000000000000011215	PPUOP	AJM,7,6400	CPS064	1526
12062	0000000000000000230306	PPUOP	SCF,7,6440	F4830CP	16
12064	0000000000000000011215	PPUOP	IJM,7,6500	CPS064	1527
12066	0000000000000000030306	PPUOP	CCF,7,6540	F4830CP	17
12070	0000000000000000061215	PPUOP	FJM,7,6600	CPS064	1528
12072	0000000000000000230615	PPUOP	SFM,7,6640	F4830CP	18
12074	0000000000000000051215	PPUOP	EJM,7,6700	CPS064	1529
12076	0000000000000000030615	PPUOP	CFM,7,6740	F4830CP	19
12100	0000000000000000010316	PPUOP	ACN,4,7400	CPS064	1530
12102	0000000000000000040316	PPUOP	DCN,4,7500	CPS064	1531
12104	0000000000000000060116	PPUOP	FAN,4,7600	CPS064	1532
12106	0000000000000000061603	PPUOP	FNC,7,7700	CPS064	1533
* 6416 PP OPCODES.				CPS064	1534
				CPS064	1535
				CPS064	1536
12110	0000000000000000052416	PPUOP	ETN,4,2600	CPS064	1537
12112	0000000000000000052216	PPUOP	ERN,4,2700	CPS064	1538
				CPS064	1539
* 7600 PP OPCODES.				CPS064	1540
				CPS064	1541

		2	M.	SET	2		CPS064	1542
	12114	00000000000000061115		PPUOP	FIM,7,6000		CPS064	1543
	12116	00000000000000051115		PPUOP	EIM,7,6100		CPS064	1544
1	12120	00000000000000112215		PPUOP	IRM,7,6200		CPS064	1545
2	12122	00000000000000161115		PPUOP	NIM,7,6300		CPS064	1546
3	12124	00000000000000061715		PPUOP	FOM,7,6400		CPS064	1547
4	12126	00000000000000051715		PPUOP	EOM,7,6500		CPS064	1548
5	12130	00000000000000172215		PPUOP	ORM,7,6600		CPS064	1549
6	12132	00000000000000161715		PPUOP	NOM,7,6700		CPS064	1550
7	12134	00000000000000220616		PPUOP	RFN,4,7400		CPS064	1551
8	12136	00000000000000052316		PPUOP	ESN,4,7700		CPS064	1552
9							CPSA281	66
10			*		180 OPCODES.		CPSA281	67
11							CPSA281	68
12							CPSA281	69
13		4	M.	SET	4		CPSA281	70
14	12140	000000000000022042314		PPUOP	RDSL,4,100000		CPSA281	71
15	12142	000000000000022040314		PPUOP	RDCL,4,100100		CPSA281	72
16	12144	000000000000023100414		PPUOP	SHDL,4,101000		CPSA281	73
17	12146	000000000000014220414		PPUOP	LRDL,4,101100		CPSA281	74
18	12150	000000000000014221114		PPUOP	LRIL,4,101200		CPSA281	75
19	12152	000000000000014221514		PPUOP	LRML,5,101300		CPSA281	76
20	12154	000000000000023220414		PPUOP	SRDL,4,101400		CPSA281	77
21	12156	000000000000023221114		PPUOP	SRIL,4,101500		CPSA281	78
22	12160	000000000000023221514		PPUOP	SRML,5,101600		CPSA281	79
23	12162	000000000000010171404		PPUOP	HOLD,4,101700		CPSA281	80
24	12164	000000000000014200414		PPUOP	LPDL,4,102200		CPSA281	81
25	12166	000000000000014201114		PPUOP	LPIL,4,102300		CPSA281	82
26	12170	000000000000014201514		PPUOP	LPML,5,102400		CPSA281	83
27	12172	000000000000011162016		PPUOP	INPN,4,102600		CPSA281	84
28	12174	000000000000014040414		PPUOP	LDDL,4,103000		CPSA281	85
29	12176	000000000000001040414		PPUOP	ADDL,4,103100		CPSA281	86
30	12200	000000000000023020414		PPUOP	SBDL,4,103200		CPSA281	87
31	12202	000000000000014150414		PPUOP	LMDL,4,103300		CPSA281	88
32	12204	000000000000023240414		PPUOP	STD L,4,103400		CPSA281	89
33	12206	000000000000022010414		PPUOP	RADL,4,103500		CPSA281	90
34	12210	000000000000001170414		PPUOP	AODL,4,103600		CPSA281	91
35	12212	000000000000023170414		PPUOP	SODL,4,103700		CPSA281	92
36	12214	000000000000014041114		PPUOP	LDIL,4,104000		CPSA281	93
37	12216	000000000000001041114		PPUOP	ADIL,4,104100		CPSA281	94
38	12220	000000000000023021114		PPUOP	SBIL,4,104200		CPSA281	95
39	12222	000000000000014151114		PPUOP	LMIL,4,104300		CPSA281	96
40	12224	000000000000023241114		PPUOP	STIL,4,104400		CPSA281	97
41	12226	000000000000022011114		PPUOP	RAIL,4,104500		CPSA281	98
42	12230	000000000000001171114		PPUOP	AOIL,4,104600		CPSA281	99
43	12232	000000000000023171114		PPUOP	SOIL,4,104700		CPSA281	100
44	12234	000000000000014041514		PPUOP	LDML,5,105000		CPSA281	101
45	12236	000000000000001041514		PPUOP	ADML,5,105100		CPSA281	102
46	12240	000000000000023021514		PPUOP	SBML,5,105200		CPSA281	103
47	12242	000000000000014151514		PPUOP	LMML,5,105300		CPSA281	104
48	12244	000000000000023241514		PPUOP	STML,5,105400		CPSA281	105
49	12246	000000000000022011514		PPUOP	RAML,5,105500		CPSA281	106
50	12250	000000000000001171514		PPUOP	AOML,5,105600		CPSA281	107
51	12252	000000000000023171514		PPUOP	SOML,5,105700		CPSA281	108
52	12254	000000000000003220414		PPUOP	CRDL,4,106000		CPSA281	109
53	12256	000000000000003221514		PPUOP	CRML,7,106100		CPSA281	110
54	12260	000000000000003270414		PPUOP	CWDL,4,106200		CPSA281	111
55	12262	000000000000003271514		PPUOP	CWML,7,106300		CPSA281	
56								
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1412THE

12264	000000000000006231215	PPUOP	FSJM,7,106400	CPSA281	112
12266	000000000000006031215	PPUOP	FCJM,7,106500	CPSA281	113
12270	000000000000003100315	PPUOP	CHCM,7,107000	CPSA281	114
12272	000000000000011012015	PPUOP	IAPM,7,107100	CPSA281	115
12274	000000000000003150310	PPUOP	CMCH,7,107200	CPSA281	116
12276	000000000000017012015	PPUOP	OAPM,7,107300	CPSA281	117
12300	000000000000015031422	PPUOP	MCLR,4,107400	CPSA281	118
	7700	FNCLCDE	EQU 007700B *FNCL* HAS SAME OPCODE AS *FNC*	CPSA281	119
12302	000000000000006160314	PPUOP	FNCL,7,FNCLCDE	CPSA281	120
				CPS064	1553
* 6600, 7600 AND V CP OPCODES				F4830CP	20
				CPS064	1555
	0 M.	SET	0	CPS064	1556
12304	00002023000000000055	CPUOP	7,000,000,PS	CPS064	1557
12306	00002023002000000055	CPUOP	7,000,000,PSQ	CPS064	1558
12310	00002212002000000055	CPUOP	5,010,000,RJQ	CPS064	1559
12312	00001220002000000055	CPUOP	5,020,000,JPQ	CPS064	1560
12314	00001220200000000055	CPUOP	5,020,220,JPB	CPS064	1561
12316	00001220202000000055	CPUOP	5,020,220,JPBQ	CPS064	1562
12320	00003222300004000055	CPUOP	1,030,020,ZRX,Q	CPS064	1563
12322	00001632300004000055	CPUOP	1,031,020,NZX,Q	CPS064	1564
12324	00002014300004000055	CPUOP	1,032,020,PLX,Q	CPS064	1565
12326	00001607300004000055	CPUOP	1,033,020,NGX,Q	CPS064	1566
12330	00001511300004000055	CPUOP	1,033,020,MIX,Q	CPS064	1567
12332	00001122300004000055	CPUOP	1,034,020,IRX,Q	CPS064	1568
12334	00001722300004000055	CPUOP	1,035,020,ORX,Q	CPS064	1569
12336	00000406300004000055	CPUOP	1,036,020,DFX,Q	CPS064	1570
12340	00001104300004000055	CPUOP	1,037,020,IDX,Q	CPS064	1571
12342	00000521002000000055	CPUOP	5,040,000,EQQ	CPS064	1572
12344	00000521200004000055	CPUOP	1,040,200,EQB,Q	CPS064	1573
12346	00000521200400010055	CPUOP	1,040,320,EQB,B,Q	CPS064	1574
12350	00003222002000000055	CPUOP	5,040,000,ZRQ	CPS064	1575
12352	00003222200004000055	CPUOP	1,040,200,ZRB,Q	CPS064	1576
12354	00001605200004000055	CPUOP	1,050,200,NEB,Q	CPS064	1577
12356	00001605200400010055	CPUOP	1,050,320,NEB,B,Q	CPS064	1578
12360	00001632200004000055	CPUOP	1,050,200,NZB,Q	CPS064	1579
12362	00002014200004000055	CPUOP	1,060,200,PLB,Q	CPS064	1580
12364	00000705200004000055	CPUOP	1,060,200,GEB,Q	CPS064	1581
12366	00000705200400010055	CPUOP	1,060,320,GEB,B,Q	CPS064	1582
12370	00001405200400010055	CPUOP	1,060,230,LEB,B,Q	CPS064	1583
12372	00001405200004000055	CPUOP	1,060,020,LEB,Q	CPS064	1584
12374	00001607200004000055	CPUOP	1,070,200,NGB,Q	CPS064	1585
12376	00001511200004000055	CPUOP	1,070,200,MIB,Q	CPS064	1586
12400	00001424200400010055	CPUOP	1,070,320,LTB,B,Q	CPS064	1587
12402	00000724200400010055	CPUOP	1,070,230,GTB,B,Q	CPS064	1588
12404	00001424200004000055	CPUOP	1,070,200,LTB,Q	CPS064	1589
12406	00000724200004000055	CPUOP	1,070,020,GTB,Q	CPS064	1590
12410	00000230300000000055	CPUOP	0,100,122,BXX	CPS064	1591
12412	00000230354000000055	CPUOP	0,110,132,BXX*X	CPS064	1592
12414	00000230314000000055	CPUOP	0,120,132,BXX+X	CPS064	1593
12416	00000230334000000055	CPUOP	0,130,132,BXX-X	CPS064	1594
12420	00000230700000000055	CPUOP	0,140,122,BX-X	CPS064	1595
12422	00000230754000000055	CPUOP	0,150,123,BX-X*X	CPS064	1596
12424	00000230714000000055	CPUOP	0,160,123,BX-X+X	CPS064	1597
12426	00000230734000000055	CPUOP	0,170,123,BX-X-X	CPS064	1598
12430	00001430002000000055	CPUOP	0,200,100,LXQ	CPS064	1599
12432	00000130002000000055	CPUOP	0,210,100,AXQ	CPS064	1600

12434	00001430300000000055	CPUOP	0,220,102,LXX	CPS064	1601
12436	00001430200000000055	CPUOP	0,220,121,LXB	CPS064	1602
12440	00000130600000000055	CPUOP	0,220,121,AX-B	CPS064	1603
12442	00001430200600000055	CPUOP	0,220,132,LXB,X	CPS064	1604
12444	00000130600600000055	CPUOP	0,220,132,AX-B,X	CPS064	1605
12446	00001430300400000055	CPUOP	0,220,123,LXX,B	CPS064	1606
12450	00000130301400000055	CPUOP	0,220,123,AXX,-B	CPS064	1607
12452	00000130300000000055	CPUOP	0,230,102,AXX	CPS064	1608
12454	00000130200000000055	CPUOP	0,230,121,AXB	CPS064	1609
12456	00001430600000000055	CPUOP	0,230,121,LX-B	CPS064	1610
12460	00000130200600000055	CPUOP	0,230,132,AXB,X	CPS064	1611
12462	00001430600600000055	CPUOP	0,230,132,LX-B,X	CPS064	1612
12464	00000130300400000055	CPUOP	0,230,123,AXX,B	CPS064	1613
12466	00001430301400000055	CPUOP	0,230,123,LXX,-B	CPS064	1614
12470	00001630000000000055	CPUOP	0,240,101,NX	CPS064	1615
12472	00001630300000000055	CPUOP	0,240,102,NXX	CPS064	1616
12474	00001630200000000055	CPUOP	0,240,121,NXB	CPS064	1617
12476	00001630200600000055	CPUOP	0,240,132,NXB,X	CPS064	1618
12500	00001630300400000055	CPUOP	0,240,123,NXX,B	CPS064	1619
12502	00003230000000000055	CPUOP	0,250,101,ZX	CPS064	1620
12504	00003230300000000055	CPUOP	0,250,102,ZXX	CPS064	1621
12506	00003230200000000055	CPUOP	0,250,121,ZXB	CPS064	1622
12510	00003230200600000055	CPUOP	0,250,132,ZXB,X	CPS064	1623
12512	00003230300400000055	CPUOP	0,250,123,ZXX,B	CPS064	1624
12514	00002530000000000055	CPUOP	0,260,101,UX	CPS064	1625
12516	00002530300000000055	CPUOP	0,260,102,UXX	CPS064	1626
12520	00002530200000000055	CPUOP	0,260,121,UXB	CPS064	1627
12522	00002530200600000055	CPUOP	0,260,132,UXB,X	CPS064	1628
12524	00002530300400000055	CPUOP	0,260,123,UXX,B	CPS064	1629
12526	00002030000000000055	CPUOP	0,270,101,PX	CPS064	1630
12530	00002030300000000055	CPUOP	0,270,102,PXX	CPS064	1631
12532	00002030200000000055	CPUOP	0,270,121,PXB	CPS064	1632
12534	00002030200600000055	CPUOP	0,270,132,PXB,X	CPS064	1633
12536	00002030300400000055	CPUOP	0,270,123,PXX,B	CPS064	1634
12540	00000630314000000055	CPUOP	0,300,132,FXX+X	CPS064	1635
12542	00000630334000000055	CPUOP	0,310,132,FXX-X	CPS064	1636
12544	00000430314000000055	CPUOP	0,320,132,DXX+X	CPS064	1637
12546	00000430334000000055	CPUOP	0,330,132,DXX-X	CPS064	1638
12550	00002230314000000055	CPUOP	0,340,132,RXX+X	CPS064	1639
12552	00002230334000000055	CPUOP	0,350,132,RXX-X	CPS064	1640
12554	00001130314000000055	CPUOP	0,360,132,IXX+X	CPS064	1641
12556	00001130334000000055	CPUOP	0,370,132,IXX-X	CPS064	1642
12560	00000630354000000055	CPUOP	0,400,132,FXX*X	CPS064	1643
12562	00002230354000000055	CPUOP	0,410,132,RXX*X	CPS064	1644
12564	00000430354000000055	CPUOP	0,420,132,DXX*X	CPS064	1645
12566	00001130354000000055	CPUOP	0,420,132,IXX*X	CPS064	1646
12570	00001530002000000055	CPUOP	0,430,100,MXQ	CPS064	1647
12572	00000630374000000055	CPUOP	0,440,132,FXX/X	CPS064	1648
12574	00002230374000000055	CPUOP	0,450,132,RXX/X	CPS064	1649
12576	00001617000000000055	CPUOP	0,460,000,NO	CPS064	1650
12600	00001617002000000055	CPUOP	0,460,000,NOQ	CPS064	1651
12602	00001115200000000055	CPUOP	7,464,020,IMB	CPS064	1652
12604	00001115002000000055	CPUOP	7,464,000,IMQ	CPS064	1653
12606	00001115202000000055	CPUOP	7,464,020,IMBQ	CPS064	1654
12610	00000330300000000055	CPUOP	0,470,122,CXX	CPS064	1655
12612	00002301102000000055	CPUOP	1,500,120,SAAQ	CPS064	1656
12614	00002302102000000055	CPUOP	1,600,120,SBAQ	CPS064	1657

12616	00002330102000000055	CPUOP	1,700,120,SXAQ	CPS064	1658
12620	00002301002000000055	CPUOP	1,510,100,SAQ	CPS064	1659
12622	00002302002000000055	CPUOP	1,610,100,SBQ	CPS064	1660
12624	00002330002000000055	CPUOP	1,710,100,SXQ	CPS064	1661
12626	00002301202000000055	CPUOP	1,510,120,SABQ	CPS064	1662
12630	00002302202000000055	CPUOP	1,610,120,SBBQ	CPS064	1663
12632	00002330202000000055	CPUOP	1,710,120,SXBQ	CPS064	1664
12634	00002301302000000055	CPUOP	1,520,120,SAXQ	CPS064	1665
12636	00002302302000000055	CPUOP	1,620,120,SBXQ	CPS064	1666
12640	00002330302000000055	CPUOP	1,720,120,SXXQ	CPS064	1667
12642	00002301310000000055	CPUOP	0,530,132,SAX+B	CPS064	1668
12644	00002302310000000055	CPUOP	0,630,132,SBX+B	CPS064	1669
12646	00002330310000000055	CPUOP	0,730,132,SXX+B	CPS064	1670
12650	00002301214000000055	CPUOP	0,530,123,SAB+X	CPS064	1671
12652	00002302214000000055	CPUOP	0,630,123,SBB+X	CPS064	1672
12654	00002330214000000055	CPUOP	0,730,123,SXB+X	CPS064	1673
12656	00002301300000000055	CPUOP	0,530,120,SAX	CPS064	1674
12660	00002302300000000055	CPUOP	0,630,120,SBX	CPS064	1675
12662	00002330300000000055	CPUOP	0,730,120,SXX	CPS064	1676
12664	00002301100000000055	CPUOP	0,540,120,SAA	CPS064	1677
12666	00002302100000000055	CPUOP	0,640,120,SBA	CPS064	1678
12670	00002330100000000055	CPUOP	0,740,120,SXA	CPS064	1679
12672	00002301110000000055	CPUOP	0,540,132,SAA+B	CPS064	1680
12674	00002302110000000055	CPUOP	0,640,132,SBA+B	CPS064	1681
12676	00002330110000000055	CPUOP	0,740,132,SXA+B	CPS064	1682
12700	00002301204000000055	CPUOP	0,540,123,SAB+A	CPS064	1683
12702	00002302204000000055	CPUOP	0,640,123,SBB+A	CPS064	1684
12704	00002330204000000055	CPUOP	0,740,123,SXB+A	CPS064	1685
12706	00002301130000000055	CPUOP	0,550,132,SAA-B	CPS064	1686
12710	00002302130000000055	CPUOP	0,650,132,SBA-B	CPS064	1687
12712	00002330130000000055	CPUOP	0,750,132,SXA-B	CPS064	1688
12714	00002301604000000055	CPUOP	0,550,123,SA-B+A	CPS064	1689
12716	00002302604000000055	CPUOP	0,650,123,SB-B+A	CPS064	1690
12720	00002330604000000055	CPUOP	0,750,123,SX-B+A	CPS064	1691
12722	00002301200000000055	CPUOP	0,560,120,SAB	CPS064	1692
12724	00002302200000000055	CPUOP	0,660,120,SBB	CPS064	1693
12726	00002330200000000055	CPUOP	0,760,120,SXB	CPS064	1694
12730	00002301210000000055	CPUOP	0,560,132,SAB+B	CPS064	1695
12732	00002302210000000055	CPUOP	0,660,132,SBB+B	CPS064	1696
12734	00002330210000000055	CPUOP	0,760,132,SXB+B	CPS064	1697
12736	00002301600000000055	CPUOP	0,570,102,SA-B	CPS064	1698
12740	00002302600000000055	CPUOP	0,670,102,SB-B	CPS064	1699
12742	00002330600000000055	CPUOP	0,770,102,SX-B	CPS064	1700
12744	00002301230000000055	CPUOP	0,570,132,SAB-B	CPS064	1701
12746	00002302230000000055	CPUOP	0,670,132,SBB-B	CPS064	1702
12750	00002330230000000055	CPUOP	0,770,132,SXB-B	CPS064	1703
12752	00002301610000000055	CPUOP	0,570,123,SA-B+B	CPS064	1704
12754	00002302610000000055	CPUOP	0,670,123,SB-B+B	CPS064	1705
12756	00002330610000000055	CPUOP	0,770,123,SX-B+B	CPS064	1706
* 6600 AND V CP OPCODES				CPS064	1707
5 M. SET 5				F4830CP	21
				F4830CP	22
				F4830CP	23
12760	00002205200000000055	CPUOP	3,011,020,REB	CPS064	1711
12762	00002205002000000055	CPUOP	3,011,000,REQ	CPS064	1712
12764	00002205202000000055	CPUOP	3,011,020,REBQ	CPS064	1713
12766	00002705200000000055	CPUOP	3,012,020,WEB	CPS064	1714

1

13062

POPS BSS 0
1 N. SET 1

CPS073 17
CPS073 18
CPS073 19
CPS073 20

** FIRST CARD GROUP ONLY.

CPS064 1749
CPS064 1750
CPS064 1751
CPS064 1752
CPS064 1753
CPS064 1754
CPS064 1755
CPS064 1756

13062 00000000000000010223 PSEUDO 5,ABS
13064 00000015010310111605 PSEUD 5,MACHINE,MCH,MCH
13066 00000000200522112010 PSEUDO 5,PERIPH
13070 00000000000000202025 PSEUDO 5,PPU
13072 00000000002324053024 PSEUDO 5,STEXT

** PERMISSIBLE ANYWHERE.

CPS064 1758
CPS064 1759
CPS064 1760
CPS064 1761
CPS064 1762
CPS064 1763
CPS064 1764
CPS064 1765
CPS064 1766
CPS064 1767
CPS064 1768
CPS064 1769
CPS064 1770
CPS064 1771
CPS064 1772
CPS064 1773
CPS064 1774
CPS064 1775
CPS064 1776
CPS064 1777
CPS064 1778
CPS064 1779
CPS064 1780
CPS064 1781
CPS064 1782
CPS064 1783
CPS064 1784
CPS064 1785
CPS064 1786
CPS064 1787
CPS064 1788
CPS064 1789
CPS064 1790
CPS064 1791
CPS064 1792
CPS064 1793
CPS064 1794

13074 00000000000002012305 PSEUDO 4,BASE
13076 00000000000002345434 PSEUD 4,B1=1,B1=1.,.B1=1
13100 00000000000002425434 PSEUDO 4,B7=1
13102 00000000000003100122 PSEUD 4,CHAR,CHAR.,CHAR.
13104 00000000000003170405 PSEUDO 4,CODE
13106 00000003171515051624 PSEUDO 4,COMMENT
13110 00000000000003201720 PSEUDO 4,CPOP
13112 00000000000320233116 PSEUDO 4,CPSYN
13114 00000000040503151103 PSEUDO 4,DECMIC
13116 00000000000512050324 PSEUDO 4,EJECT
13120 00000000000005160404 PSEUDO 4,ENDD
13122 00000000000005160415 PSEUDO 4,ENDM
13124 00000000000010052205 PSEUDO 4,HERE
13126 00000000000000110603 PSEUDO 4,IFC
13130 00000000000000112220 PSEUDO 4,IRP
13132 00000000000014112324 PSEUDO 4,LIST
13134 00000000001501032217 PSEUDO 4,MACRO
13136 00000000150103221705 PSEUDO 4,MACROE
13140 00000000151103031624 PSEUDO 4,MICCNT
13142 00000000001511032217 PSEUDO 4,MICRO
13144 00000000000000161114 PSEUDO 4,NIL
13146 00000016171401020514 PSEUDO 4,NOLABEL
13150 00000000001617220506 PSEUDO 4,NOREF
13152 00000000170324151103 PSEUDO 4,OCTMIC
13154 00000000001720040506 PSEUDO 4,OPDEF
13156 00000000001720233116 PSEUDO 4,OPSYN
13160 00000000000020201720 PSEUDO 4,PPOP
13162 00000020252207040506 PSEUDO 4,PURGDEF
13164 00000020252207150103 PSEUDO 4,PURGMAC
13166 00000000000021250114 PSEUDO 4,QUAL
13170 00000000000000221524 PSEUDO 4,RMT
13172 00000000000023131120 PSEUDO 4,SKIP
13174 00000000002320010305 PSEUDO 4,SPACE
13176 00000000000000232324 PSEUDO 4,SST

CPS064	1795
CPS064	1796
CPS064	1797
CPS064	1798

CPS064 1800

CPS064	1802
CPS064	1803
CPS064	1804
CPS064	1805

CPS064 1807

CPS064	1810
CPS064	1811
CPS064	1812

CPS064	1813
CPS064	1814
CPS064	1815

CPS064	1816
CPS064	1817
CPS064	1818

CPS064	1819
CPS064	1820
CPS064	1821

CPS064	1822
CPS064	1823
CPS064	1824

CPS064	1825
CPS064	1826
CPS064	1827

CPS064	1828
CPS064	1829
CPS064	1830
CPS064	1831

CPS064	1831
CPS064	1832
CPS064	1833
CPS064	1834

CPS064	1834
CPS064	1835
CPS064	1836
CPS064	1837

CPS064	1837
CPS064	1838
CPS064	1839
CPS064	1840

CPS064	1840
CPS064	1841
CPS064	1842
CPS064	1843

CPS064	1843
CPS064	1844
CPS064	1845

13326	00000000001106202041	PSEUDO 2,IFPP6	CPS064	1846
13330	00000000001106202042	PSEUDO 2,IFPP7	CPS064	1847
13332	00000000000000140303	PSEUDO 2,LCC	CPS064	1848
13334	00000000000000141703	PSEUDO 2,LOC	CPS064	1849
13336	00000000000000141124	PSEUDO 2,LIT	CPS064	1850
13340	00000000000000150130	PSEUDO 2,MAX	CPS064	1851
13342	0000000000000001504	PSEUDO 2,MD	CPS064	1852
13344	00000000000000151116	PSEUDO 2,MIN	CPS064	1853
13346	00000000000000172207	PSEUDO 2,ORG	CPS064	1854
13350	00000000000017220703	PSEUDO 2,ORGC	CPS064	1855
13352	00000000001104051624	PSEUDO 2,IDENT	CPS064	1856
13354	00000000000000201723	PSEUDO 2,POS	CPS064	1857
13356	00000000000000220520	PSEUDO 2,REP	CPS064	1858
13360	00000000000022052003	PSEUDO 2,REPC	CPS064	1859
13362	00000000000022052011	PSEUDO 2,REPI	CPS064	1860
13364	0000000000000002254	PSEUDO 2,R=	CPS064	1861
13366	00000000000000230507	PSEUDO 2,SEG	CPS064	1862
13370	00000023050715051624	PSEUDO 2,SEGMENT	CPS064	1863
13372	00000000000000230524	PSEUDO 2,SET	CPS064	1864
13374	00000023241720042520	PSEUDO 2,STOPDUP	CPS064	1865
13376	00000000000000252305	PSEUDO 2,USE	CPS064	1866
13400	00000000252305140315	PSEUDO 2,USELCM	CPS064	1867
13402	00000000000000260604	PSEUDO 2,VFD	CPS064	1868
13404	00000000003024053024	PSEUDO 2,XTEXT	CPS064	1869
13406	0000000000000000054	PSEUD 2,=,EQU,EQU	CPS064	1870

** NEW PSEUDO OPS.

CP147 64

CP147 65

CP147 66

CP147 67

13410 00000000001404230524 PSEUDO 4,LDSET

13412 00000000000000020325 PSEUDO 5,BCU

13414 00000000000000150325 PSEUDO 5,MCU

13416 00000000000002031720 PSEUDO 4,BCOP

13420 00000000000016041720 PSEUDO 4,NDOP

13422 00000000000311202025 PSEUDO 5,CIPPU

13424 00000000150515230514 PSEUDO 5,MEMSEL

13426 00000000000003171614 PSEUDO 2,CONL

13430 00000000000026060414 PSEUDO 2,VFDL

CPS064 1871

1540 LGOPS EQU *-OPS

CPS064 1872

M_D BASE DECIMAL

CPS064 1873

* BUFFER SPACE FOR LOADING SYSTEM TEXT.

CPSA097 8

CPS064 1876

CPS064 1877

13432 IFNE OVERLAY,0,2

CPS064 1878

GBUF BSS 0 CIO BUFFER SPACE FOR *G* SYSTEXT FILE

CPS064 1879

15434 ENDZ EQU GBUF+GBUFL MANAGED TABLE SPACE DURING *LST* PROCESSING

CPS064 1880

IFEQ OVERLAY,0 SEGMENT CONTROL CPS064 1882

IDENT SECONDARY OVERLAY. CPS064 1883

CPS064 1884

ELSE CPS064 1885

CPS064 1886

CPS064 1887

IDENT "OVLA",ORGA+1,,1,1 SECONDARY OVERLAY CPS064 1888

COMMENT CYBER 70/ MODEL "MODEL" CPS064 1889

COMMENT COMPREHENSIVE ASSEMBLER PROGRAM VERSION "VERSION". CPS064 1890

10562 10561 ORGA EQU PRTA CPS064 1891

ORG ORGA+1 CPS064 1892

CPS064 1893

ENDIF CPS064 1894

1412THE

** PASS 1 CONTROL.

COMPASS 5279

COMPASS 5280

COMPASS 5281

COMPASS 5284

COMPASS 5285

COMPASS 5286

COMPASS 5287

10562 0100021551

PASS1

QUAL
RJPASS1
PRS

PRESET STORAGE

10563 7160241115

TIME

ATIME

10566 0100020024

RJ

AUT

ALLOCATE USE TABLE

** CTL - SEARCH FOR IDENT CARD.

COMPASS 5289

COMPASS 5290

COMPASS 5291

COMPASS 5292

10567 0100020517

CTL

RJ

INPUT1

READ FIRST CARD

10570 0100020173

RJ

EDIT

CMP20 54

10571 0100006066

RJ

SETUP

COMPASS 5293

10572 5110003201

SA1

TITBUF

SET TITLE

COMPASS 5294

0100006137

RJ

SNT

COMPASS 5295

10573 5110012132

SA1

=7R*****

PRESET IDNAM

COMPASS 5296

10611

BX6

X1

COMPASS 5297

10574 5160003120

SA6

IDNAM

COMPASS 5298

5110003103

SA1

IOP

COMPASS 5299

10575 5120012133

SA2

=5RIDENT

COMPASS 5300

13612

BX6

X1-X2

COMPASS 5301

10576 0306010604

ZR

X6,CTL2

IF OP CODE IS IDENT

COMPASS 5302

7120051604

SX2

3REND

COMPASS 5303

10577 13621

BX6

X2-X1

COMPASS 5304

0316010602

NZ

X6,CTL1

IF NOT *END* CARD

COMPASS 5305

10600 0100022346

RJ

RSS

RECORD SEGMENT START

COMPASS 5306

10601 0400010623

EQ

CTL105

PROCESS END CARD

COMPASS 5307

10602 0100020112

CTL1

RJ

CWI

WRITE INTERMEDIATE FILE

COMPASS 5308

10603 0400010567

EQ

CTL

COMPASS 5309

10604 0100006036

CTL2

RJ

SCLIST

SCAN IDENT NAME

COMPASS 5310

10605 5160003120

SA6

IDNAM

COMPASS 5311

10166

BX1

X6

DISPLAY IDENT MESSAGE

COMPASS 5312

10606 0100005351

RJ

DIM

COMPASS 5313

10607 0100022346

RJ

RSS

RECORD SEGMENT START

COMPASS 5314

** CTL60 - CLEAR OPERATION CODE ERROR.

COMPASS 5316

COMPASS 5317

COMPASS 5318

10610 76600

CTL60

SX6

B0

COMPASS 5319

5160003321

SA6

OERR

COMPASS 5320

10611 5160003343

SA6

W9ERR

AND MICRO WARNING ERROR

COMPASS 5321

10612 43600

CTL65

MX6

0

COMPASS 5322

5160003322

SA6

AERR

COMPASS 5323

10613 5160003327

SA6

UERR

COMPASS 5324

5160003341

SA6

W7ERR

COMPASS 5325

** CTL70 - RETURN POINT FOR MOST OPERATION CODE PROCESSORS.

COMPASS 5327

COMPASS 5328
COMPASS 5329
COMPASS 5330

10614 0100023001 CTL70 RJ WINTER WRITE INTERMEDIATE FILE

** CTL100 - MAIN COMPASS PASS 1 CONTROL.

COMPASS 5332
COMPASS 5333
COMPASS 5334

10615 0100020517 CTL100 RJ INPUT1 READ NEXT CARD
10616 5110003556 SA1 IFCNT CHECK IF-SKIPPING

COMPASS 5335
CPS066 1

7160000001 SX6 1
10617 0301010623 ZR X1,CTL105 IF NOT SKIPPING
5120026437 SA2 CARD

CPS066 2
CPS066 3
CPS106 5

10620 6272777730 SB7 X2-1R* CHECK FOR COMMENT CARD
0470010651 ZR B7,CTL290 IF COMMENT CARD

CPS106 6
CPS106 7

10621 37616 IX6 X1-X6 REDUCE COUNT

CPS066 4

54610 SA6 A1
0316010623 NZ X6,CTL105 IF STILL SKIPPING
10622 5160003307 SA6 NOAS CLEAR NO-ASSEMBLY FLAG

CPS066 5
CPS066 6
CPS066 7

10623 0100020173 CTL105 RJ EDIT REMOVE CONCATENATION AND MICROS
10624 0100006066 CTL110 RJ SETUP PREPARE FOR ASSEMBLY
10625 5110026436 SA1 STYPE

COMPASS 5336
COMPASS 5337
COMPASS 5338

6271777730 SB7 X1-1R* CHECK FOR COMMENTS CARD
10626 0470010651 ZR B7,CTL290 IF COMMENT CARD
5110003110 SA1 POSCTR CHECK FOR END OF WORD

COMPASS 5339
COMPASS 5340
COMPASS 5341

10627 0311010630 + NZ X1,*+1
0100023346 RJ YFOUP PUSH ON TO NEXT WORD
10630 5110003103 SA1 IOP LOOK UP OPERATION CODE

COMPASS 5342
COMPASS 5343
COMPASS 5344

0100006166 RJ TLUOP
10631 5110003303 SA1 OPTYPE DETERMINE TYPE OF OPCODE
7100000007 SX0 7

COMPASS 5345
COMPASS 5346
COMPASS 5347

10632 21171 AX1 57
11210 BX2 X1*X0
5150003556 SA5 IFCNT CHECK IF-SKIPPING

COMPASS 5348
COMPASS 5349
COMPASS 5350

10633 5140003114 SA4 MACHINE
7232777774 SX3 X2-3

COMPASS 5352
COMPASS 5357

10634 0305010635 + ZR X5,*+1 IF NOT SKIPPING
0313010610 NZ X3,CTL60 JUMP IF SKIPPING AND NOT END OR ENDIF

COMPASS 5358
COMPASS 5359

10635 6272777773 SB7 X2-4
0470010643 ZR B7,CTL280 IF TYPE 4

COMPASS 5360
COMPASS 5361

10636 0670010645 PL B7,CTL260 IF TYPES 5,6 OR 7
76610 SX6 B1 SET FIRST CARD GROUP FLAG

COMPASS 5362
COMPASS 5363

10637 5160003137 SA6 IFCDGP
0277010644 JP CTL200+4+B7

COMPASS 5364
COMPASS 5365

10640 0304010664 CTL200 ZR X4,CTLCP TYPE 0 - CP OPERATION

COMPASS 5366
COMPASS 5367

0400011055 EQ CTLPPER IF CP OP IN PP CODING
10641 0314011060 + NZ X4,CTLPP TYPE 1 - PP OPERATION
0400010664 EQ CTLCP IF PP OP IN CP CODING

COMPASS 5368
COMPASS 5369
COMPASS 5370

10642 46000 + NO TYPE 2 - NORMAL PSEUDO OPERATION
10643 5110003303 CTL280 SA1 OPTYPE TYPE 3 - PSEUDO PROCESSED WHILE IN IF CODE
21122 AX1 18 JUMP ON PSEUDO OP

COMPASS 5371
COMPASS 5372
COMPASS 5373

63710 SB7 X1
10644 0277000000 JP B7

COMPASS 5374
COMPASS 5375

** CTL260 - TYPE 5, 6, AND 7 PSEUDO OPERATIONS.

COMPASS 5377
COMPASS 5378
COMPASS 5379

10645	0717020644	CTL260	GT	B7,B1,MACALL IF MACRO (TYPES 6 + 7)
	5110003137		SA1	IFCDGP CHECK IF THIS CARD IS LEGAL
10646	0301010643		ZR	X1,CTL280 JUMP IF SO
10647	76610	CTL80	SX6	B1 NOTE OP CODE ERROR
	5160003345		SA6	EFLG
10650	5160003321		SA6	OERR COMPLAIN AND IGNORE OP
	0400010614		EQ	CTL70

COMPASS 5380
COMPASS 5381
COMPASS 5382
COMPASS 5383
COMPASS 5384
COMPASS 5385
COMPASS 5386

** CTL200 - CHECK IF SKIP COUNT FOR COMMENT CARDS.

COMPASS 5388

10651	5150003556	CTL290	SA5	IFCNT
	63750		SB7	X5
10652	0571010653		NE	B7,B1,CTL300 IF STILL IF-SKIPPING
	76600		SX6	B0 TERMINATE IF-SKIPPING
	54650		SA6	A5
		*	EQ	CTL300

COMPASS 5389
COMPASS 5390
COMPASS 5391
COMPASS 5392
COMPASS 5393
COMPASS 5394
COMPASS 5395
COMPASS 5396

** CTL300 - RETURN POINT FOR PSEUDOS WITH NO PASS 2 PROCESSING.

COMPASS 5398
COMPASS 5399
COMPASS 5400

10653	0100020112	CTL300	RJ	CWI	CONDITIONALLY WRITE THE INTERMEDIATE
10654	0400010615		EQ	CTL100	READ NEXT CARD

COMPASS 5401
COMPASS 5402

** CTL400 - RETURN POINT FOR PSEUDOS THAT HAVE OPCODE CHANGED.

COMPASS 5404
COMPASS 5405
COMPASS 5406

10655	76610	CTL400	SX6	B1	
	5160003310		SA6	TXTFLG	
10656	0100020112		RJ	CWI	WRITE INTERMEDIATE
10657	43600		MX6	0	
	5160003310		SA6	TXTFLG	
10660	0400010615		EQ	CTL100	READ NEXT CARD

COMPASS 5407
COMPASS 5408
COMPASS 5409
COMPASS 5410
COMPASS 5411
COMPASS 5412

** ERA - RETURN POINT FOR PSEUDOS WITH *A* ERROR.

COMPASS 5414
COMPASS 5415
COMPASS 5416

10661	76610	ERA	SX6	B1
	5160003345		SA6	EFLG
10662	5160003322		SA6	AERR
	0400010614		EQ	CTL70

COMPASS 5417
COMPASS 5418
COMPASS 5419
COMPASS 5420

**

SCAN INSTRUCTION FOR SCAD WHILE IN PASS 1.

COMPASS 5422
COMPASS 5423
COMPASS 5424
COMPASS 5425
COMPASS 5426

10663 5110006303 RJY SA1 EXLGN SCAN INITIALIZE RJ INSTRUCTION
0100023145 RJ YEVIEM

** DECODE CENTRAL PROCESSOR OPERATIONS.

COMPASS 5428

COMPASS 5429

COMPASS 5430

COMPASS 5431

COMPASS 5432

COMPASS 5433

COMPASS 5434

COMPASS 5435

COMPASS 5436

COMPASS 5437

COMPASS 5438

COMPASS 5439

COMPASS 5440

COMPASS 5441

COMPASS 5442

COMPASS 5443

COMPASS 5444

COMPASS 5445

COMPASS 5446

COMPASS 5447

COMPASS 5448

COMPASS 5449

COMPASS 5450

COMPASS 5451

COMPASS 5452

COMPASS 5453

COMPASS 5454

COMPASS 5455

COMPASS 5456

COMPASS 5457

COMPASS 5458

COMPASS 5459

COMPASS 5460

CMP9 1

COMPASS 5461

COMPASS 5462

COMPASS 5463

COMPASS 5464

COMPASS 5465

COMPASS 5466

COMPASS 5467

COMPASS 5468

COMPASS 5469

COMPASS 5470

COMPASS 5471

COMPASS 5472

COMPASS 5473

COMPASS 5474

COMPASS 5475

COMPASS 5476

COMPASS 5477

COMPASS 5478

COMPASS 5479

COMPASS 5480

COMPASS 5481

COMPASS 5482

COMPASS 5483

1	10664	5110003142	CTLCP	SA1	COL	RECLAIM FIRST 2 LETTERS OF OP CODE	COMPASS	5431
2		5221026437		SA2	X1+CARD		COMPASS	5432
3	10665	54321		SA3	A2+B1		COMPASS	5433
4		20206		LX2	6		COMPASS	5434
5		12623		BX6	X2+X3		COMPASS	5435
6		43700		MX7	0		COMPASS	5436
7	10666	5160003273		SA6	OPADS		COMPASS	5437
8		54761		SA7	A6+B1	OPADS+1	COMPASS	5438
9		54771		SA7	A7+B1	OPADS+2	COMPASS	5439
10	10667	73611		SX6	X1+B1		COMPASS	5440
11		54771		SA7	A7+B1	OPADS+3	COMPASS	5441
12		5170003561		SA7	P1TEMP	SUBFIELD COUNT	COMPASS	5442
13	10670	5170003564		SA7	P1TEMPC		COMPASS	5443
14		5160003144		SA6	COLUMN		COMPASS	5444
15	10671	0100005444		RJ	GETCH		COMPASS	5445
16	10672	6271777774		SB7	X1-3	CHECK FOR AN A, B, OR X	COMPASS	5446
17		6261777747		SB6	X1-1RX		COMPASS	5447
18	10673	0770010674	+	NG	B7,*+1		COMPASS	5448
19		0560010701		NZ	B6,CTLCP1		COMPASS	5449
20	10674	7110000074		SX1	60		COMPASS	5450
21		0100023145		RJ	YEVITEM	CHECK FOR OP-CODE REGISTER	COMPASS	5451
22	10675	5120006300		SA2	ELREG		COMPASS	5452
23		0302010737		ZR	X2,CTLCPER	BAD OP-CODE	COMPASS	5453
24	10676	5110003145		SA1	CHAR		COMPASS	5454
25		6271777722		SB7	X1-1R		COMPASS	5455
26	10677	0470010704		ZR	B7,CTLCP2	IF END OF OPCODE FIELD	COMPASS	5456
27		0517010737		NE	B1,B7,CTLCPER	IF NOT *,*	COMPASS	5457
28	10700	0400010707		EQ	CTLCP2A		COMPASS	5458
29	10701	0100005444	CTLCP1	RJ	GETCH	MAKE SURE IT IS 2-LETTER OP CODE	COMPASS	5459
30	10702	6271777722		SB7	X1-1R		COMPASS	5460
31		0471010707		EQ	B7,B1,CTLCP2A	IF COMMA	CMP9	1
32	10703	0570010737		NZ	B7,CTLCPER	ERROR IF NOT 2-LETTER OP	COMPASS	5461
33							COMPASS	5462
34			*		ENTRY ON NEW SUBFIELD.		COMPASS	5463
35							COMPASS	5464
36	10704	5120003564	CTLCP2	SA2	P1TEMPC		COMPASS	5465
37		0312010707		NZ	X2,CTLCP2A	IF IN VARIABLE FIELD	COMPASS	5466
38	10705	5110003143		SA1	COL+1	RESET TO VARIABLE FIELD	COMPASS	5467
39		10611		BX6	X1		COMPASS	5468
40		54620		SA6	A2		COMPASS	5469
41	10706	5160003144		SA6	COLUMN		COMPASS	5470
42	10707	0100005444	CTLCP2A	RJ	GETCH		COMPASS	5471
43	10710	43600		MX6	0		COMPASS	5472
44		5160003562		SA6	P1TEMPA	REGISTER COUNT	COMPASS	5473
45							COMPASS	5474
46			*		ENTRY ON NEW TERM.		COMPASS	5475
47							COMPASS	5476
48	10711	6271777722	CTLCP3	SB7	X1-1R	CHECK FOR END OF ADDRESS EXPRESSION	COMPASS	5477
49		0470010760		ZR	B7,CTLCP10	IF END OF ADDRESS FIELD	COMPASS	5478
50	10712	0471010754		EQ	B7,B1,CTLCP9A	IF COMMA	COMPASS	5479
51		43600		MX6	0		COMPASS	5480
52	10713	5160003563		SA6	P1TEMP+2	OPERATOR	COMPASS	5481
53		6271777710		SB7	X1-1R&		COMPASS	5482
54	10714	0470010717		ZR	B7,CTLCP4	IF LOGICAL MINUS	COMPASS	5483
55								
56								
57								
58								
59								
60								

		6271777732		SB7	X1-1R+		COMPASS	5484
	10715	0470010717		ZR	B7,CTLCP4	IF PLUS SIGN	COMPASS	5485
		0571010720		NE	B7,B1,CTLCP5		COMPASS	5486
1	10716	76610		SX6	B1	SET FLAG FOR MINUS SIGN	COMPASS	5487
2		54660		SA6	A6		COMPASS	5488
3	10717	0100005444	CTLCP4	RJ	GETCH		COMPASS	5489
4	10720	7110000074	CTLCP5	SX1	60	EVALUATE ITEM	COMPASS	5490
5		0100023145		RJ	YEVITEM		COMPASS	5491
6	10721	5120006300	CTLCP6A	SA2	ELREG		COMPASS	5492
7		5150003561		SA5	P1TEMP	SUBFIELD COUNT	COMPASS	5493
8	10722	5235003274		SA3	X5+OPADS+1	SUBFIELD MASK	COMPASS	5494
9		54451		SA4	A5+B1	REGISTER COUNT	COMPASS	5495
10		54541		SA5	A4+B1	OPERATOR	COMPASS	5496
11	10723	0302010745		ZR	X2,CTLCP6	IF NOT REGISTER	COMPASS	5497
12		21203		AX2	3		COMPASS	5498
13		20502		LX5	2		COMPASS	5499
14	10724	6272777774		SB7	X2-3		COMPASS	5500
15	10725	0770010726	+	NG	B7,*+1	CORRECT FOR X REGISTER	COMPASS	5501
16		7120000003		SX2	3		COMPASS	5502
17	10726	63740		SB7	X4		COMPASS	5503
18		12552		BX5	X5+X2		COMPASS	5504
19		0717010737		GT	B7,B1,CTLCPER	ERROR IF 3RD REGISTER	COMPASS	5505
20	10727	0471010741		EQ	B7,B1,CTLCP7A	IF SECOND REGISTER	COMPASS	5506
21		20505		LX5	5		COMPASS	5507
22		12635		BX6	X3+X5	OR INTO MASK FOR FIRST REGISTER	COMPASS	5508
23	10730	73741		SX7	X4+B1		COMPASS	5509
24		54630		SA6	A3		COMPASS	5510
25		54740		SA7	A4		COMPASS	5511
26	10731	6271777730		SB7	X1-1R*		COMPASS	5512
27	10732	0470010733	+	ZR	B7,*+1	CHECK FOR CONNECTING * OR /	COMPASS	5513
28		0571010711		NE	B7,B1,CTLCP3		COMPASS	5514
29	10733	7261777732		SX6	X1-45B		COMPASS	5515
30		54650		SA6	A5		COMPASS	5516
31	10734	0100005444		RJ	GETCH		COMPASS	5517
32	10735	7110000074		SX1	60		COMPASS	5518
33		0100023145		RJ	YEVITEM		COMPASS	5519
34	10736	5120006300		SA2	ELREG	MAKE SURE IT IS A REGISTER	COMPASS	5520
35		0312010721		NZ	X2,CTLCP6A		COMPASS	5521
36	10737	43600	CTLCPER	MX6	0	MAKE BAD OP CODE	COMPASS	5522
37		5160003273		SA6	OPADS		COMPASS	5523
38	10740	0400010765		EQ	CTLCP11		CMP9	2
39	10741	20501	CTLCP7A	LX5	1	OR IN FOR SECOND REGISTER	COMPASS	5525
40		73741		SX7	X4+B1		COMPASS	5526
41		12635		BX6	X3+X5		COMPASS	5527
42		54740		SA7	A4		COMPASS	5528
43	10742	54630		SA6	A3		COMPASS	5529
44		6271777730		SB7	X1-1R*		COMPASS	5530
45	10743	0470010737		ZR	B7,CTLCPER		COMPASS	5531
46		0471010737		EQ	B7,B1,CTLCPER		COMPASS	5532
47	10744	0400010711		EQ	CTLCP3		COMPASS	5533
48							COMPASS	5534
49	10745	76410	CTLCP6	SX4	B1	SPACE OVER ADDRESS ITEM	COMPASS	5535
50		12634		BX6	X3+X4	SET ADDRESS FLAG	COMPASS	5536
51		54630		SA6	A3		COMPASS	5537
52	10746	6271777730		SB7	X1-1R*		COMPASS	5538
53	10747	0470010750	+	ZR	B7,*+1		COMPASS	5539
54		0571010711		NE	B7,B1,CTLCP3		COMPASS	5540

10750	0100005444		RJ	GETCH		COMPASS	5541
10751	7110000074		SX1	60		COMPASS	5542
	0100023145		RJ	YEVITEM		COMPASS	5543
10752	5120006300		SA2	ELREG		COMPASS	5544
	0312010737		NZ	X2,CTLCPER	COMPLAIN IF REGISTER	COMPASS	5545
10753	0400010721		EQ	CTLCP6A		COMPASS	5546
						COMPASS	5547
		*		END OF SUBFIELD.		CMP26	19
						CMP26	20
10754	5120003561	CTLCP9A	SA2	P1TEMP	COMMA	COMPASS	5548
	6261777721		SB6	X1-1R,		CMP9	3
10755	73621		SX6	X2+B1	UP SUBFIELD COUNT	COMPASS	5549
	6276777774		SB7	X6-3		COMPASS	5550
	54620		SA6	A2		COMPASS	5551
10756	0670010737		PL	B7,CTLCPER	IF TOO MANY COMMAS	CMP9	4
	0460010707		ZR	B6,CTLCP2A	IF COMMA	CMP9	5
10757	0400010711		EQ	CTLCP3		CMP9	6
						COMPASS	5554
		*		END OF FIELD.		CMP26	21
						CMP26	22
10760	5120003564	CTLCP10	SA2	P1TEMPC	CHECK FOR END OF FIELD	CMP9	7
	0312010765		NZ	X2,CTLCP11	IF END OF ADDRESS FIELD	CMP9	8
10761	5110003143		SA1	COL+1	RESET TO ADDRESS FIELD	CMP9	9
	10611		BX6	X1		CMP9	10
	54620		SA6	A2		CMP9	11
10762	5160003144		SA6	COLUMN		CMP9	12
	0100005444		RJ	GETCH		CMP9	13
10763	43600		MX6	0		CMP9	14
	6271777722		SB7	X1-1R		CMP9	15
10764	5160003562		SA6	P1TEMPA	REGISTER COUNT	CMP9	16
	0570010754		NZ	B7,CTLCP9A	IF NOT BLANK	CMP9	17
						CMP26	23
		*		END OF STATEMENT.		CMP26	24
						CMP26	25
10765	5120003273	CTLCP11	SA2	OPADS	CREATE LOOK UP MASK	CMP9	18
	54321		SA3	A2+B1		COMPASS	5558
	54431		SA4	A3+B1		COMPASS	5559
10766	20244		LX2	36		COMPASS	5560
	20334		LX3	28		COMPASS	5561
	20424		LX4	20		COMPASS	5562
	12623		BX6	X2+X3		COMPASS	5563
10767	36764		IX7	X6+X4		COMPASS	5564
	54241		SA2	A4+B1		COMPASS	5565
	20214		LX2	12		COMPASS	5566
10770	7100000055		SX0	1R		COMPASS	5567
	12472		BX4	X7+X2		COMPASS	5568
	36140		IX1	X4+X0		COMPASS	5569
10771	0100006166		RJ	TLUOP		COMPASS	5570
10772	5120003303		SA2	OPTYPE		COMPASS	5571
	66700		SB7	B0	SET B7 IN CASE THIS IS OPDEF	COMPASS	5572
10773	0332020644		NG	X2,MACALL	IF OPDEF CALL	COMPASS	5573
	0312010777		NZ	X2,CTLCP7	IF VALID OPCODE ENTRY	COMPASS	5574
10774	76710		SX7	B1	SET OP CODE ERROR TO A 30-BIT INSTRUCTION	COMPASS	5575
	5170003345		SA7	EFLG		COMPASS	5576
10775	5170003321		SA7	OERR		COMPASS	5577
	20733		LX7	27		COMPASS	5578
	10277		BX2	X7		COMPASS	5579

10776	5170003303		SA7	OPTYPE		COMPASS	5580
10777	76010	CTLCP7	SX0	B1		COMPASS	5581
	21233		AX2	27		COMPASS	5582
		11602	BX6	X0*X2	FLAG BIT FOR 30-BIT INSTRUCTION	COMPASS	5583
		21201	AX2	1		COMPASS	5584
11000	11702		BX7	X0*X2	FLAG BIT FOR FORCE UPPER	COMPASS	5585
		5150003136	SA5	NFOUP		COMPASS	5586
		23406	AX4	X6	15 OR 30 BIT FLAG	COMPASS	5587
11001	12775		BX7	X7+X5	OR INTO FORCE FROM LAST INSTRUCTION	COMPASS	5588
		54750	SA7	A5		COMPASS	5589
		20604	LX6	4		COMPASS	5590
		37464	IX4	X6-X4		COMPASS	5591
11002	7214000017		SX1	X4+15		COMPASS	5592
		10611	BX6	X1		COMPASS	5593
11003	5160003561		SA6	P1TEMP	LENGTH OF OPERATION CODE	COMPASS	5594
		0100023377	RJ	YPRLOC	PROCESS LOCATION FIELD	COMPASS	5595
11004	76010		SX0	B1		COMPASS	5596
		5120003303	SA2	OPTYPE		COMPASS	5597
		21235	AX2	29		COMPASS	5598
11005	11620		BX6	X2*X0		COMPASS	5599
		5160003136	SA6	NFOUP		COMPASS	5600
11006	5110003561		SA1	P1TEMP		COMPASS	5601
		0100006214	RJ	UPPOS	UP POSITION COUNTER	COMPASS	5602
11007	5110003303	CTLCP8	SA1	OPTYPE	CHECK MACHINE TYPE	CMP30	2379
		5120003115	SA2	MTYPE		CMP30	2380
11010	7100000007		SX0	7B		F4830CP	37
		0302010612	ZR	X2,CTL65	IF MACHINE NOT SPECIFIED OR TYPE OMITTED	F4830CP	38
11011	21136		AX1	30		F4830CP	39
		11401	BX4	X0*X1		F4830CP	40
		0304010612	ZR	X4,CTL65	IF INSTRUCTION VALID ON ANY PROCESSOR	F4830CP	41
11012	11524		BX5	X2*X4		F4830CP	42
		76610	SX6	B1		F4830CP	43
		0315010612	NZ	X5,CTL65	IF INSTRUCTION VALID ON THIS PROCESSOR	F4830CP	44
11013	5160003345		SA6	EFLG		CMP30	2388
		5160003321	SA6	OERR	OPCODE ERROR	CMP30	2389
11014	5160003312		SA6	MACHFLG		CPSA140	7
		0400010612	EQ	CTL65		COMPASS	5603

1412THE

** PROCESS BC INSTRUCTION.

F4820 186
F4820 187
F4820 188

1	11015	7110000020	CTLBC	SX1	16		F4820 189	1
2		0100023377		RJ	YPRLOC	PROCESS LOCATION	F4820 190	2
3	11016	7110000020		SX1	16		F4820 191	3
4		0100006214		RJ	UPPOS	UP POSITION COUNTER	F4820 192	4
5	11017	5110003303		SA1	OPTYPE	CHECK INSTRUCTION	F4820B 6	5
6		43271		MX2	-3		F4820B 7	6
7		20141		LX1	-27		F4820B 8	7
8	11020	15612		BX6	-X2*X1		F4820B 9	8
9		0316011024		NZ	X6,CTLBC1	IF NOT TYPE 0	F4820B 10	9
10		20105		LX1	5	CHECK NAD EXTENSION	F4820B 11	10
11	11021	43667		MX6	-5		F4820B 12	11
12		15616		BX6	-X6*X1		F4820B 13	12
13		0306011024		ZR	X6,CTLBC1	IF NOT NAD EXTENSION	F4820B 14	13
14	11022	37662		IX6	X6-X2	TYPE = 7 + NAD EXTENSION	F4820B 15	14
15		6226777755		SB2	X6-/PASS2/ZBCAL		F4820B 16	15
16	11023	0720011024		NG	B2,CTLBC1		F4820B 17	16
17		76600		SX6	B0		F4820B 18	17
18	11024	5216011777	CTLBC1	SA1	/PASS2/ZBCA+X6	CHECK ADDRESS FIELD CONTROL	F4820B 19	18
19		10611		BX6	X1		F4820B 20	19
20	11025	5160003562		SA6	P1TEMPA		F4820B 21	20
21		5160003563		SA6	P1TEMPB		F4820B 22	21
22	11026	7110000074	CTLBC2	SX1	60	SCAN FOR LITERALS	F4820B 23	22
23		0100006305		RJ	SCAD		F4820B 24	23
24	11027	5110003563		SA1	P1TEMPB	CHECK ADDRESS FIELD DESCRIPTOR	F4820B 25	24
25		22611		LX6	X1,B1		F4820B 26	25
26		54610		SA6	A1		F4820B 27	26
27	11030	0331011026		NG	X1,CTLBC2	IF MORE ADDRESS FIELDS	F4820B 28	27
28		5110003562		SA1	P1TEMPA	ADVANCE OVER INSTRUCTION WORDS	F4820B 29	28
29	11031	21144		AX1	36		F4820B 30	29
30		73110		SX1	X1		F4820B 31	30
31		0100006214		RJ	UPPOS		F4820B 32	31
32	11032	5120006304		SA2	EXSTOP	CHECK FOR EXTRA ADDRESS FIELD	F4820B 33	32
33		0302010612		ZR	X2,CTL65		F4820 203	33
34	11033	76610		SX6	B1	SET 8-ERR FOR EXTRA ADDRESS FIELD	F4820 204	34
35		5160003345		SA6	EFLG		F4820 205	35
36	11034	5160003342		SA6	W8ERR		F4820 206	36
37		0400010612		EQ	CTL65		F4820 207	37
38							F4820 208	38
39	11035	10000000005000000000		VFD	3/1,1/0,29/5,27/	MASK FOR BAD 180 INSTRUCTION	CPSA281 123	39
40	11036	14000000000000000000		VFD	3/1,1/1,29/0,27/	MASK FOR BAD MC INSTRUCTION	F4820 209	40
41	11037	14000000006000000000	CTLPPM	VFD	3/1,1/1,29/6,27/	MASK FOR BAD BC INSTRUCTION	F4820 210	41
42	11040	10000000005000000000		VFD	3/1,30/5,27/	MASK FOR BAD PP INSTRUCTION	F4820 211	42
43	11041	10000000005000000000		VFD	3/1,1/0,29/5,27/	MASK FOR BAD 7000 PPU INSTRUCTION	CPSA281 124	43

** PROCESS MC INSTRUCTION.

F4820 213
F4820 214
F4820 215

1	11042	7110000010	CTLMC	SX1	8		F4820 216	1
2		0100023377		RJ	YPRLOC	PROCESS LOCATION	F4820 217	2
3	11043	7110000010		SX1	8		F4820 218	3
4		0100006214		RJ	UPPOS	UP POSITION COUNTER	F4820 219	4
5	11044	7110000074		SX1	60	SCAN ADDRESS	F4820 220	5
6		0100006305		RJ	SCAD		F4820 221	6
7	11045	5120003303		SA2	OPTYPE		F4820 222	7
8		43671		MX6	-3		F4820 223	8
9		21233		AX2	27		F4820 224	9
10	11046	15226		BX2	-X6*X2		F4820 225	10
11		7110000010		SX1	8		F4820 226	11
12	11047	0302011052		ZR	X2,CMC2	IF NO ADDRESS	F4820 227	12
13		20273		LX2	59		F4820 228	13
14	11050	0332011051		NG	X2,CMC1	IF 8-BIT ADDRESS	F4820 229	14
15		7110000020		SX1	16		F4820 230	15
16	11051	0100006214	CMC1	RJ	UPPOS	UP POSITION COUNTER	F4820 231	16
17	11052	5120006304	CMC2	SA2	EXSTOP	CHECK FOR EXTRA ADDRESS FIELD	F4820 232	17
18		0302010612		ZR	X2,CTL65		F4820 233	18
19	11053	76610		SX6	B1	SET 8-ERR FOR EXTRA ADDRESS FIELD	F4820 234	19
20		5160003345		SA6	EFLG		F4820 235	20
21	11054	5160003342		SA6	W8ERR		F4820 236	21
22		0200010612		JP	CTL65		F4820 237	22
23								23
24								24
25								25
26								26
27								27
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60								60

** PROCESS PP INSTRUCTION.

COMPASS	5605
COMPASS	5606
COMPASS	5607
F4820	238
F4820	239
COMPASS	5609
COMPASS	5610
COMPASS	5611
COMPASS	5612
COMPASS	5613
COMPASS	5614
CPSA281	125
CPSA213	18
CPSA213	19
CPSA213	20
CPSA213	21
CPSA213	22
CPSA213	23
F4820	244
F4820	245
F4820	246
CPSA197	20
CPSA197	21
CPSA213	24
COMPASS	5616
CPSA281	126
COMPASS	5618
COMPASS	5619
CPSA281	127
COMPASS	5621
COMPASS	5622
COMPASS	5623
COMPASS	5624
COMPASS	5625
COMPASS	5626
COMPASS	5627
COMPASS	5628
COMPASS	5629
COMPASS	5630
COMPASS	5631
COMPASS	5632
COMPASS	5633
COMPASS	5634
CMP30	2390
COMPASS	5636
COMPASS	5637
COMPASS	5638
CMP30	2391
COMPASS	5640

11055	5140003116	CTLPPER	SA4	PPTYPE	FORCE BAD PP INSTRUCTION
	5224011040		SA2	CTLPPM+1+X4	
11056	76710		SX7	B1	
	10622		BX6	X2	
	5160003303		SA6	OPTYPE	
11057	5170003321		SA7	OERR	POST OP-CODE ERROR
	5170003345		SA7	EFLG	
11060	5110003123	CTLPP	SA1	LWORD	
	5140003116		SA4	PPTYPE	
11061	5120003303		SA2	OPTYPE	
	6274000003		SB7	X4+3	
11062	20203		LX2	3	
	0470011066		ZR	B7,CTLPP0	
	13624		BX6	X2-X4	
11063	0336011055		NG	X6,CTLPPER	IF PP IN BCU OR BC IN PPU CODE
	6274000002		SB7	X4+2	
11064	0470011042		ZR	B7,CTLMC	IF MC INSTRUCTION
	73441		SX4	X4+B1	
11065	0304011015		ZR	X4,CTLBC	IF BC INSTRUCTION
11066		CTLPP0	BSS	0	
11066	0100023377		RJ	YPRLOC	PROCESS LOCATION
11067	5110003123		SA1	LWORD	
	0100006214		RJ	UPPOS	UP POSITION COUNTER
11070	5120003303		SA2	OPTYPE	
	5110003123		SA1	LWORD	
11071	20240		LX2	32	
	0322011077		PL	X2,CTLPP1	JUMP IF 12-BIT OP
11072	0100006214		RJ	UPPOS	
11073	7110000074		SX1	60	
	0100006305		RJ	SCAD	
11074	5110003303		SA1	OPTYPE	
	21133		AX1	27	
11075	7120000005		SX2	5	
	11621		BX6	X2*X1	
	13662		BX6	X6-X2	
11076	0316011100		NZ	X6,CTLPP2	IF NO SECOND FIELD
11077	7110000074	CTLPP1	SX1	60	CHECK FOR POSSIBLE LITERALS
	0100006305		RJ	SCAD	
11100	5120006304	CTLPP2	SA2	EXSTOP	CHECK FOR EXTRA ADDRESS FIELD
	0302011007		ZR	X2,CTLCP8	
11101	76610		SX6	B1	SET 8-ERR FOR EXTRA ADDRESS FIELD
	5160003345		SA6	EFLG	
11102	5160003342		SA6	W8ERR	
	0400011007		EQ	CTLCP8	GO CHECK MACHINE TYPE

** PASS 2 CONTROL.

COMPASS	5643
COMPASS	5644
COMPASS	5645
COMPASS	5646
COMPASS	5647
COMPASS	5648
COMPASS	5649
COMPASS	5650
CPSA246	6
COMPASS	5651
COMPASS	5652
COMPASS	5653
COMPASS	5654
COMPASS	5655
COMPASS	5656
COMPASS	5657
COMPASS	5658
COMPASS	5659
COMPASS	5660
COMPASS	5661
COMPASS	5662
COMPASS	5663
COMPASS	5664
COMPASS	5665
COMPASS	5666
COMPASS	5667
CPSA161	6
COMPASS	5669
CPS002	28
COMPASS	5671
CPS002	29
CPS002	30
CPS002	31
CPS002	32
COMPASS	5674
COMPASS	5675
COMPASS	5676
COMPASS	5677
COMPASS	5678
COMPASS	5679
COMPASS	5680
COMPASS	5681
COMPASS	5682
COMPASS	5683
CPS004	2
COMPASS	5685
COMPASS	5686
COMPASS	5687
COMPASS	5688
COMPASS	5689
COMPASS	5690
COMPASS	5691
COMPASS	5692

			QUAL	PASS2	
	11103	0100024223	RJ	PRS	PRESET CONSTANTS
	11104	0100024005	RJ	PLM	PRINT LOAD MAP
	11105	0100024046	RJ	PLO	PRESET LIST OPTIONS
	11106	0100024676	RJ	SUO	SET USE ORIGINS
	11107	0100024730	RJ	URS	UNDEFINE REDEFINABLE SYMBOLS
			**		SEARCH FOR IDENT CARD.
	11110	0100024511	RJ	RINTER	READ IN PRESUMED IDENT LINE
	11111	0100006066	RJ	SETUP	
	11112	5120003103	SA2	IOP	CHECK FOR IDENT OPCODE
		5130012133	SA3	=0RIDENT	
	11113	13623	BX6	X2-X3	
		0306011122	ZR	X6,SFI2	IF LINE IS IDENT
	11114	7130051604	SX3	3REND	
		13432	BX4	X3-X2	
	11115	0304011117	ZR	X4,SFI1	IF END OF PROGRAM
		0100007611	RJ	LISTER	
	11116	0400011110	EQ	SFI	LOOP
	11117	76610	SX6	B1	
		5160003321	SA6	OERR	
	11120	5160003345	SA6	EFLG	
		7110012134	JOBMSG	(=C* IDENT STATEMENT MISSING.*),R	
	11122	43600	MX6	0	SET DEFAULT (0,0) OVERLAY
		76100	SX1	B0	
		0100024623	RJ	SIC	SCAN IDENT CARD
	11123	5110004066	SA1	P2TEMP	DUMP LOADER INFORMATION
		54211	SA2	A1+B1	
		10611	BX6	X1	
	11124	5160003120	SA6	IDNAM	RESET IDNAM IN CASE OF TRUNCATION
		0100025616	RJ	DFIRST	
	11125	0100026166	RJ	DLT	DUMP LITERAL TABLES
	11126	0100024664	RJ	SMO	SET MAX AND MIN ORIGINS
	11127	5110003103	SA1	IOP	
		5120012133	SA2	=0RIDENT	
	11130	13312	BX3	X1-X2	
		0313011135	NZ	X3,Z101	BYPASS FIRST RINTER IF NOT IDENT
	11131	0100007611	RJ	LISTER	LIST IDENT CARD
	11132	5110003120	SA1	IDNAM	DISPLAY IDENT MESSAGE
		0100005351	RJ	DIM	
	11133	0100023530	RJ	CRL	CHECK RECURSION LIMIT
			**		Z100 - GENERAL PASS 2 PROCESSING.
	11134	0100024511	RJ	RINTER	READ INTERMEDIATE FILE
	11135	0100006066	RJ	SETUP	AND SET THE LINE UP
	11136	5110026436	SA1	STYPE	CHECK FOR COMMENTS CARD OR
		5120003310	SA2	TXTFLG	TEXT DEFINITION CARD OR IFSKIPS
	11137	5130003307	SA3	NOAS	

		7201777730		SX0	X1-1R*		COMPASS	5693
	11140	36232		IX2	X3+X2		COMPASS	5694
		0300012126		ZR	X0,ZLIST	COMMENTS CARD	COMPASS	5695
1	11141	0312012126		NZ	X2,ZLIST	BYPASSED CARD	COMPASS	5696
2		5110003110		SA1	POSCTR		COMPASS	5697
3	11142	0311011143		NZ	X1,Z110		COMPASS	5698
4		0100025141		RJ	ZFOUP		COMPASS	5699
5	11143	5110003303	Z110	SA1	OPTYPE		COMPASS	5700
6		7100000007		SX0	7		COMPASS	5701
7	11144	63610		SB6	X1	POSSIBLE TRANSFER ADDRESS	COMPASS	5702
8		21171		AX1	57		COMPASS	5703
9		11210		BX2	X1*X0		COMPASS	5704
10		76610		SX6	B1		COMPASS	5705
11	11145	63720		SB7	X2		COMPASS	5706
12		0277011146		JP	++1+B7		COMPASS	5707
13							COMPASS	5708
14	11146	5160003137	+	SA6	IFCDGP	TYPE 0 - CP MACHINE OPS	COMPASS	5709
15		0400011160		EQ	ZCP		COMPASS	5710
16	11147	5160003137	+	SA6	IFCDGP	TYPE 1 - PP MACHINE OPS	COMPASS	5711
17		0400011323		EQ	ZPP		COMPASS	5712
18	11150	5160003137	+	SA6	IFCDGP	TYPE 2 - NORMAL PSEUDOS	COMPASS	5713
19		0266000000		JP	B6		COMPASS	5714
20	11151	5160003137	+	SA6	IFCDGP	TYPE 3 - PSEUDOS TO PROCESS WHILE	COMPASS	5715
21		0266000000		JP	B6	IF SKIPPING	COMPASS	5716
22	11152	0266000000	+	JP	B6	TYPE 4 - PERMISSIBLE ANYWHERE	COMPASS	5717
23	11153	5110003137	+	SA1	IFCDGP	TYPE 5 - FIRST CARD GROUP ONLY	COMPASS	5718
24		0400011156		EQ	ZT5		COMPASS	5719
25	11154	0400012111	+	EQ	ZMACALL	TYPE 6 - MACRO CALL	COMPASS	5720
26	11155	0400012111	+	EQ	ZMACALL	TYPE 7 - MACRO CALL	COMPASS	5721
27								
28								
29								
30								
31			**			ENTRY ON TYPE 5 PSEUDO-OPS.	COMPASS	5723
32							COMPASS	5724
33							COMPASS	5725
34	11156	0311012126	ZT5	NZ	X1,ZLIST	IF CARD IS OUT OF PLACE	COMPASS	5726
35		0266000000		JP	B6	JUMP TO PROCESSOR	COMPASS	5727
36								
37								
38								
39								
40			**			SCAN INSTRUCTION FOR SCAD WHILE IN PASS 2.	COMPASS	5729
41							COMPASS	5730
42							COMPASS	5731
43	11157	5110006303	RJZ	SA1	EXLGN	INITIALIZED RJ INSTRUCTION FOR SCAD	COMPASS	5732
44		0100024761		RJ	ZEVITEM		COMPASS	5733
45								
46								
47								
48								
49								
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* CENTRAL PROCESSOR INSTRUCTIONS.

COMPASS	5735
COMPASS	5736
COMPASS	5737
COMPASS	5738
COMPASS	5739
COMPASS	5740
COMPASS	5741
COMPASS	5742
COMPASS	5743
COMPASS	5744
COMPASS	5745
COMPASS	5746
COMPASS	5747
COMPASS	5748
COMPASS	5749
COMPASS	5750
COMPASS	5751
COMPASS	5752
COMPASS	5753
COMPASS	5754
COMPASS	5755
COMPASS	5756
COMPASS	5757
COMPASS	5758
COMPASS	5759
COMPASS	5760
COMPASS	5761
COMPASS	5762
COMPASS	5763
CMP041	6
COMPASS	5764
CMP041	7
COMPASS	5765
COMPASS	5766
COMPASS	5767
COMPASS	5768
COMPASS	5769
COMPASS	5770
COMPASS	5771
COMPASS	5772
COMPASS	5773
COMPASS	5774
COMPASS	5775
COMPASS	5776
COMPASS	5777
COMPASS	5778
COMPASS	5779
CMP085	1
COMPASS	5780
COMPASS	5781
COMPASS	5782
COMPASS	5783
COMPASS	5784
CPSA140	8
CPSA140	9
COMPASS	5785
COMPASS	5786

11160	5110003303	ZCP	SA1	OPTYPE	FETCH OP-CODE EQUIVALENT FROM PASS 1
	43071		MX0	57	
	21122		AX1	18	
11161	15610		BX6	-X0*X1	EXTRACT REGISTER FIELDS
	21103		AX1	3	
	15710		BX7	-X0*X1	
11162	5160003273		SA6	OPADS	
	54761		SA7	A6+B1	
	21103		AX1	3	
11163	15610		BX6	-X0*X1	
	76010		SX0	B1	
	21103		AX1	3	
	11710		BX7	X1*X0	30-BIT INSTRUCTION FLAG TO OPASS+3
11164	54671		SA6	A7+B1	
	54761		SA7	A6+B1	
	21101		AX1	1	FORCE UPPER TO OPADS+4
	11610		BX6	X1*X0	
11165	21101		AX1	1	
	11701		BX7	X0*X1	FORCE NEXT UPPER TO OPADS+5
	54671		SA6	A7+B1	
	54761		SA7	A6+B1	
11166	5120003136		SA2	NFOUP	
	12626		BX6	X2+X6	
	54620		SA6	A2	OR NFOUP INTO THIS UPPER FORCE
11167	21123		AX1	48-29	
	0311011173		NZ	X1,ZCP0	IF NOT 00 INSTRUCTION
11170	5110003321		SA1	OERR	
	5120003102		SA2	LOCSYM	SET SUB-SUBTITLE
11171	0311011173		NZ	X1,ZCP0	IF UNDEFINED OPCODE
	10622		BX6	X2	
11172	5160003622		SA6	SUBNAME	
11173	5130003276	ZCP0	SA3	OPADS+3	PROCESS LOCATION FIELD
	10433		BX4	X3	CONSTRUCT A 15 OR 30
	20304		LX3	4	
11174	37434		IX4	X3-X4	
	7214000017		SX1	X4+15	
11175	0100025177		RJ	ZPRLOC	PROCESS LOCATION FIELD
11176	5110003300		SA1	OPADS+5	RESET NFOUP FOR NEXT INSTUCTION
	10611		BX6	X1	
	43700		MX7	0	
11177	5160003136		SA6	NFOUP	
	5170004066		SA7	P2TEMP	FOR REGISTER ACCUMULATION
11200	54771		SA7	A7+B1	P2TEMPA
	54771		SA7	A7+B1	P2TEMPB
	5170006302		SA7	EXERR	
11201	5110003303		SA1	OPTYPE	SET OPERATION CODE VALUE
	21160		AX1	48	
	10611		BX6	X1	
11202	20606		LX6	6	
	5160004047		SA6	OPVAL	
11203	5120003312		SA2	MACHFLG	
	0312011205		NZ	X2,ZCP0A	IF *MACHINE* VIOLATION
11204	5120003321		SA2	OERR	CHECK IF PASS 1 FOUND AN ERROR
	0312011303		NZ	X2,ZCP100A	

11205	5120003142	ZCP0A	SA2	COL		CPSA140	10
	73621		SX6	X2+B1		CPSA140	11
11206	5160003144		SA6	COLUMN		COMPASS	5788
	0100005444		RJ	GETCH		COMPASS	5789
11207	6271777774		SB7	X1-3	TEST FOR A REGISTER	COMPASS	5790
	6261777747		SB6	X1-1RX		COMPASS	5791
11210	0770011213		NG	B7,ZCP3A	IF A OR B	CMP9	19
	0460011213		ZR	B6,ZCP3A	IF X	CMP9	20
11211	0100005444	ZCP3	RJ	GETCH		CMP9	21
11212	0400011223		EQ	ZCP3B		CMP9	22
11213	7110000003	ZCP3A	SX1	3		CMP9	23
	0100024761		RJ	ZEVITEM	EVALUATE OP CODE REGISTER	COMPASS	5796
11214	5110006300		SA1	ELREG		COMPASS	5797
	10611		BX6	X1		COMPASS	5798
11215	5120004047	+	SA2	OPVAL	GET UPPER 9 BITS OF OP CODE SHIFTED LEFT 6	CPS026	2
	21214		AX2	12		CPS026	3
11216	6272777772		SB7	X2-5		CPS026	4
	0570011222		NZ	B7,ZCP3C	IF NOT AN SAI INSTRUCTION (5X0)	CPS026	5
11217	43071		MX0	-3		CPS026	6
	15710		BX7	-X0*X1		CPS026	7
	6277777771		SB7	X7-6		CPS026	8
11220	0770011222		MI	B7,ZCP3C	IF NOT REGISTER 6 OR 7	CPS026	9
	7170000023		SX7	1RS		CPS026	10
11221	5170004055		SA7	REFLET		CPS026	11
11222	5160004070	ZCP3C	SA6	P2TEMPB	SAVE REGISTER LETTER AND NUMBER	CPS026	12
	5110003145		SA1	CHAR		COMPASS	5800
11223	6271777722	ZCP3B	SB7	X1-1R		CMP9	24
	66600		SB6	B0	FLAG TO INDICATE BEGIN TO SCAN VARIABLES.	CPS147X	6
11224	0570011230		NZ	B7,ZCP1A	IF NOT END OF OP CODE FIELD	COMPASS	5802
11225	5110004067	ZCP1	SA1	P2TEMPA		COMPASS	5803
	0311011243		NZ	X1,ZCP2	IF END OF VARIABLE FIELD	CMP9	25
11226	5120003143		SA2	COL+1		COMPASS	5805
	10622		BX6	X2	RESET TO VARIABLE FIELD	COMPASS	5806
	54610		SA6	A1		COMPASS	5807
11227	5160003144		SA6	COLUMN		COMPASS	5808
11230	0100005444	ZCP1A	RJ	GETCH		COMPASS	5809
11231	0460011233		EQ	B6,B0,ZCP1B	IF BEGINNING SCAN OF VARIABLES.	CPS147X	7
	5120003145		SA2	CHAR	ELSE CONTINUING SCAN. CHECK FIRST CHAR.	CPS147X	8
11232	6272777722		SB7	X2-1R		CPS147X	9
	0470011243		ZR	B7,ZCP2	IF FIRST CHAR OF VARIABLE FIELD IS BLANK.	CPS147X	10
11233	5120003276	ZCP1B	SA2	OPADS+3		COMPASS	5810
	7110000006		SX1	6		COMPASS	5811
11234	0302011235		ZR	X2,*+1		COMPASS	5812
	7110000022		SX1	18		COMPASS	5813
11235	0100006305		RJ	SCAD		COMPASS	5814
11236	5140003257		SA4	EXREG	TEST FOR A REGISTER FIELD	COMPASS	5815
	0304011243		ZR	X4,ZCP2	JUMP IF ADDRESS FIELD	COMPASS	5816
11237	5120004066		SA2	P2TEMP	COMBINE REGISTER FIELDS	COMPASS	5817
	20211		LX2	9		COMPASS	5818
	12642		BX6	X4+X2		COMPASS	5819
11240	54620		SA6	A2		COMPASS	5820
	6271777722		SB7	X1-1R	TEST FOR END OF ADDRESS FIELD	COMPASS	5821
11241	0570011233		NZ	B7,ZCP1B	IF MORE REGISTERS	CMP9	26
	66610		SB6	B1	FLAG TO INDICATE CONTINUE SCAN OF VARIABLES	CPS147X	11
11242	0400011225		EQ	ZCP1	IF BLANK	CMP9	27
11243	7160000055	ZCP2	SX6	1R		CPS026	13

11244	5110004070	5160004055	SA6	REFLET		CPS026	14
			SA1	P2TEMPB		CPS026	15
		5120004066	SA2	P2TEMP	OR OP CODE REGISTER INTO REGISTERS	COMPASS	5826
11245	20211		LX2	9		COMPASS	5827
	12112		BX1	X1+X2		COMPASS	5828
		5120003273	SA2	OPADS		COMPASS	5829
11246	5130004047		SA3	OPVAL		COMPASS	5830
	10633		BX6	X3		COMPASS	5831
	43071		MX0	57		COMPASS	5832
11247	6130000003		SB3	3		COMPASS	5833
	66500		SB5	B0		COMPASS	5834
11250	6140000011		SB4	9		COMPASS	5835
11251	22332	ZCP4	LX3	X2,B3		COMPASS	5836
	36432		IX4	X3+X2	COMBINE REGISTERS INTO OP CODE	COMPASS	5837
	63740		SB7	X4		COMPASS	5838
	67674		SB6	B7-B4		COMPASS	5839
11252	23361		AX3	X1,B6		COMPASS	5840
	15430		BX4	-X0*X3		COMPASS	5841
	22554		LX5	X4,B5		COMPASS	5842
	54221		SA2	A2+B1		COMPASS	5843
11253	66553	+	SB5	B5+B3		COMPASS	5844
	0470011254		ZR	B7,*+1		COMPASS	5845
	12656		BX6	X5+X6		COMPASS	5846
11254	0554011251		NE	B5,B4,ZCP4		COMPASS	5847
	5140003254		SA4	EXVAL		COMPASS	5848
11255	54541		SA5	A4+B1	EXREL	COMPASS	5849
	54151		SA1	A5+B1	EXEXT	COMPASS	5850
	0312011277		NZ	X2,ZCP100	IF 30-BIT INSTRUCTION	COMPASS	5851
11256	43066		MX0	54		COMPASS	5852
	0324011262		PL	X4,ZCP6	IF POSITIVE Q	COMPASS	5853
11257	7120000074		SX2	60		COMPASS	5854
	36442		IX4	X4+X2	TRY Q + 60	COMPASS	5855
11260	0324011262		PL	X4,ZCP6	IF Q IN RANGE	COMPASS	5856
	37442		IX4	X4-X2		COMPASS	5857
	76710		SX7	B1		COMPASS	5858
11261	5170003341		SA7	W7ERR		COMPASS	5859
	5170003345		SA7	EFLG		COMPASS	5860
11262	15440	ZCP6	BX4	-X0*X4	TRUNCATE ADDRESS TO 6 BITS	COMPASS	5861
	36664		IX6	X6+X4	OR INTO INSTRUCTION	COMPASS	5862
	5160004047		SA6	OPVAL	AND SAVE	COMPASS	5863
11263	12151		BX1	X5+X1	DISAPPROVE OF EXT OR REL	COMPASS	5864
	76710		SX7	B1		COMPASS	5865
	0301011265		ZR	X1,ZCP5	COMPLAIN IF RELOCATABLE OR EXTERNAL	COMPASS	5866
11264	5170003322		SA7	AERR		COMPASS	5867
	5170003345		SA7	EFLG		COMPASS	5868
11265	7110000017	ZCP5	SX1	15		COMPASS	5869
	0100006214		RJ	UPPOS	CALL UPPOS(15)	COMPASS	5870
11266	5110004047		SA1	OPVAL		COMPASS	5871
	5120003110		SA2	POSCTR	CONSTRUCT PRINT LINE	COMPASS	5872
11267	7130000005		SX3	5		COMPASS	5873
	7140000003		SX4	3		COMPASS	5874
11270	27202		IX2	X2/X4		COMPASS	5875
11272	7140000044		SX4	36		COMPASS	5876
	37242		IX2	X4-X2		COMPASS	5877
11273	0100007773		RJ	PACK0		COMPASS	5878
11274	5110004047		SA1	OPVAL		COMPASS	5879
	7120000017		SX2	15		COMPASS	5880

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** PP INSTRUCTIONS.

COMPASS	5918
COMPASS	5919
COMPASS	5920
CPSA281	128
CPSA213	26
F4820	250
F4820	251
CPSA197	22
CPSA197	23
CPSA281	129
COMPASS	5923
CPSA281	130
COMPASS	5925
COMPASS	5926
COMPASS	5927
COMPASS	5928
CPS026	16
CPS026	17
CPS026	18
CPS026	19
CPS026	20
CPS026	21
CPS026	22
CPS026	23
COMPASS	5930
COMPASS	5931
COMPASS	5932
COMPASS	5933
COMPASS	5934
CPSA281	131
COMPASS	5936
CPS026	24
CPS026	25
CPS026	26
CPS026	27
CPS026	28
CPS026	29
CPS026	30
CPSA281	132
CPSA281	133
CPSA281	134
COMPASS	5940
CPS026	31
CPS026	32
COMPASS	5941
COMPASS	5942
COMPASS	5943
COMPASS	5944
COMPASS	5945
COMPASS	5946
COMPASS	5947
COMPASS	5948
COMPASS	5949
COMPASS	5950
COMPASS	5951
COMPASS	5952
COMPASS	5953

11323	5110003123	ZPP	SA1	LWORD	PROCESS LOCATION FIELD
	5140003116		SA4	PPTYPE	
11324	6274000002		SB7	X4+2	
	0470012021		ZR	B7,ZMC	IF MICROPROCESSOR
11325	73441		SX4	X4+B1	
	0304011463		ZR	X4,ZBC	IF BUFFER CONTROLLER.
11326	0100025177		RJ	ZPRLOC	PROCESS LOCATION SYMBOL
11327	5110003303		SA1	OPTYPE	
	43054		MX0	-16	ISOLATE 16-BIT OPCODE
	15710		BX7	-X0*X1	
11330	21133		AX1	27	EXTRACT CONTROL DIGIT
	76010		SX0	B1	
	5170004047		SA7	OPVAL	
11331	5120003270		SA2	PSIM	PERIPHERAL STORE INSTRUCTION MASK
	21706		AX7	6	GET 6-BIT OP CODE
	63770		SB7	X7	
11332	22272		LX2	B7	
	0322011334		PL	X2,ZPP1	IF NOT A STORE INSTRUCTION
11333	7160000023		SX6	1RS	
	5160004055		SA6	REFLET	
11334	11601	ZPP1	BX6	X0*X1	
	21101		AX1	1	
	7100000003		SX0	3	TYPE OF ADDRESS FIELD
11335	11701		BX7	X0*X1	
	5160003273		SA6	OPADS	24-BIT FLAG
	54761		SA7	A6+B1	
11336	0316011401		NZ	X6,ZPP100	IF 24-BIT INSTRUCTION
	7110000006		SX1	6	
11337	76670		SX6	B7	
	21602		AX6	2	
	6276777766		SB7	X6-44BS-2	
11340	0570011342		NZ	B7,ZPP1A	IF NOT A STORE INSTRUCTION
	7160000011		SX6	1RI	
11341	5160004055		SA6	REFLET	
11342	63770	ZPP1A	SB7	X7	
	0571011344		NE	B7,B1,ZPP1B	IF NOT TYPE 2
11343	5110003126		SA1	PPMEMSZ	12-4K, 13-8K, 14-16K MEMORY SIZES
11344		ZPP1B	BSS	0	
11344	0100006305		RJ	SCAD	SCAN ADDRESS FOR 12-BIT OPCODE
11345	7160000055		SX6	1R	
	5160004055		SA6	REFLET	
11346	5110003274		SA1	OPADS+1	
	63710		SB7	X1	
11347	0277011347		JP	B7+*	JUMP ON ADDRESS TYPE
11350	5110003254	+	SA1	EXVAL	TYPE 2 - RELATIVE BETWEEN 32 AND -32
	0400011353		EQ	ZPP21	
11351	5110003254	+	SA1	EXVAL	TYPE 4 - DIRECT CORE (0-63)
	0400011372		EQ	ZPP22	
11352	5110003254	+	SA1	EXVAL	TYPE 6 - ABSOLUTE BETWEEN -32, +32
	0400011357		EQ	ZPP23	
11353	5130003106	ZPP21	SA3	LOCCTR	
	5140003131		SA4	PPJUMP	

11354	0314011356		NZ	X4,ZP21A	IF PPJUMP SET	COMPASS	5954
	10211		BX2	X1		COMPASS	5955
	21205		AX2	5	CHECK FOR BETWEEN +32 AND -32	COMPASS	5956
11355	0302011362		ZR	X2,ZPP24		COMPASS	5957
11356	37113	ZP21A	IX1	X1-X3		COMPASS	5958
11357	10211	ZPP23	BX2	X1		COMPASS	5959
	21205		AX2	5		COMPASS	5960
	0302011362		ZR	X2,ZPP24		COMPASS	5961
11360	76610	ZPP25	SX6	B1	BAD ADDRESS FIELD	COMPASS	5962
	5160003322		SA6	AERR		COMPASS	5963
11361	5160003345		SA6	EFLG		COMPASS	5964
11362	43066	ZPP24	MX0	54		COMPASS	5965
	15110		BX1	-X0*X1	TRUNCATE TO 6 BITS	COMPASS	5966
	5120004047		SA2	OPVAL		COMPASS	5967
11363	36612		IX6	X1+X2		COMPASS	5968
	54620		SA6	A2		COMPASS	5969
	5110003123		SA1	LWORD		CPSA281	135
11364	0100006214		RJ	UPPOS	CALL UPPOS(12)	COMPASS	5971
11365	5110004047		SA1	OPVAL		COMPASS	5972
	7120000031		SX2	25		COMPASS	5973
11366	5130003262		SA3	PPBYT		CPSA281	136
	0100007773		RJ	PACK0	CALL PACK0(OPVAL,25,4)	COMPASS	5975
11367	5110004047		SA1	OPVAL		COMPASS	5976
	5120003123		SA2	LWORD		CPSA281	137
11370	76300		SX3	B0		COMPASS	5978
	10433		BX4	X3		COMPASS	5979
	0100025344		RJ	BINOUT	CALL BINOUT(OPVAL,12,0,0)	COMPASS	5980
11371	0400011321		EQ	ZLISTG		COMPASS	5981
11372	0331011360	ZPP22	NG	X1,ZPP25	COMPLAIN IF ADDRESS NEGATIVE	COMPASS	5982
	6271777677		SB7	X1-64	CHECK FOR EXCESS OF 63	COMPASS	5983
11373	0670011360		PL	B7,ZPP25		CPSA297	21
	5120004047		SA2	OPVAL	CURRENT OP CODE	CPSA297	22
11374	5130003271		SA3	PSIM2	INSTRUCTION MASK FOR STORES THAT PREFETCH	CPSA297	23
	21206		AX2	6	ERROR MAY BE FLAGGED	CPSA297	24
	63720		SB7	X2		CPSA297	25
11375	22373		LX3	X3,B7		CPSA297	26
	0323011362		PL	X3,ZPP24	IF NOT TO CHECK FOR PREFETCH ERROR	CPSA297	27
	76610		SX6	B1		CPSA297	28
11376	5130003106		SA3	LOCCTR	CHECK IF STORING AT *+1	CPSA297	29
	37331		IX3	X3-X1		CPSA297	30
	73331		SX3	X3+B1		CPSA297	31
11377	0313011362		NZ	X3,ZPP24	IF NOT *+1	CPSA297	32
	5160003345		SA6	EFLG		CPSA297	33
11400	5160003344		SA6	WD45ERR	+ ERROR	CPSA297	34
	0400011362		EQ	ZPP24		CPSA297	35
						COMPASS	5986
		*		24-BIT PP INSTRUCTIONS.		COMPASS	5987
						COMPASS	5988
11401	5140004047	ZPP100	SA4	OPVAL	SHIFT OPVALUE LEFT 18 BITS	CPSA281	138
	10744		BX7	X4		CPSA281	139
	20722		LX7	18		CPSA281	140
11402	54740		SA7	A4		CPSA281	141
	7110000022		SX1	18	SET FOR ADDRESS SIZE = 18	CPSA281	142
11403	5120003274		SA2	OPADS+1		COMPASS	5994
	7222777776		SX2	X2-1		COMPASS	5995
11404	0302011410		ZR	X2,ZPP101	IF TYPE 3 INSTRUCTION	CPSA281	143
	5110003126		SA1	PPMEMSZ	12-4K, 13-8K, 14-16K MEMORY SIZES	CPSA281	144

11405	5130003116		SA3	PPTYPE	MUST SPECIAL-CASE *FNCL* INSTRUCTION	CPSA281	145
	7233000003		SX3	X3+3		CPSA281	146
11406	0313011410		NZ	X3,ZPP101	IF NOT 180 PPU ASSEMBLY	CPSA281	147
	7244770077		SX4	X4-FNCLCDE		CPSA281	148
11407	0314011410		NZ	X4,ZPP101	IF NOT *FNCL* INSTRUCTION	CPSA281	149
	7110000020		SX1	16	SET *FNCL* ADDRESS SIZE = 16	CPSA281	150
11410	0100006305	ZPP101	RJ	SCAD	EVALUATE FIRST ADDRESS FIELD	CPSA281	151
11411	7160000055		SX6	1R		CPS026	33
	5160004055		SA6	REFLET		CPS026	34
11412	5110003274		SA1	OPADS+1		COMPASS	5999
	63710		SB7	X1		COMPASS	6000
11413	5120003254		SA2	EXVAL		COMPASS	6001
	0277011414		JP	++1+B7		COMPASS	6002
						COMPASS	6003
11414	43054	+	MX0	-16	TYPE 1 - MEMORY (16 BIT) ADDRESS	CPSA281	152
	15220		BX2	-X0*X2	WITH NO SECOND FIELD	CMP029	16
	0400011437		EQ	ZPP104		COMPASS	6006
11415	43052	+	MX0	42	TYPE 3 - CONSTANT (18 BIT) ADDRESS	COMPASS	6007
	15220		BX2	-X0*X2		COMPASS	6008
	0400011437		EQ	ZPP104		COMPASS	6009
11416	43054	+	MX0	-16	TYPE 5 - MEMORY (16 BIT) ADDRESS	CPSA281	153
	15620		BX6	-X0*X2	WITH OPTIONAL SECOND FIELD	COMPASS	6011
	0400011423		EQ	ZPP102		COMPASS	6012
11417	5110003145	+	SA1	CHAR	TYPE 7 - MEMORY (12 BIT) ADDRESS	COMPASS	6013
	6271777722		SB7	X1-1R	WITH MANDATORY SECOND ADDRESS	COMPASS	6014
						COMPASS	6015
11420	0570011422		NZ	B7,ZPP105	IF CHANNEL NUMBER IS PRESENT	COMPASS	6016
	76610		SX6	B1	SET MISSING ADDRESS ERROR	COMPASS	6017
11421	5160003345		SA6	EFLG		COMPASS	6018
	5160003342		SA6	W8ERR		COMPASS	6019
11422	43054	ZPP105	MX0	-16		CPSA281	154
	15620		BX6	-X0*X2		COMPASS	6021
11423	5160004066	ZPP102	SA6	P2TEMP		COMPASS	6022
	5120004047		SA2	OPVAL	CURRENT OP CODE	CPSA297	36
11424	5130003271		SA3	PSIM2	INSTRUCTION MASK FOR STORES THAT PREFETCH	CPSA297	37
	21230		AX2	6+18	ERROR MAY BE FLAGGED	CPSA297	38
	63720		SB7	X2		CPSA297	39
11425	22373		LX3	X3,B7		CPSA297	40
	0323011431		PL	X3,ZPP102A	IF NOT TO CHECK FOR PREFETCH ERROR	CPSA297	41
11426	5140003106		SA4	LOCCTR	CHECK IF STORING AT *+2	CPSA297	42
	37446		IX4	X4-X6		CPSA297	43
	76710		SX7	B1		CPSA297	44
11427	7244000002		SX4	X4+2		CPSA297	45
	0314011431		NZ	X4,ZPP102A	IF NOT *+2	CPSA297	46
11430	5170003345		SA7	EFLG		CPSA297	47
	5170003344		SA7	WD45ERR	+ ERROR	CPSA297	48
11431	7110000006	ZPP102A	SX1	6		CPSA297	49
	0100006305		RJ	SCAD	EVALUATE SECOND ADDRESS	COMPASS	6024
11432	5110003254		SA1	EXVAL		COMPASS	6025
	0321011435		PL	X1,ZPP103		COMPASS	6026
11433	76610		SX6	B1	POST ADDRESS FIELD OVERFLOW	COMPASS	6027
	5160003345		SA6	EFLG		COMPASS	6028
11434	5160003341		SA6	W7ERR		COMPASS	6029
11435	43066	ZPP103	MX0	54		COMPASS	6030
	15110		BX1	-X0*X1	TRUNCATE TO 6 BITS	COMPASS	6031
	5120004066		SA2	P2TEMP		COMPASS	6032
11436	20122		LX1	18		CPSA281	155

11437	12221 5130003274	ZPP104	BX2 SA3 SX3	X2+X1 OPADS+1 X3-1	OR DIRECT REFERENCE INTO OP	COMPASS 6034 CPSA281 156 CPSA281 157
11440	0313011442 43660 15126		NZ MX6 BX1	X3,ZPP104A -12 -X6*X2	IF NOT 18-BIT CONSTANT ADDRESS MOVE UPPER 6 BITS OF ADDRESS FIELD INTO SECOND ADDRESS FIELD	CPSA281 158 CPSA281 159 CPSA281 160
11441	11662 20606 12261		BX6 LX6 BX2	X6*X2 6 X6+X1		CPSA281 161 CPSA281 162 CPSA281 163
11442	5110004047 12612 54610	ZPP104A	SA1 BX6 SA6	OPVAL X1+X2 A1	SET UP TO OUTPUT 24 OR 32-BIT INSTR	CPSA281 164 COMPASS 6036 COMPASS 6037
11443	21622 5160004066		AX6 SA6	18 P2TEMP		CPSA281 165 COMPASS 6039
11444	5110003123 0100006214		SA1 RJ	LWORD UPPOS	CALL UPPOS(12)	CPSA281 166 COMPASS 6041
11445	5110004066 7120000031		SA1 SX2	P2TEMP 25		COMPASS 6042 COMPASS 6043
11446	5130003262 0100007773		SA3 RJ	PPBYT PACK0	CALL PACK0(HIGH 12 BITS,25,4)	CPSA281 167 COMPASS 6045
11447	5110004066 5120003123		SA1 SA2	P2TEMP LWORD		COMPASS 6046 CPSA281 168
11450	43300 10433 0100025344		MX3 BX4 RJ	0 X3 BINOUT		COMPASS 6048 COMPASS 6049 COMPASS 6050
11451	0100026252		RJ	DWORD	DUMP THIS WORD	COMPASS 6051
11452	5110003123 0100006214		SA1 RJ	LWORD UPPOS	CALL UPPOS(12)	CPSA281 169 COMPASS 6053
11453	5110004047 7120000036		SA1 SX2	OPVAL 30		COMPASS 6054 COMPASS 6055
11454	43352 15113 5140003116		MX3 BX1 SA4	-18 -X3*X1 PPTYPE		CPSA281 170 CPSA281 171 CPSA281 172
11455	7244000003 0314011457		SX4 NZ	X4+3 X4,ZPP106	IF NOT 180 PP ASSEMBLY	CPSA281 173 CPSA281 174
11456	7120000040		SX2	32		CPSA281 175
11457	5130003262 0100007773	ZPP106	SA3 RJ	PPBYT PACK0	CALL PACK0(LO 12 BITS,30,4)	CPSA281 176 COMPASS 6057
11460	5110004047 5120003123		SA1 SA2	OPVAL LWORD		COMPASS 6058 CPSA281 177
11461	43300 10433 0100025344		MX3 BX4 RJ	0 X3 BINOUT	CALL BINOUT(LO 12 BITS,12,0,0)	COMPASS 6060 COMPASS 6061 COMPASS 6062
11462	0400011321		EQ	ZLISTG		COMPASS 6063

** BC INSTRUCTIONS.

F4820	255
F4820	256
F4820	257
F4820	258
F4820	259
F4820	260
F4820	261
F4820	262
F4820B	34
F4820B	35
F4820B	36
F4820B	37
F4820B	38
F4820B	39
F4820B	40
F4820B	41
F4820B	42
F4820B	43
F4820B	44
F4820B	45
F4820B	46
F4820B	47
F4820	268
F4820	269
F4820	270
F4820	271
F4820	272
F4820	273
F4820	274
F4820	275
F4820B	48
F4820	277
F4820	278
F4820	279
F4820	280
F4820	281
F4820	282
F4820	283
F4820	284
F4820	285
F4820	286
F4820	287
F4820	288
F4820	289
F4820	290
F4820	291
F4820	292
F4820	293
F4820	294
F4820	295
F4820	296
F4820	297
F4820	298
F4820	299
F4820	300
F4820	301
F4820	302

11463	7110000020	ZBC
	0100025177	
11464	5110003303	
	43054	
	15710	
11465	20141	
	43271	
	5170004047	
11466	15612	
	0316011472	
	43667	
11467	20105	
	15616	
	0306011472	
11470	37662	
	6226777755	
11471	0720011472	
	76600	
11472	5216011777	ZBC0
	10611	
11473	5160003273	
	21122	
	73110	
11474	0100006305	
11475	5130003273	
	5120003254	
11476	10622	
	7110000020	
	54631	
11477	0323011500	+
	0100006305	
11500	5110003273	
	5130004047	
11501	54211	
	5140003254	
	43070	
11502	63710	
	66600	
	0277000000	
11503	11702	ZBC1
	0307011506	
11504	76610	ZBC2
	5160003322	
11505	5160003345	

** 0 - 4-BIT ADDRESS. (SAB)

** PROCESS *A* ERROR.

SX1	16	PROCESS LOCATION FIELD
RJ	ZPRLOC	PRLOC(16)
SA1	OPTYPE	
MX0	-16	ISOLATE 16-BIT OP CODE
BX7	-X0*X1	
LX1	-27	
MX2	-3	
SA7	OPVAL	
BX6	-X2*X1	
NZ	X6,ZBC0	IF NOT TYPE 0
MX6	-5	MASK FOR NAD EXTENSION
LX1	5	CHECK NAD EXTENSION
BX6	-X6*X1	
ZR	X6,ZBC0	IF NOT NAD EXTENSION
IX6	X6-X2	TYPE = 7 + NAD EXTENSION
SB2	X6-ZBCAL	
NG	B2,ZBC0	
SX6	B0	
SA1	ZBCA+X6	EXTRACT FIRST ADDRESS FIELD WIDTH
BX6	X1	
SA6	OPADS	TYPE FLAG
AX1	18	
SX1	X1	
RJ	SCAD	SCAN ADDRESS FIELD
SA3	OPADS	CHECK TYPE
SA2	EXVAL	SAVE VALUE
BX6	X2	
SX1	16	
SA6	A3+B1	
PL	X3,*+1	IF NO SECOND FIELD
RJ	SCAD	
SA1	OPADS	CHECK TYPE
SA3	OPVAL	(X3) = OPCODE VALUE
SA2	A1+B1	(X2) = FIRST ADDRESS VALUE
SA4	EXVAL	(X4) = SECOND ADDRESS VALUE
MX0	-4	(X0) = FIELD WIDTH MASK
SB7	X1	
SB6	B0	(B6) = SHIFT COUNT
JP	B7	JUMP ON ADDRESS TYPE

** FORM INSTRUCTION.

F4820 303

F4820 304

F4820 305

F4820 306

F4820 307

F4820 308

F4820 309

F4820 310

F4820 311

F4820 312

F4820 313

F4820 314

F4820 315

F4820 316

F4820 317

F4820 318

F4820 319

F4820 320

F4820 321

F4820 322

F4820 323

F4820 324

F4820 325

F4820 326

F4820 327

F4820 328

F4820 329

F4820 330

F4820 331

F4820 332

F4820 333

F4820 334

F4820 335

F4820 336

F4820 337

F4820 338

F4820 339

F4820 340

F4820 341

F4820 342

F4820 343

F4820 344

F4820 345

F4820A 5

F4820A 6

F4820 348

F4820 349

F4820A 7

F4820A 8

F4820A 9

F4820A 10

F4820 350

F4820 351

F4820 352

F4820 353

F4820 354

F4820 355

11506 15620

ZBC3

BX6

-X0*X2

TRUNCATE ADDRESS

22666

LX6

X6,B6

POSITION FIELD

36663

IX6

X6+X3

11507 5160004047

SA6

OPVAL

11510 7110000020

ZBC4

SX1

16

CALL UPPOS(16)

0100006214

RJ

UPPOS

11511 5110004047

SA1

OPVAL

CALL PACK0(OPVAL,25,4)

7120000031

SX2

25

11512 7130000004

SX3

4

0100007773

RJ

PACK0

11513 5110004047

SA1

OPVAL

CALL BINOUT(OPVAL,16,0,0)

7120000020

SX2

16

11514 43300

MX3

0

13444

BX4

X4-X4

0100025344

RJ

BINOUT

11515 0400011321

EQ

ZLISTG

RETURN

** 1 - (16 - 4-BIT) ADDRESS. (SLC)

11516 7160000020

ZBC5

SX6

16

0302011503

ZR

X2,ZBC1

IF NO SHIFT

11517 37262

IX2

X6-X2

0200011503

JP

ZBC1

** 2 - (15 - 4-BIT) ADDRESS. (TAB)

11520 7160000017

ZBC6

SX6

15

37262

IX2

X6-X2

11521 0200011503

JP

ZBC1

** 3 - 8-BIT ADDRESS. (ADN)

11522 43064

ZBC7

MX0

-8

0200011503

JP

ZBC1

** 4 - 9-BIT RELATIVE ADDRESS. (UJR)

11523 10122

ZBC8

BX1

X2

CALL PACK0(VALUE,34,4)

7120000042

SX2

34

11524 7130000004

SX3

4

0100007773

RJ

PACK0

11525 7160000051

SX6

1R(

5160003660

SA6

OCTAL+29

11526 7160000052

SX6

1R)

5160003665

SA6

OCTAL+34

11527 5120003274

SA2

OPADS+1

5130004047

SA3

OPVAL

11530 5140003106

SA4

LOCCTR

66600

SB6

B0

37224

IX2

X2-X4

11531 43064

MX0

-8

Address	Label	OpCode	OpName	OpVal	OpDesc	OpHex	OpDec
11532	0322011503 7233002000 14222	PL	X2,ZBC1	IF JUMP FORWARD	F4820	356	
		SX3	X3+0#0400		F4820	357	
		BX2	-X2		F4820	358	
11533	0200011503	JP	ZBC1		F4820	359	
					F4820	360	
					F4820	361	
	**		5 - 4-BIT CHANNEL AND NO ADDRESS. (IAN)		F4820	362	
					F4820	363	
11534	6160000004	ZBC9	SB6	4	SET SHIFT COUNT	F4820	364
	0200011503	JP	ZBC1		F4820	365	
					F4820	366	
					F4820	367	
	**		6 - 8-BIT ADDRESS AND OPTIONAL INDEXING. (LDD) (UJI)		F4820	368	
					F4820	369	
11535	43010	ZBC10	MX0	8		F4820	370
	0334011504	NG	X4,ZBC2	IF NEGATIVE INDEX	F4820	371	
11536	6274777774	SB7	X4-3		F4820	372	
	0670011504	PL	B7,ZBC2	IF INDEX .GE. 3	F4820	373	
11537	20410	LX4	8	MERGE INDEX REGISTER WITH OPVAL	F4820	374	
	36634	IX6	X3+X4		F4820	375	
	36334	IX3	X3+X4		F4820	376	
11540	5160004047	SA6	OPVAL		F4820	377	
	20661	LX6	-11		F4820	378	
11541	0326011503	PL	X6,ZBC1	IF NOT INDIRECT	F4820	379	
	15120	BX1	-X0*X2	EXTRACT DIRECT CELL	F4820	380	
11542	0100024403	RJ	RBV	READ BINARY VALUE	F4820	381	
11543	10166	BX1	X6		F4820	382	
	0306011546	ZR	X6,ZBC11	IF NO INDIRECT VALUE	F4820	383	
11544	7120000036	SX2	30		F4820	384	
	7130000004	SX3	4		F4820	385	
11545	0100007773	RJ	PACK0		F4820	386	
11546	5130004047	ZBC11	SA3	OPVAL	F4820	387	
	5120003274	SA2	OPADS+1		F4820	388	
11547	66600	SB6	B0		F4820	389	
	43064	MX0	-8		F4820	390	
	0200011503	JP	ZBC1		F4820	391	
					F4820	392	
					F4820	393	
	**		7 - 4-BIT CHANNEL AND 4-BIT ADDRESS. (INT)		F4820	394	
					F4820	395	
11550	15740	ZBC12	BX7	-X0*X4	CHECK 2ND FIELD	F4820	396
	11604	BX6	X0*X4		F4820	397	
	6160000004	SB6	4		F4820	398	
11551	36337	IX3	X3+X7		F4820	399	
	0306011503	ZR	X6,ZBC1	IF NO ADDRESS OVERFLOW	F4820	400	
11552	0200011504	JP	ZBC2		F4820	401	
					F4820B	49	
	**		8 - 1-BIT ADDRESS. (JFA)		F4820B	50	
					F4820B	51	
	11510	ZBC8.0	EQU	ZBC4		F4820B	52
					F4820B	53	
					F4820B	54	
					F4820B	55	
	**		9 - 8-BIT RELATIVE ADDRESS BACKWARDS. (RTB)		F4820B	56	
					F4820B	57	
11553	10122	ZBC9.0	BX1	X2	CALL PACK0(VALUE,34,4)	F4820B	58
	7120000042	SX2	34		F4820B	59	

11554	7130000004		SX3	4		F4820B	60
	0100007773		RJ	PACK0		F4820B	61
11555	7160000051		SX6	1R(		F4820B	62
	5160003660		SA6	OCTAL+29		F4820B	63
11556	7160000052		SX6	1R)		F4820B	64
	5160003665		SA6	OCTAL+34		F4820B	65
11557	5120003274		SA2	OPADS+1		F4820B	66
	5130004047		SA3	OPVAL		F4820B	67
11560	5140003106		SA4	LOCCTR		F4820B	68
	66600		SB6	B0		F4820B	69
	37224		IX2	X2-X4		F4820B	70
11561	43064		MX0	-8		F4820B	71
	0322011504		PL	X2,ZBC2	IF JUMP FORWARD	F4820B	72
	14222		BX2	-X2		F4820B	73
11562	0200011503		JP	ZBC1		F4820B	74
** 10 - 12-BIT ADDRESS. (FNA)						F4820B	75
						F4820B	76
						F4820B	77
11563	43060	ZBC10.0	MX0	-12		F4820B	78
	0200011503		JP	ZBC1		F4820B	79
						F4820B	80
** 11 - 2 16-BIT ADDRESS I/O.						F4820B	81
						F4820B	82
						F4820B	83
11564	10644	ZBC11.0	BX6	X4	SAVE 2ND ADDRESS FIELD	F4820B	84
	5110003145		SA1	CHAR	CHECK 3RD ADDRESS	F4820B	85
11565	5160003275		SA6	OPADS+2		F4820B	86
	6221777722		SB2	X1-1R		F4820B	87
11566	0420011600		ZR	B2,ZBC11.1	IF NO 3RD ADDRESS	F4820B	88
	7110000002		SX1	2	SCAN 3RD ADDRESS	F4820B	89
11567	0100006305		RJ	SCAD		F4820B	90
11570	5110003254		SA1	EXVAL	ENTER PARITY CONTROL	F4820B	91
	5120004047		SA2	OPVAL		F4820B	92
11571	43372		MX3	-2		F4820B	93
	15113		BX1	-X3*X1		F4820B	94
	20104		LX1	4	POSITION PARITY CONTROL BITS IN INSTRUCTION	F4820B	95
	12612		BX6	X1+X2		F4820B	96
11572	5110003145		SA1	CHAR	CHECK 4TH FIELD	F4820B	97
	54620		SA6	A2		F4820B	98
11573	6221777722		SB2	X1-1R		F4820B	99
	0420011600		ZR	B2,ZBC11.1	IF NO 4TH ADDRESS	F4820B	100
11574	7110000002		SX1	2	SCAN 4TH ADDRESS	F4820B	101
	0100006305		RJ	SCAD		F4820B	102
11575	5110003254		SA1	EXVAL	ENTER MODE	F4820B	103
	5120004047		SA2	OPVAL		F4820B	104
11576	43372		MX3	-2		F4820B	105
	15113		BX1	-X3*X1		F4820B	106
	12612		BX6	X1+X2		F4820B	107
	54620		SA6	A2		F4820B	108
11577	0200011602		JP	ZBC11.2		F4820B	109
11600	76610	ZBC11.1	SX6	B1	SET A-ERROR	F4820B	110
	5160003322		SA6	AERR		F4820B	111
11601	5160003345		SA6	EFLG		F4820B	112
11602	7110000020	ZBC11.2	SX1	16	CALL UPPOS(16)	F4820B	113
	0100006214		RJ	UPPOS		F4820B	114
11603	5110004047		SA1	OPVAL	CALL PACK0(OPVAL,25,4)	F4820B	115
	7120000031		SX2	25		F4820B	116

11604	7130000004	SX3	4		F4820B	117
	0100007773	RJ	PACKO		F4820B	118
11605	5110004047	SA1	OPVAL	CALL BINOUT(OPVAL,16,0,0)	F4820B	119
	7120000020	SX2	16		F4820B	120
11606	76300	SX3	B0		F4820B	121
	76400	SX4	B0		F4820B	122
	0100025344	RJ	BINOUT		F4820B	123
11607	0100026252	RJ	DWORD		F4820B	124
11610	0100007720	RJ	LISTERG	LIST LINE	F4820B	125
11611	7110000020	SX1	16	CALL UPPOS(16)	F4820B	126
	0100006214	RJ	UPPOS		F4820B	127
11612	5110003274	SA1	OPADS+1	CALL PACKO(OPADS+1,25,4)	F4820B	128
	7120000031	SX2	25		F4820B	129
11613	7130000004	SX3	4		F4820B	130
	0100007773	RJ	PACKO		F4820B	131
11614	5110003274	SA1	OPADS+1	CALL BINOUT(OPADS+1,16,0,0)	F4820B	132
	7120000020	SX2	16		F4820B	133
11615	76300	SX3	B0		F4820B	134
	76400	SX4	B0		F4820B	135
	0100025344	RJ	BINOUT		F4820B	136
11616	0100026252	RJ	DWORD		F4820B	137
11617	0100007720	RJ	LISTERG	LIST LINE	F4820B	138
11620	7110000020	SX1	16	CALL UPPOS(16)	F4820B	139
	0100006214	RJ	UPPOS		F4820B	140
11621	5110003275	SA1	OPADS+2	CALL PACKO(OPADS+2,25,4)	F4820B	141
	7120000031	SX2	25		F4820B	142
11622	7130000004	SX3	4		F4820B	143
	0100007773	RJ	PACKO		F4820B	144
11623	5110003275	SA1	OPADS+2	CALL BINOUT(OPADS+2,16,0,0)	F4820B	145
	7120000020	SX2	16		F4820B	146
11624	76300	SX3	B0		F4820B	147
	76400	SX4	B0		F4820B	148
	0100025344	RJ	BINOUT		F4820B	149
11625	0100026252	RJ	DWORD		F4820B	150
11626	0100007720	RJ	LISTERG		F4820B	151
11627	7110000020	SX1	16	CALL UPPOS(16)	F4820B	152
	0100006214	RJ	UPPOS		F4820B	153
11630	7110000000	SX1	0	CALL PACKO(0,25,4)	F4820B	154
	7120000031	SX2	25		F4820B	155
11631	7130000004	SX3	4		F4820B	156
	0100007773	RJ	PACKO		F4820B	157
11632	7110000000	SX1	0	CALL BINOUT(0,16,0,0)	F4820B	158
	7120000020	SX2	16		F4820B	159
11633	76300	SX3	B0		F4820B	160
	76400	SX4	B0		F4820B	161
	0100025344	RJ	BINOUT		F4820B	162
11634	0200011321	JP	ZLISTG	RETURN	F4820B	163
					F4820B	164
	**	12 - 2	16-BIT ADDRESS.	(QCL)	F4820B	165
					F4820B	166
11635	7110000020	SX1	16	CALL UPPOS(16)	F4820B	167
	0100006214	RJ	UPPOS		F4820B	168
11636	5110004047	SA1	OPVAL	CALL PACKO(OPVAL,25,4)	F4820B	169
	7120000031	SX2	25		F4820B	170
11637	7130000004	SX3	4		F4820B	171
	0100007773	RJ	PACKO		F4820B	172
11640	5110004047	SA1	OPVAL	CALL BINOUT(OPVAL,16,0,0)	F4820B	173

11641	76300	7120000020	SX2	16		F4820B	174
			SX3	B0		F4820B	175
	76400		SX4	B0		F4820B	176
		0100025344	RJ	BINOUT		F4820B	177
11642	0100026252		RJ	DWORD		F4820B	178
11643	0100007720		RJ	LISTERG	LIST LINE	F4820B	179
11644	7110000020		SX1	16	CALL UPPOS(16)	F4820B	180
		0100006214	RJ	UPPOS		F4820B	181
11645	5110003274		SA1	OPADS+1	CALL PACK0(OPADS+1,25,4)	F4820B	182
		7120000031	SX2	25		F4820B	183
11646	7130000004		SX3	4		F4820B	184
		0100007773	RJ	PACK0		F4820B	185
11647	5110003274		SA1	OPADS+1	CALL BINOUT(OPADS+1,16,0,0)	F4820B	186
		7120000020	SX2	16		F4820B	187
11650	76300		SX3	B0		F4820B	188
	76400		SX4	B0		F4820B	189
		0100025344	RJ	BINOUT		F4820B	190
11651	0100026252		RJ	DWORD		F4820B	191
11652	0100007720		RJ	LISTERG	LIST LINE	F4820B	192
11653	7110000020		SX1	16	CALL UPPOS(16)	F4820B	193
		0100006214	RJ	UPPOS		F4820B	194
11654	5110003254		SA1	EXVAL	CALL PACK0(EXVAL,25,4)	F4820B	195
		7120000031	SX2	25		F4820B	196
11655	7130000004		SX3	4		F4820B	197
		0100007773	RJ	PACK0		F4820B	198
11656	5110003254		SA1	EXVAL	CALL BINOUT(EXVAL,16,0,0)	F4820B	199
		7120000020	SX2	16		F4820B	200
11657	76300		SX3	B0		F4820B	201
	76400		SX4	B0		F4820B	202
		0100025344	RJ	BINOUT		F4820B	203
11660	0200011321		JP	ZLISTG	RETURN	F4820B	204
						F4820B	205
		**		13 - 7-BIT RELATIVE ADDRESS. (L1R)		F4820B	206
						F4820B	207
11661	10122	ZBC13.0	BX1	X2	CALL PACK0(VALUE,34,4)	F4820B	208
		7120000042	SX2	34		F4820B	209
11662	7130000004		SX3	4		F4820B	210
		0100007773	RJ	PACK0		F4820B	211
11663	7160000051		SX6	1R(		F4820B	212
		5160003660	SA6	OCTAL+29		F4820B	213
11664	7160000052		SX6	1R)		F4820B	214
		5160003665	SA6	OCTAL+34		F4820B	215
11665	5120003274		SA2	OPADS+1		F4820B	216
		5130004047	SA3	OPVAL		F4820B	217
11666	5140003106		SA4	LOCCTR		F4820B	218
		66600	SB6	B0		F4820B	219
		37224	IX2	X2-X4		F4820B	220
11667	43065		MX0	-7		F4820B	221
		0322011503	PL	X2,ZBC1	IF JUMP FORWARD	F4820B	222
11670	7233000200		SX3	X3+0#0080		F4820B	223
		14222	BX2	-X2		F4820B	224
11671	0200011503		JP	ZBC1		F4820B	225
						F4820B	226
		**		14 - 16 BIT INSTRUCTION AND 16 BIT ADDRESS (LJM)		F4820B	227
						F4820B	228
11672	7110000020	ZBC14.0	SX1	16	CALL UPPOS(16)	F4820B	229
		0100006214	RJ	UPPOS		F4820B	230

11673	5110004047		SA1	OPVAL	CALL PACK0(OPVAL,25,4)	F4820B	231
	7120000031		SX2	25		F4820B	232
11674	7130000004		SX3	4		F4820B	233
	0100007773		RJ	PACK0		F4820B	234
11675	5110004047		SA1	OPVAL	CALL BINOUT(OPVAL,16,0,0)	F4820B	235
	7120000020		SX2	16		F4820B	236
11676	76300		SX3	B0		F4820B	237
	76400		SX4	B0		F4820B	238
	0100025344		RJ	BINOUT		F4820B	239
11677	0100026252		RJ	DWORD		F4820B	240
11700	0100007720		RJ	LISTERG	LIST LINE	F4820B	241
11701	7110000020		SX1	16	CALL UPPOS(16)	F4820B	242
	0100006214		RJ	UPPOS		F4820B	243
11702	5110003274		SA1	OPADS+1	CALL PACK0(OPADS+1,25,4)	F4820B	244
	7120000031		SX2	25		F4820B	245
11703	7130000004		SX3	4		F4820B	246
	0100007773		RJ	PACK0		F4820B	247
11704	5110003274		SA1	OPADS+1	CALL BINOUT(OPADS+1,16,0,0)	F4820B	248
	7120000020		SX2	16		F4820B	249
11705	76300		SX3	B0		F4820B	250
	76400		SX4	B0		F4820B	251
	0100025344		RJ	BINOUT		F4820B	252
11706	0200011321		JP	ZLISTG	RETURN	F4820B	253
						F4820B	254
		**	15 - 16 BIT INSTRUCTION WITH 3 16 BIT ADDRESS FIELDS (QGT)			F4820B	255
						F4820B	256
11707	10644	ZBC15.0	BX6	X4	SAVE 2ND ADDRESS FIELD	F4820B	257
	5110003145		SA1	CHAR	CHECK 3RD ADDRESS	F4820B	258
11710	5160003275		SA6	OPADS+2		F4820B	259
	6221777722		SB2	X1-1R		F4820B	260
11711	0420011716		ZR	B2,ZBC15.1	IF NO 3RD ADDRESS	F4820B	261
	7110000020		SX1	16	SCAN 3RD ADDRESS	F4820B	262
11712	0100006305		RJ	SCAD		F4820B	263
11713	5110003254		SA1	EXVAL	ENTER MODE	F4820B	264
	43354		MX3	-16		F4820B	265
	15113		BX1	-X3*X1		F4820B	266
11714	10611		BX6	X1		F4820B	267
	5160003276		SA6	OPADS+3		F4820B	268
11715	0200011720		JP	ZBC15.2		F4820B	269
11716	76610	ZBC15.1	SX6	B1	SET A-ERROR	F4820B	270
	5160003322		SA6	AERR		F4820B	271
11717	5160003345		SA6	EFLG		F4820B	272
11720	7110000020	ZBC15.2	SX1	16	CALL UPPOS(16)	F4820B	273
	0100006214		RJ	UPPOS		F4820B	274
11721	5110004047		SA1	OPVAL	CALL PACK0(OPVAL,25,4)	F4820B	275
	7120000031		SX2	25		F4820B	276
11722	7130000004		SX3	4		F4820B	277
	0100007773		RJ	PACK0		F4820B	278
11723	5110004047		SA1	OPVAL	CALL BINOUT(OPVAL,16,0,0)	F4820B	279
	7120000020		SX2	16		F4820B	280
11724	76300		SX3	B0		F4820B	281
	76400		SX4	B0		F4820B	282
	0100025344		RJ	BINOUT		F4820B	283
11725	0100026252		RJ	DWORD		F4820B	284
11726	0100007720		RJ	LISTERG	LIST LINE	F4820B	285
11727	7110000020		SX1	16	CALL UPPOS(16)	F4820B	286
	0100006214		RJ	UPPOS		F4820B	287

11730	5110003274		SA1	OPADS+1	CALL PACK0(OPADS+1,25,4)	F4820B	288
	7120000031		SX2	25		F4820B	289
11731	7130000004		SX3	4		F4820B	290
	0100007773		RJ	PACK0		F4820B	291
11732	5110003274		SA1	OPADS+1	CALL BINOUT(OPADS+1,16,0,0)	F4820B	292
	7120000020		SX2	16		F4820B	293
11733	76300		SX3	B0		F4820B	294
	76400		SX4	B0		F4820B	295
	0100025344		RJ	BINOUT		F4820B	296
11734	0100026252		RJ	DWORD		F4820B	297
11735	0100007720		RJ	LISTERG	LIST LINE	F4820B	298
11736	7110000020		SX1	16	CALL UPPOS(16)	F4820B	299
	0100006214		RJ	UPPOS		F4820B	300
11737	5110003275		SA1	OPADS+2	CALL PACK0(OPADS+2,25,4)	F4820B	301
	7120000031		SX2	25		F4820B	302
11740	7130000004		SX3	4		F4820B	303
	0100007773		RJ	PACK0		F4820B	304
11741	5110003275		SA1	OPADS+2	CALL BINOUT(OPADS+2,16,0,0)	F4820B	305
	7120000020		SX2	16		F4820B	306
11742	76300		SX3	B0		F4820B	307
	76400		SX4	B0		F4820B	308
	0100025344		RJ	BINOUT		F4820B	309
11743	0100026252		RJ	DWORD		F4820B	310
11744	0100007720		RJ	LISTERG		F4820B	311
11745	7110000020		SX1	16	CALL UPPOS(16)	F4820B	312
	0100006214		RJ	UPPOS		F4820B	313
11746	5110003276		SA1	OPADS+3	CALL PACK0(OPADS+3,25,4)	F4820B	314
	7120000031		SX2	25		F4820B	315
11747	7130000004		SX3	4		F4820B	316
	0100007773		RJ	PACK0		F4820B	317
11750	5110003276		SA1	OPADS+3	CALL BINOUT(OPADS+3,16,0,0)	F4820B	318
	7120000020		SX2	16		F4820B	319
11751	76300		SX3	B0		F4820B	320
	76400		SX4	B0		F4820B	321
	0100025344		RJ	BINOUT		F4820B	322
11752	0200011321		JP	ZLISTG	RETURN	F4820B	323
						F4820B	324
						F4820B	325
		**	16 - 4 BIT ADDRESS AND 15-4 BIT FLAG (SCM)			F4820B	326
11753	15740	ZBC16.0	BX7	-X0*X4	CHECK SECOND FIELD	F4820B	327
	7160000017		SX6	15		F4820B	328
	37767		IX7	X6-X7	SUBTRACT 15 FROM FLAG	F4820B	330
11754	11604		BX6	X0*X4	CHECK ANY BITS GREATER THAN 4	F4820B	331
	6160000004		SB6	4		F4820B	332
	36337		IX3	X3+X7		F4820B	333
11755	0306011503		ZR	X6,ZBC1	CHECK FIRST FIELD	F4820B	334
	0200011504		JP	ZBC2	SET ERROR	F4820B	335
						F4820B	336
		**	17 - 16 BIT INSTRUCTION AND 16 BIT RELATIVE FORWARD			F4820B	337
						F4820B	338
11756	7110000020	ZBC17.0	SX1	16	CALL UPPOS(16)	F4820B	339
	0100006214		RJ	UPPOS		F4820B	340
11757	5110004047		SA1	OPVAL	CALL PACK0(OPVAL,25,4)	F4820B	341
	7120000031		SX2	25		F4820B	342
11760	7130000004		SX3	4		F4820B	343
	0100007773		RJ	PACK0		F4820B	344

11761	5110004047	SA1	OPVAL	CALL BINOUT (OPVAL,16,0,0)	F4820B	345
	7120000020	SX2	16		F4820B	346
11762	76300	SX3	B0		F4820B	347
	76400	SX4	B0		F4820B	348
	0100025344	RJ	BINOUT		F4820B	349
11763	0100026252	RJ	DWORD		F4820B	350
11764	0100007720	RJ	LISTERG	LIST LINE	F4820B	351
					F4820B	352
11765	7110000020	SX1	16	CALL UPPOS(16)	F4820B	353
	0100006214	RJ	UPPOS		F4820B	354
11766	5110003274	SA1	OPADS+1	CALL PACK0(OPADS+1,25,4)	F4820B	355
	5130003106	SA3	LOCCTR	LOAD LOCATION COUNTER	F4820B	356
11767	37113	IX1	X1-X3	CONVERT TO RELATIVE FORWARD	F4820B	357
	0331011504	MI	X1,ZBC2	IF BACKWARDS, SET ERROR	F4820B	358
11770	7120000031	SX2	25		F4820B	359
	7130000004	SX3	4		F4820B	360
11771	0100007773	RJ	PACK0		F4820B	361
11772	5110003274	SA1	OPADS+1	CALL BINOUT(OPADS+1,16,0,0)	F4820B	362
	5140003106	SA4	LOCCTR	LOAD LOCATION COUNTER	F4820B	363
11773	37114	IX1	X1-X4	CONVERT TO RELATIVE	F4820B	364
	0331011504	MI	X1,ZBC2	IF BACKWARDS, SET ERROR	F4820B	365
11774	7120000020	SX2	16		F4820B	366
	76300	SX3	B0		F4820B	367
	76400	SX4	B0		F4820B	368
11775	0100025344	RJ	BINOUT		F4820B	369
11776	0200011321	JP	ZLISTG	RETURN	F4820B	370
					F4820B	371
					F4820B	372
					F4820	402
11777		ZBCA	BSS	0	F4820	403
					F4820B	373
	**			THE BIT LAYOUT OF THE INSTRUCTION FORMAT JUMP TABLE IS..	F4820B	374
	*				F4820B	375
	*			BITS 59-56 = BIT DEFINES NUMBER OF ADDRESS FIELDS MINUS 1.	F4820B	376
	*			BITS 53-36 = INSTRUCTION LENGTH IN BITS MINUS 16.	F4820B	377
	*			BITS 35-18 = WIDTH OF FIRST ADDRESS FIELD.	F4820B	378
	*			BITS 18-00 = ADDRESS OF NAD INSTRUCTION CREAKER.	F4820B	379
	*				F4820B	380
L	0	LOC	0		F4820B	381
					F4820B	382
L	0	VFD	24/,18/4,18/ZBC1		F4820	404
L	1	VFD	24/,18/4,18/ZBC5		F4820	405
L	2	VFD	24/,18/4,18/ZBC6		F4820	406
L	3	VFD	24/,18/8,18/ZBC7		F4820	407
L					F4820	408
L	4	VFD	24/,18/16,18/ZBC8		F4820	409
L	5	VFD	24/,18/4,18/ZBC9		F4820	410
L	6	VFD	1/1,23/,18/8,18/ZBC10		F4820	411
L	7	VFD	1/1,23/,18/4,18/ZBC12		F4820	412
L					F4820B	383
L	10	VFD	4/0,20/0/,18/1,18/ZBC8.0		F4820B	384
L	11	VFD	4/0,20/0/,18/16,18/ZBC9.0		F4820B	385
L	12	VFD	4/0,20/0/,18/12,18/ZBC10.0		F4820B	386
L	13	VFD	4/16B,20/48,18/16,18/ZBC11.0		F4820B	387
L					F4820B	388
L	14	VFD	4/17B,20/32,18/16,18/ZBC12.0		F4820B	389
L	15	VFD	4/0,20/0/,18/16,18/ZBC13.0		F4820B	390

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12037	0307012042		ZR	X7,ZMC5	IF NEGATIVE NUMBER WITHIN FIELD	F4820	460
						F4820	461
						F4820	462
		**		PROCESS *A* ERROR.		F4820	463
12040	76610	ZMC4	SX6	B1	SET *A* ERROR	F4820	464
	5160003322		SA6	AERR		F4820	465
12041	5160003345		SA6	EFLG		F4820	466
						F4820	467
						F4820	468
		**		FORM ADDRESS FIELD.		F4820	469
						F4820	470
						F4820	471
12042	15620	ZMC5	BX6	-X0*X2	TRUNCATE ADDRESS	F4820	472
	5160004047		SA6	OPVAL		F4820	473
12043	0100026252		RJ	DWORD	DUMP THIS WORD	F4820	474
12044	7110000010		SX1	8	CALL UPPOS(8)	F4820	475
	0100006214		RJ	UPPOS		F4820	476
12045	5130003273		SA3	OPADS	CALL PACK0(OPVAL,24+FW/4,FW/4)	F4820	477
	5110004047		SA1	OPVAL		F4820	478
12046	21324		AX3	20		F4820	479
	7223000030		SX2	X3+24		F4820	480
12047	0100007773		RJ	PACK0		F4820	481
12050	5110003273		SA1	OPADS		F4820	482
	20145		LX1	59-22		F4820	483
12051	0321012056		PL	X1,ZMC6	IF 8-BIT FIELD	F4820	484
	5110004047		SA1	OPVAL	CALL BINOUT(HIBITS,8,0,0)	F4820	485
12052	7120000010		SX2	8		F4820	486
	43300		MX3	0		F4820	487
	13444		BX4	X4-X4		F4820	488
12053	21110		AX1	8		F4820	489
	0100025344		RJ	BINOUT		F4820	490
12054	0100026252		RJ	DWORD		F4820	491
12055	7110000010		SX1	8		F4820	492
	0100006214		RJ	UPPOS	CALL UPPOS(8)	F4820	493
12056	5110004047	ZMC6	SA1	OPVAL	CALL BINOUT(LOBITS,8,0,0)	F4820	494
	7120000010		SX2	8		F4820	495
12057	43300		MX3	0		F4820	496
	13444		BX4	X4-X4		F4820	497
	0100025344		RJ	BINOUT		F4820	498
12060	0200011321		JP	ZLISTG	RETURN	F4820	499
						F4820	500
						F4820	501
		**		2 - 16-BIT ADDRESS FIELD.		F4820	502
						F4820	503
						F4820	504
12061	43054	ZMC7	MX0	-16		F4820A	11
	5110003117		SA1	RMODE	CHECK FOR REVERSED ADDRESS	F4820A	12
12062	0301012036		ZR	X1,ZMC3	IF NORMAL ADDRESS MODE	F4820A	13
						F4820A	14
	10122		BX1	X2	CALL PACK0(VALUE,34,4)	F4820A	15
12063	7120000042		SX2	34		F4820A	16
	7130000004		SX3	4		F4820A	17
12064	0100007773		RJ	PACK0		F4820A	18
12065	7160000051		SX6	1R(		F4820A	19
	5160003660		SA6	OCTAL+29		F4820A	20
12066	7160000052		SX6	1R)		F4820A	21
	5160003665		SA6	OCTAL+34		F4820A	22

12067	5120003254		SA2	EXVAL		F4820A	23
		43054	MX0	-16		F4820A	24
		43764	MX7	-8		F4820A	25
12070	15127		BX1	-X7*X2	LSB	F4820A	26
		21210	AX2	8		F4820A	27
		20110	LX1	8		F4820A	28
		15727	BX7	-X7*X2	MSB	F4820A	29
12071	20210		LX2	8		F4820A	30
		11202	BX2	X0*X2	MERGE AFTER SWAPPING BYTES	F4820A	31
		12227	BX2	X2+X7		F4820A	32
		12221	BX2	X2+X1		F4820A	33
12072	0200012042		JP	ZMC5		F4820A	34
						F4820	507
** 3 - 8-BIT RELATIVE ADDRESS.						F4820	508
						F4820	509
12073	10122	ZMC8	BX1	X2	CALL PACK0(VALUE,30,4)	F4820	510
		7120000042	SX2	34		F4820	511
12074	7130000004		SX3	4		F4820	512
		0100007773	RJ	PACK0		F4820	513
12075	7160000051		SX6	1R(		F4820	514
		5160003660	SA6	OCTAL+29		F4820	515
12076	7160000052		SX6	1R)		F4820	516
		5160003665	SA6	OCTAL+34		F4820	517
12077	5120003254		SA2	EXVAL		F4820	518
		5140003106	SA4	LOCCTR		F4820	519
12100	76611		SX6	B1+B1		F4820	520
		36446	IX4	X4+X6		F4820	521
		37224	IX2	X2-X4		F4820	522
		43065	MX0	-7		F4820	523
12101	0322012036		PL	X2,ZMC3	IF JUMP FORWARD	F4820	524
		76710	SX7	B1	CHANGE TO TWO COMPLEMENT NUMBER	F4820	525
		43101	MX1	1		F4820	526
12102	15221		BX2	-X1*X2		F4820	527
		36227	IX2	X2+X7		F4820	528
		16410	BX4	-X0+X1		F4820	529
		12642	BX6	X4+X2		F4820	530
12103	43064		MX0	-8		F4820	531
		0306012042	ZR	X6,ZMC5	IF NO OVERFLOW	F4820	532
12104	0200012040		JP	ZMC4		F4820	533
						F4820	534
12105		ZMCA	BSS	0		F4820	535
12105	000000000000000011321		VFD	12/0,30/0,18/ZMC2		F4820	536
12106	00100000000010012036		VFD	12/8,30/8,18/ZMC3		F4820	537
12107	00200000000020012061		VFD	12/16,30/16,18/ZMC7		F4820	538
12110	00200000000010012073		VFD	12/16,30/8,18/ZMC8		F4820	539

** MACRO CALL.

COMPASS 6065
COMPASS 6066
COMPASS 6067

12111	5110003303	ZMACALL	SA1	OPTYPE	SEE IF A LOCATION TERM SHOULD BE	COMPASS 6068
	5120003102		SA2	LOCSYM	LISTED	COMPASS 6069
12112	20102		LX1	2		COMPASS 6070
	0331012115		MI	X1,ZMCL1	IF TYPE 2 MACRO (LOCATION ARGUMENT)	CMP029 17
	43100		MX1	0		COMPASS 6072
12113	0302012115		ZR	X2,ZMCL1	IF NO LOCATION FIELD	COMPASS 6073
	0100025177		RJ	ZPRLOC		COMPASS 6074
12114	0400012120		EQ	ZMCL2		CMP029 18
12115	5110003123	ZMCL1	SA1	LWORD		COMPASS 6078
	5120003110		SA2	POSCTR		COMPASS 6079
12116	13312		BX3	X1-X2		COMPASS 6080
	0313012120		NZ	X3,ZMCL2	IF POS " LWORD	COMPASS 6081
12117	0100023563		RJ	LLA		COMPASS 6082
12120	5110003345	ZMCL2	SA1	EFLG	LIST IF ERROR	CMP029 19
	0311012126		NZ	X1,ZLIST		CMP029 20
12121	5110004060		SA1	NLFLG	SET DEFERRED LIST FLAG	CMP029 21
	5120004061		SA2	DLFLG		COMPASS 6084
12122	5130003363		SA3	LG+1		CMP051 1
	76610		SX6	B1		COMPASS 6085
12123	0313012126		NZ	X3,ZLIST	IF LIST G ON	CMP051 2
	13616		BX6	X1-X6		COMPASS 6086
	12662		BX6	X6+X2		COMPASS 6087
12124	54620		SA6	A2		COMPASS 6088
	0400011134		EQ	Z100		COMPASS 6089

** ZLLA - LIST LOCATION ADDRESS.

COMPASS 6091
COMPASS 6092
COMPASS 6093
COMPASS 6094

12125	0100023563	ZLLA	RJ	LLA	
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** ZLIST - LIST CURRENT LINE.

COMPASS 6096
COMPASS 6097
COMPASS 6098
COMPASS 6099
COMPASS 6100
COMPASS 6101
COMPASS 6102
COMPASS 6103

12126	5120003345	ZLIST	SA2	EFLG	
	0302012130		ZR	X2,ZLST1	IF NO ERROR
12127	0100007516		RJ	LDL	LIST DEFERRED LINE
12130	0100007611	ZLST1	RJ	LISTER	
12131	0400011134		EQ	Z100	

*** ABS - ABSOLUTE ASSEMBLY.

*
*

COMPASS 6105
COMPASS 6106
COMPASS 6107

* ABS
* ABS DECLARES THE PROGRAM TO BE ABSOLUTE. IF USED, IT MUST
* APPEAR AT THE BEGINNING OF THE ASSEMBLY. IN ABSOLUTE
* ASSEMBLIES, THE FOLLOWING ARE ILLEGAL.

COMPASS 6108
COMPASS 6109
COMPASS 6110

* EXT
* LCC

COMPASS 6111
COMPASS 6112
COMPASS 6113

* REP
* REPC
* REPI

COMPASS 6114
CMP30 2418
COMPASS 6115

USE PSEUDO

COMPASS 6116
COMPASS 6117
COMPASS 6118

SEG PSEUDO-OP PROCESSING (A-E).

CMP30 2419

QUAL PASS1

COMPASS 6120

12314 76610

ABS

SX6 B1

COMPASS 6121

5160003130

SA6 ABSFG SET ABSOLUTE ASSEMBLY FLAG

COMPASS 6122

43600

MX6 0

COMPASS 6123

12315 5160003105

SA6 ORGCTR+1 AND RELOCATION FOR COUNTERS

COMPASS 6124

5160003107

SA6 LOCCTR+1

COMPASS 6125

12316 0400010653

EQ CTL300 RETURN

COMPASS 6126

** ABS - ABSOLUTE ASSEMBLY.

COMPASS 6128

COMPASS 6129

COMPASS 6130

QUAL PASS2

COMPASS 6131

12126

ABS

EQU ZLIST

COMPASS 6132

*** BASE - NUMERIC DATA MODE.

COMPASS 6134

*
*

COMPASS 6135
COMPASS 6136

*MNAME BASE CHAR

COMPASS 6137

* (CHAR) = 0 SET OCTAL BASE.

COMPASS 6138

* D SET DECIMAL BASE.

COMPASS 6139

* M SET MIXED BASE.

COMPASS 6140

* * SET PREVIOUS BASE.

COMPASS 6141

* BLANK LEAVE BASE UNCHANGED.

COMPASS 6142

* IF (MNAME) IS PRESENT, SAVE THE CURRENT BASE IN MICRO MNAME.

COMPASS 6143

COMPASS 6144

COMPASS 6145

QUAL PASS1

COMPASS 6146

12317 5120003102

BASE

SA2 LOCSYM

COMPASS 6147

0302012322

ZR X2,BASE1 IF NO MICRO NAME

CMP30 2420

12320 5110022674

SA1 BASEMIC

CMP30 2421

76611

SX6 B1+B1

CMP30 2422

10711

BX7 X1

CMP30 2423

12321 5170030217

SA7 RELVEC

CMP18 24

0100020317

RJ EMT

ENTER MICRO TABLE

COMPASS 6154

12322 5110003145

BASE1

SA1 CHAR

CMP30 2424

12323	0336010614	0100005120	RJ	CBC	CHECK BASE CHARACTER	CMP30	2425
		20166	MI	X6,CTL70	IF ERROR	CMP30	2426
		76710	LX1	-6		CMP30	2427
12324	12617		SX7	B1		CMP30	2428
	5160022674		BX6	X1+X7		CMP30	2429
12325	0400010614		SA6	BASEMIC	STORE CURRENT BASE MICRO	CMP30	2430
			EQ	CTL70		COMPASS	6213
** BASE - NUMERIC DATA MODE.						COMPASS	6215
						COMPASS	6220
						COMPASS	6221
						COMPASS	6222
12326	5110003135		QUAL	PASS2		CMP30	2431
	5221005145	BASE	SA1	ABASE		CMP30	2432
12327	26372		SA2	CBCA+X1	GET CURRENT BASE	CMP30	2433
	77607		UX3,B7	X2		CMP30	2434
	7170000065		SX6	-B7		CMP30	2435
12330	5160003664		SX7	CONCAT		CMP30	2436
	54761		SA6	OCTAL+33	STORE IN LISTING LINE	CMP30	2437
	54671		SA7	A6+B1		CMP30	2438
12331	5110003145		SA6	A7+B1		CMP30	2439
	0100005120		SA1	CHAR		CMP30	2440
12332	0336012126		RJ	CBC	CHECK BASE CHARACTER	CMP30	2441
	10611		MI	X6,ZLIST	IF ERROR	CMP30	2442
12333	5160003666		BX6	X1		CMP30	2443
	0400012126		SA6	OCTAL+35	STORE NEW LETTER	CMP30	2444
			EQ	ZLIST	AND GO LIST	COMPASS	6237
*** BCU - BUFFER CONTROLLER UNIT ASSEMBLY.						F4820	541
*						F4820	542
*						F4820	543
*						F4820	544
*						F4820	545
* BCU DECLARES THE PROGRAM TO BE A BUFFER CONTROLLER ASSEMBLY AND ABSOLUTE. THE RULES STATED UNDER ABS APPLY.						F4820	546
						F4820	547
						F4820	548
						F4820	549
12334	77601		QUAL	PASS1		F4820	550
	76711	BCU	SX6	-B1	SET FLAG FOR BCU ASSEMBLY	F4820	551
	5160003116		SX7	B1+B1		CPSA233	4
12335	5170003127		SA6	PPTYPE		F4820	552
	76610		SA7	NCHARS		CPSA233	5
12336	7170000020		SX6	B1	SET FLAGS FOR BCU ASSEMBLY	F4820	553
12337	5160003114		SX7	16		F4820	554
	5170003123	BCU.1	SA6	MACHINE		F4820	555
	5130007310		SA7	LWORD	SET WORD LENGTH TO 16	F4820	556
12340	5170003110		SA7	POSCTR	REVISE POSITION COUNTER TO 16	F4820	557
12341	10633		SA3	/DATA/STCX	SET CHARACTER STORE FOR 8-BIT/NON-ASCII	CPSA293	67
	5160007276		BX6	X3		CPSA293	68
	20730		SA6	/DATA/STC0	*** SAFE CODE-MODIFICATION ***	CPSA293	69
12342	5110003411		LX7	24	RESET BLOCK COUNTERS	F4820	557
	5120003450		SA1	O.USETAB		F4820	558
			SA2	L.USETAB		F4820	559

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** BCOP - DEFINE BC OPERATION CODE.

F4820 601
F4820 602
F4820 603
F4820 604
F4820 605

12126

BCOP

QUAL
EQUPASS2
ZLIST

*** BSS - STORAGE RESERVATION.

COMPASS 6239
COMPASS 6240
COMPASS 6241
COMPASS 6242
COMPASS 6243
COMPASS 6244
COMPASS 6245
COMPASS 6246
COMPASS 6247
COMPASS 6248

*SYM

BSS AEXP

(SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER.

LOCATION AND ORIGIN COUNTERS ARE INCREMENTED BY THE VALUE

OF (AEXP).

12357 5110003123

BSS

QUAL
SA1PASS1
LWORD

0100023377

RJ

YPRLOC

12360 7160000003

SX6

3

EVALUATE ADDRESS FIELD

7110000074

SX1

60

12361 0100006440

RJ

SCADCON

12362 5110003254

SA1

EXVAL

10611

BX6

X1

21625

AX6

21

12363 0316010661

NZ

X6,ERA

IF VALUE TOO LARGE

0321012375

PL

X1,BSS1

IF NOT NEGATIVE BSS

12364 76610

SX6

B1

5160003345

SA6

EFLG

12365 5160003341

SA6

W7ERR

5120003104

SA2

ORGCTR

12366 36621

IX6

X2+X1

0336010661

NG

X6,ERA

IF INTO PREVIOUS BLOCK

54321

SA3

A2+B1

FETCH BLOCK NUMBER

12367 5150003411

SA5

O.USETAB

5140003153

SA4

UI

12370 36545

IX5

X4+X5

BASE ADDRESS OF BLOCK GROUP

0313012372

NZ

X3,BSS2

CHANGE 0 (ABSOLUTE) TO 1

12371 5130003154

SA3

UI+1

12372 20302

BSS2

LX3

2

6263777776

SB6

X3-1

53456

SA4

X5+B6

FETCH MAX ORGCTR FOR BLOCK

12373 37424

IX4

X2-X4

0324012375

PL

X4,BSS1

IF NOT LESS THAN CURRENT ORGCTR

10622

BX6

X2

12374 54640

SA6

A4

12375 10611

BSS1

BX6

X1

SAVE EXPRESSION VALUE FOR PASS 2

5160003304

SA6

FLAG

12376 0100023504

RJ

YUPLOC

ADVANCE LOCATION COUNTERS

12377 0400010614

EQ

CTL70

COMPASS 6251

** BSS - STORAGE RESERVATION.

							COMPASS	6252	
							COMPASS	6253	
							COMPASS	6254	
1	12400	5110003123	BSS	SA1	LWORD		COMPASS	6255	1
2		0100025177		RJ	ZPRLOC		COMPASS	6256	2
3	12401	7160000003		SX6	3		COMPASS	6257	3
4		7110000074		SX1	60		CPS062	8	4
5	12402	0100006440		RJ	SCADCON		COMPASS	6259	5
6	12403	5110003322		SA1	AERR		COMPASS	6260	6
7		5120003327		SA2	UERR		COMPASS	6261	7
8	12404	36312		IX3	X1+X2		COMPASS	6262	8
9		0313012126		NZ	X3,ZLIST	EXIT IF ANY ERRORS	COMPASS	6263	9
10	12405	5110003304		SA1	FLAG		CPS062	9	10
11		5120003104		SA2	ORGCTR		CPS062	10	11
12	12406	36312		IX3	X1+X2		CPS062	11	12
13		21325		AX3	21		CPS062	12	13
14		0313012452		NZ	X3,BSSZR	IF VALUE OUT OF RANGE	CPS062	13	14
15							COMPASS	6264	15
16			*		ENTRY FROM BSSZ.		COMPASS	6265	16
17							COMPASS	6266	17
18	12407	5110003304	BSS5	SA1	FLAG		CPS062	14	18
19		5120003254		SA2	EXVAL		CPS062	15	19
20	12410	37612		IX6	X1-X2		CPS062	16	20
21		10711		BX7	X1		CPS062	17	21
22		0306012413		ZR	X6,BSS7	IF SAME VALUE IN BOTH PASSES	CPS062	18	22
23	12411	76610		SX6	B1		CPS062	19	23
24		54720		SA7	A2	USE PASS 1 VALUE	CPS062	20	24
25		5160003345		SA6	EFLG		CPS062	21	25
26	12412	5160003322		SA6	AERR	SET ADDRESS ERROR	CPS062	22	26
27	12413	0301011321	BSS7	ZR	X1,ZLISTG	IF BSS 0	CPS062	23	27
28		5120003103		SA2	IOP	CHECK OPCODE	CPS0241	5	28
29	12414	7272772222		SX7	X2-2R		CPS028	298	29
30		0307012417		ZR	X7,BSS6	IF BLANK OPCODE	CPS028	299	30
31	12415	7120000044		SX2	36		CPS010	32	31
32		43300		MX3	0		CPS010	33	32
33	12416	0100007773		RJ	PACK0	CALL PACK0 (EXVAL, 36, 0)	CPS010	34	33
34	12417	5110003304	BSS6	SA1	FLAG		CPS062	24	34
35		0100025311		RJ	ZUPLOC		COMPASS	6269	35
36	12420	5110003304		SA1	FLAG		CPS062	25	36
37		0321011321		PL	X1,ZLISTG	IF NOT NEGATIVE BSS	CPS028	302	37
38	12421	0100025401		RJ	DBSSZ	DUMP BSSZ CODE	CPS028	303	38
39	12422	0100026031		RJ	DLAST	DUMP LINK AND FILL TABLES	CPS028	304	39
40	12423	0400011321		EQ	ZLISTG		COMPASS	6270	40
41									41
42									42
43									43
44									44
45			***		BSSZ - STORAGE RESERVATION.		COMPASS	6272	45
46			*				COMPASS	6273	46
47			*				COMPASS	6274	47
48			*SYM	BSSZ	AEXP		COMPASS	6275	48
49			*		(SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER.		COMPASS	6276	49
50			*		LOCATION AND ORIGIN COUNTERS ARE INCREMENTED BY THE VALUE		COMPASS	6277	50
51			*		OF (AEXP). AT LOAD TIME, THE NUMBER OF WORDS SPECIFIED		COMPASS	6278	51
52			*		BY (AEXP) WILL BE SET TO ZERO.		COMPASS	6279	52
53							COMPASS	6280	53
54							COMPASS	6281	54
55									55
56									56
57									57
58									58
59									59
60									60

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** B1=1 - DECLARE THAT (B1) CONTAINS A 1.

COMPASS 6381
COMPASS 6382
COMPASS 6383
COMPASS 6384
COMPASS 6385

12126

.B1=1

QUAL PASS2
EQU ZLIST

*** B7=1 - DECLARE THAT (B7) CONTAINS A 1.

COMPASS 6387
COMPASS 6388
COMPASS 6389

* B7=1
* USED IN CONJUNCTION WITH THE (R=) PSEUDO. THIS DECLARES
* THAT (B7) IS 1, AND DEFINES THE SYMBOL B7=1.

COMPASS 6390
COMPASS 6391
COMPASS 6392

COMPASS 6393
COMPASS 6394
COMPASS 6395

12475 7160016546

5160003174

B7=1

QUAL PASS1
SX6 REQD-1
SA6 REQC
EQ BEQ1

SET FULL SCAN FOR R= PSEUDO

COMPASS 6396
COMPASS 6397
COMPASS 6398

12476 0400012472

** B7=1 - DECLARE THAT (B7) CONTAINS A 1.

COMPASS 6400
COMPASS 6401
COMPASS 6402
COMPASS 6403
COMPASS 6404

12126

B7=1

QUAL PASS2
EQU ZLIST

*** CC - COMPARE COLLATED (CMU INSTRUCTION).

CMP30 2451
CMP30 2452
CMP30 2453

*
* CC L,KA,CA,KB,CB
* (L) = DATA FIELD LENGTH IN CHARACTERS (@127).
* (KA) = FIRST OPERAND FIELD FIRST WORD ADDRESS.
* (CA) = FIRST OPERAND FIELD FIRST CHARACTER POSITION (0-9).
* (KB) = SECOND OPERAND FIELD FIRST WORD ADDRESS.
* (CB) = SECOND OPERAND FIELD FIRST CHARACTER POSITION (0-9).

CMP30 2454
CMP30 2455
CMP30 2456

CMP30 2457
CMP30 2458
CMP30 2459

CMP30 2460
CMP30 2461

12477 5110003114

0311011055

CC

QUAL PASS1
SA1 MACHINE
NZ X1,CTLPPER

COMPLAIN IF PP ASSEMBLY

CMP30 2462
CMP30 2463
CMP30 2464

12500 5110003123

0100023377

SA1 LWORD
RJ YPRLOC

PROCESS LOCATION FIELD

CMP30 2465

12501 7160000005

5160003561

SX6 5
SA6 P1TEMP

SCAN UP TO FIVE ARGUMENTS

CMP30 2466
CMP30 2467

12502 7110000022

0100006305

CC1

SX1 18
RJ SCAD

SCAN ARGUMENT

CMP30 2468
CMP30 2469
CMP30 2470

12503 5110003561

5120006304

SA1 P1TEMP
SA2 EXSTOP

CMP30 2471
CMP30 2472

12504 7261777776

SX6 X1-1

CMP30 2473

	12505	54610	0302012506	ZR	X2,CC2	IF END OF ARGUMENTS	CMP30	2474
				SA6	A1		CMP30	2475
			0316012502	NZ	X6,CC1	IF NOT 5 SCANNED YET	CMP30	2476
1	12506	76110		SX1	B1		CMP30	2477
2			0100023504	RJ	YUPL0C	BUMP LOCATION COUNTER	CMP30	2478
3	12507	0400010612		EQ	CTL65	RETURN	CMP30	2479
4								
5								
6								
7								
8			**		CC - COMPARE COLLATED (CMU INSTRUCTION).		CMP30	2481
9							CMP30	2482
10							CMP30	2483
11				QUAL	PASS2		CMP30	2484
12	12510	7160000466	CC	SX6	466B		CMP30	2485
13	12511	20603	CC1	LX6	3		CMP30	2486
14			7170000007	SX7	7		CMP30	2487
15	12512	0316012513		NZ	X6,CC2	IF NOT *MD*	CMP30	2488
16			7170000015	SX7	13		CMP30	2489
17	12513	5160004047	CC2	SA6	OPVAL	MACHINE OP CODE	CMP30	2490
18			5170003273	SA7	OPADS	LENGTH OF LENGTH FIELD	CMP30	2491
19	12514	5110003123		SA1	LWORD		CMP30	2492
20			0100025177	RJ	ZPRLOC	PROCESS LOCATION FIELD	CMP30	2493
21	12515	5110003273		SA1	OPADS		CMP30	2494
22			7160000003	SX6	3		CMP30	2495
23	12516	0100006440		RJ	SCADCON		CMP30	2496
24	12517	5110003273		SA1	OPADS	PROCESS LENGTH FIELD	CMP30	2497
25			5120003254	SA2	EXVAL		CMP30	2498
26	12520	43601		MX6	1		CMP30	2499
27			6271777704	SB7	X1-59		CMP30	2500
28			22676	LX6	X6,B7	7- OR 13-BIT MASK	CMP30	2501
29	12521	15626		BX6	-X6*X2		CMP30	2502
30			43070	MX0	-4		CMP30	2503
31			15760	BX7	-X0*X6	LL = LOWER 4 BITS OF L	CMP30	2504
32			21604	AX6	4	LU = UPPER 3 OR 9 BITS OF L	CMP30	2505
33	12522	5130004047		SA3	OPVAL		CMP30	2506
34			20710	LX7	8		CMP30	2507
35			12636	BX6	X3+X6		CMP30	2508
36	12523	54630		SA6	A3	OPVAL = OP CODE, LU	CMP30	2509
37			54710	SA7	A1	OPADS = LL IN BITS 11-8	CMP30	2510
38			7110000022	SX1	18		CMP30	2511
39	12524	76610		SX6	B1		CMP30	2512
40			0100006440	RJ	SCADCON	SCAN KS OR KA	CMP30	2513
41	12525	5110003254		SA1	EXVAL		CMP30	2514
42			54211	SA2	A1+B1	EXREL	CMP30	2515
43			43052	MX0	-18		CMP30	2516
44	12526	54321		SA3	A2+B1	EXEXT	CMP30	2517
45			15610	BX6	-X0*X1		CMP30	2518
46			22702	LX7	X2		CMP30	2519
47	12527	5160003274		SA6	OPADS+1	OPADS+1 = KS/KA VALUE	CMP30	2520
48			54761	SA7	A6+B1	OPADS+2 = RELOCATION	CMP30	2521
49			10633	BX6	X3		CMP30	2522
50	12530	54671		SA6	A7+B1	OPADS+3 = EXTERNAL	CMP30	2523
51			7160000003	SX6	3		CMP30	2524
52			73161	SX1	X6+B1		CMP30	2525
53	12531	0100006440		RJ	SCADCON	SCAN CS OR CA	CMP30	2526
54	12532	5110003254		SA1	EXVAL		CMP30	2527
55								
56								
57								
58								
59								
60								

	12533	7231777765	5120003273	SA2	OPADS		CMP30	2528
			16713	SX3	X1-10		CMP30	2529
			20104	BX7	-X3+X1		CMP30	2530
	12534	0327012536		LX1	4	IF NOT 0-9, USE 0 AND SET A-ERROR	CMP30	2531
			76610	PL	X7,CC3		CMP30	2532
			43100	SX6	B1		CMP30	2533
	12535	5160003345		MX1	0		CMP30	2534
			5160003322	SA6	EFLG		CMP30	2535
				SA6	AERR		CMP30	2536
	12536	12621		BX6	X2+X1		CMP30	2537
			54620	SA6	A2	OPADS = LL IN BITS 11-8, CS/CA IN BITS 7-4	CMP30	2538
			7110000022	SX1	18		CMP30	2539
	12537	76610		SX6	B1		CMP30	2540
			0100006440	RJ	SCADCON	SCAN KD OR KB	CMP30	2541
	12540	5110003254		SA1	EXVAL		CMP30	2542
			54211	SA2	A1+B1	EXREL	CMP30	2543
			43052	MX0	-18		CMP30	2544
	12541	54321		SA3	A2+B1	EXEXT	CMP30	2545
			15610	BX6	-X0*X1		CMP30	2546
			22702	LX7	X2		CMP30	2547
	12542	5160003277		SA6	OPADS+4	OPADS+4 = KD/KB VALUE	CMP30	2548
			54761	SA7	A6+B1	OPADS+5 = RELOCATION	CMP30	2549
			10633	BX6	X3		CMP30	2550
	12543	54671		SA6	A7+B1	OPADS+6 = EXTERNAL	CMP30	2551
			7160000003	SX6	3		CMP30	2552
			73161	SX1	X6+B1		CMP30	2553
	12544	0100006440		RJ	SCADCON	SCAN CD OR CB	CMP30	2554
	12545	5110003254		SA1	EXVAL		CMP30	2555
			5120003273	SA2	OPADS		CMP30	2556
	12546	7231777765		SX3	X1-10		CMP30	2557
			16713	BX7	-X3+X1		CMP30	2558
	12547	0327012551		PL	X7,CC4	IF NOT 0-9, USE 0 AND SET A-ERROR	CMP30	2559
			76610	SX6	B1		CMP30	2560
			43100	MX1	0		CMP30	2561
	12550	5160003345		SA6	EFLG		CMP30	2562
			5160003322	SA6	AERR		CMP30	2563
	12551	12621		BX6	X2+X1	OPADS = 48/ 0, 4/ LL, 4/ CS/CA, 4/ CD/CB	CMP30	2564
			54620	SA6	A2		CMP30	2565
			5110006304	SA1	EXSTOP		CMP30	2566
	12552	0301012554		ZR	X1,CC5	IF END OF VARIABLE FIELD	CMP30	2567
			76610	SX6	B1		CMP30	2568
	12553	5160003345		SA6	EFLG	TOO MANY ARGUMENTS	CMP30	2569
			5160003342	SA6	W8ERR		CMP30	2570
	12554	7170000060		SX7	48		CMP30	2571
			5110004047	SA1	OPVAL	OUTPUT OPCODE AND LU	CMP30	2572
	12555	7120000014		SX2	12	(BITS 59-48 OF WORD)	CMP30	2573
			43300	MX3	0		CMP30	2574
			13444	BX4	X4-X4		CMP30	2575
	12556	5170003110		SA7	POSCTR		CMP30	2576
			0100025344	RJ	BINOUT		CMP30	2577
	12557	7170000036		SX7	30		CMP30	2578
			5110003274	SA1	OPADS+1	OUTPUT KS OR KA FIELD	CMP30	2579
	12560	7120000022		SX2	18	(BITS 47-30 OF WORD)	CMP30	2580
			54311	SA3	A1+B1		CMP30	2581
			54431	SA4	A3+B1		CMP30	2582
	12561	5170003110		SA7	POSCTR		CMP30	2583
			0100025344	RJ	BINOUT		CMP30	2584

12562	7170000022		SX7	18		CMP30	2585
	5110003273		SA1	OPADS	OUTPUT LL, CS/CA, CD/CB	CMP30	2586
12563	7120000014		SX2	12	(BITS 29-18 OF WORD)	CMP30	2587
	43300		MX3	0		CMP30	2588
	13444		BX4	X4-X4		CMP30	2589
12564	5170003110		SA7	POSCTR		CMP30	2590
	0100025344		RJ	BINOUT		CMP30	2591
12565	76700		SX7	B0		CMP30	2592
	5110003277		SA1	OPADS+4	OUTPUT KD OR KB FIELD	CMP30	2593
12566	7120000022		SX2	18	(BITS 17-0 OF WORD)	CMP30	2594
	54311		SA3	A1+B1		CMP30	2595
	54431		SA4	A3+B1		CMP30	2596
12567	5170003110		SA7	POSCTR		CMP30	2597
	0100025344		RJ	BINOUT		CMP30	2598
12570	5110004047		SA1	OPVAL		CMP30	2599
	5120003274		SA2	OPADS+1	LIST UPPER HALF OF WORD IN OCTAL	CMP30	2600
12571	54321		SA3	A2+B1		CMP30	2601
	54431		SA4	A3+B1		CMP30	2602
	20122		LX1	18		CMP30	2603
	10633		BX6	X3		CMP30	2604
12572	22704		LX7	X4		CMP30	2605
	36112		IX1	X1+X2		CMP30	2606
	7120000032		SX2	26		CMP30	2607
12573	7130000012		SX3	10		CMP30	2608
	5160003255		SA6	EXREL		CMP30	2609
12574	54761		SA7	A6+B1		CMP30	2610
	0100023574		RJ	PACKOR		CMP30	2611
12575	5110003275		SA1	OPADS+2		CMP30	2612
	54211		SA2	A1+B1		CMP30	2613
	12612		BX6	X1+X2		CMP30	2614
12576	0306012600		ZR	X6,CC6	IF NOT RELOCATABLE NOR EXTERNAL	CMP30	2615
	0100007720		RJ	LISTERG	LIST LINE	CMP30	2616
12577	43600		MX6	0	CLEAR DETAIL FLAG	CMP30	2617
	5160003605		SA6	DETFLG		CMP30	2618
12600	5110003273	CC6	SA1	OPADS		CMP30	2619
	5120003277		SA2	OPADS+4	LIST LOWER HALF OF WORD IN OCTAL	CMP30	2620
12601	54321		SA3	A2+B1		CMP30	2621
	54431		SA4	A3+B1		CMP30	2622
	20122		LX1	18		CMP30	2623
	10633		BX6	X3		CMP30	2624
12602	22704		LX7	X4		CMP30	2625
	36112		IX1	X1+X2		CMP30	2626
	7120000044		SX2	36		CMP30	2627
12603	7130000012		SX3	10		CMP30	2628
	5160003255		SA6	EXREL		CMP30	2629
12604	54761		SA7	A6+B1		CMP30	2630
	0100023574		RJ	PACKOR		CMP30	2631
12605	0100007720		RJ	LISTERG	LIST LINE	CMP30	2632
12606	0400011134		EQ	Z100	RETURN	CMP30	2633

1412THE

*** CHAR - CHANGE CHARACTER CODE.

*
*
*
*
*
*
*
*
*CHAR AEXP,AEXP
DEFINES CHARACTER CODE CONVERSION INVOKED BY *CODE OTHER*.
INITIALLY, ALL CHARACTERS HAVE THEIR DISPLAY CODE VALUES.
CHAR REDEFINES THE CHARACTER WHOSE DISPLAY CODE VALUE
IS (AEXP1) TO BE CONVERTED TO THE VALUE OF (AEXP2) WHEN
CODE OTHER IS IN EFFECT.
THIS CHANGE IS MADE IN PASS 1 SO THE CHARACTERS HAVE THIS
VALUE DURING PASS 2.CPS011 11
CPS011 12
CPS011 13
CPS011 14
CPS011 15
CPS011 16
CPS011 17
CPS011 18
CPS011 19
CPS011 20
CPS011 21
CPS011 22
CPS011 23
CPS011 24
CPS011 25
CPS011 26
CPS011 27
CPS011 28
CPS011 29
CPS011 30
CPS011 31
CPS011 32
F4820 606
CPS011 34
CPS011 35
CPS011 36
CPS011 37
CPS011 38
F4820 607
CPS011 40
CPS011 41
CPSA281 179
CPSA281 180
CPS011 44
CPS011 45
CPS011 46
CPS011 47
CPS011 48

			QUAL	PASS1	
12607	7110000006	CHAR.	SX1	6	
	7160000003		SX6	3	
12610	0100006440		RJ	SCADCON	
12611	0311010614		NZ	X1,CTL70	IF ERRORS
	5110003254		SA1	EXVAL	
12612	43066		MX0	-6	
	15610		BX6	-X0*X1	
	5160003561		SA6	P1TEMP	
12613	7110000010		SX1	8	
	7160000003		SX6	3	
12614	0100006440		RJ	SCADCON	
12615	0311010614		NZ	X1,CTL70	IF ERRORS
	5110003561		SA1	P1TEMP	
12616	5120003254		SA2	EXVAL	
	43064		MX0	-8	
12617	5231007312		SA3	X1+STCA	READ CHARACTER
	15620		BX6	-X0*X2	
	20044		LX0	36	
12620	20644		LX6	36	
	11303		BX3	X0*X3	
	12636		BX6	X3+X6	
	54630		SA6	A3	UPDATE CHARACTER
12621	5160003304		SA6	FLAG	
	0200010614		JP	CTL70	RETURN

** CHAR - CHANGE CHARACTER CODE.

			QUAL	PASS2	
12622	7110000006	CHAR.	SX1	6	COLLECT REFERENCES
	0100006305		RJ	SCAD	
12623	7110000010		SX1	8	
	0100006305		RJ	SCAD	
12624	5110003304		SA1	FLAG	
	0301012126		ZR	X1,ZLIST	IF ERRORS IN PASS 1
12625	43064		MX0	-8	
	10611		BX6	X1	
	15210		BX2	-X0*X1	
12626	5262007312		SA6	STCA+X2	UPDATE CHARACTER
	76311		SX3	B1+B1	

CPS011 50
CPS011 51
CPS011 52
CPS011 53
CPS047 1
CPS047 2
F4820 610
CPS047 4
CPS047 5
CPS047 6
F4820 611
CPS011 56
CPS011 57
CPS011 58
CPS011 59

Address	Label	Op	Op1	Op2	Op3	Op4	Op5	Op6	Op7
12627	7120000041	SX2	33	OUTPUT	OCTAL			CPS011	60
	0100007773	RJ	PACK0					CPS011	61
12630	7160000065	SX6	CONCAT					CPS011	62
	5160003664	SA6	OCTAL+33					CPS011	63
12631	5110003304	SA1	FLAG					CPS011	64
	7120000044	SX2	36					CPS011	65
12632	76311	SX3	B1+B1					CPS011	66
	21144	AX1	36					CPSA281	181
	0100007773	RJ	PACK0					CPS011	68
12633	0200012126	JP	ZLIST	RETURN				CPS011	69
	***	CIPPU - 180 PP ASSEMBLY.						CPSA281	183
	*							CPSA288	18
	*							CPSA288	19
	*	CIPPU CH1,CH2						CPSA288	20
	*	DECLARES THE PROGRAM TO BE A 180 PPU PROGRAM AND ABSOLUTE.						CPSA288	21
	*	THE RULES STATED UNDER ABS APPLY.						CPSA288	22
	*	IF (CH1) = J, LOW-CORE PP JUMPS ARE ASSEMBLED AS (TAG - *).						CPSA288	23
	*	IF (CH1) = ANYTHING OTHER THAN J, LOW-CORE PP JUMPS ARE						CPSA288	24
	*	ASSEMBLED AS JUMP TO (TAG).						CPSA288	25
	*	IF (CH2) = S, CHARACTER DATA FOR *CON* AND *VFD* INSTRUCTIONS						CPSA288	26
	*	IS PLACED IN THE RIGHT-MOST 12 BITS OF EACH 16-BIT						CPSA288	27
	*	PP WORD. THIS IS OVERRIDDEN BY USE OF *CONL* AND						CPSA288	28
	*	*VFDL*.						CPSA288	29
	*	IF (CH2) = ANYTHING OTHER THAN S, CHARACTER DATA FOR *CON*						CPSA288	30
	*	AND *VFD* IS ASSEMBLED WITH THE FULL 16-BIT WORD						CPSA288	31
	*	AS THE FIELD SIZE.						CPSA288	32
								CPSA281	184
								CPSA281	185
								CPSA281	186
12634	7160777774	QUAL	PASS1					CPSA281	187
	5160003116	SX6	-3	PP TYPE = 180				CPSA281	188
12635	76700	SA6	PPTYPE					CPSA281	33
	43600	SX7	B0	SET FOR *L* OPTION				CPSA288	34
	5130003144	MX6	0	SET FOR NOT *J* OPTION				CPSA288	35
12636	5213026436	SA3	COLUMN					CPSA288	36
	7221777765	SA1	X3+CARD-1	GET FIRST CHAR OF ADDRESS FIELD				CPSA288	37
12637	0312012641	SX2	X1-1RJ					CPSA288	38
	76610	NZ	X2,CIPPU3	IF *J* OPTION NOT PRESENT				CPSA288	39
		SX6	B1	SET FOR *J* OPTION				CPSA288	40
12640	54111	SA1	A1+B1	GET NEXT CHAR				CPSA288	41
12641	7221777722	SX2	X1-1R					CPSA288	42
	0302012645	ZR	X2,CIPPU4	IF END OF ADDRESS FIELD				CPSA288	43
12642	7221777721	SX2	X1-1R,					CPSA288	44
	0312012640	NZ	X2,CIPPU1	LOOP FORWARD TO COMMA				CPSA288	45
12643	54111	SA1	A1+B1	GET NEXT CHAR				CPSA288	46
	7221777754	SX2	X1-1RS					CPSA288	47
12644	0312012645	NZ	X2,CIPPU4					CPSA288	48
	7170000004	SX7	4	SET FOR *S* OPTION				CPSA288	49
12645	5160003131	SA6	PPJUMP	SET PP JUMP INDICATOR				CPSA288	50
	5170003124	SA7	VWORD	SET *VFD* AND *CON* ASSEMBLY MODE				CPSA281	195
12646	76610	SX6	B1					CPSA281	196
	7170000020	SX7	16					CPSA281	197
12647	5160003114	SA6	MACHINE	MACHINE TYPE = 1 FOR PP				CPSA281	198
	5170003123	SA7	LWORD	WORD LENGTH = 16 FOR 180 PP				CPSA281	199

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* (CHAR) = A SET ASCII 6-BIT SUBSET CODE.	CPS011	70
* D SET DISPLAY CODE.	COMPASS	6411
* E SET EXTERNAL BCD CODE.	COMPASS	6412
* I SET INTERNAL BCD CODE.	COMPASS	6413
* O SET OTHER CHARACTER CODE DEFINED BY *CHAR*.	CPS011	71
* * SET PREVIOUS CODE.	CMP30	2635
* BLANK LEAVE CODE UNCHANGED.	CMP30	2636
* IF (MNAME) IS PRESENT, SAVE THE CURRENT CODE IN MICRO MNAME.	CMP30	2637
	COMPASS	6414
	COMPASS	6415
	COMPASS	6416
12674 5120003102 CODE QUAL SA2 PASS1 LOCSYM	CMP30	2638
0302012677 ZR X2, CODE1 IF NO MICRO NAME	CMP30	2639
12675 5110022675 SA1 CODEMIC	CMP30	2640
76611 SX6 B1+B1	CMP30	2641
10711 BX7 X1	CMP30	2642
12676 5170030217 SA7 RELVEC	CMP30	2643
0100020317 RJ EMT ENTER MICRO TABLE	CMP30	2644
12677 5110003145 CODE1 SA1 CHAR	CMP30	2645
0100005150 RJ CCC CHECK CODE CHARACTER	COMPASS	6418
12700 0336010614 MI X6, CTL70 IF ERROR	CMP30	2646
20166 LX1 -6	CMP30	2647
76710 SX7 B1	CMP30	2648
12701 12617 BX6 X1+X7	CMP30	2649
5160022675 SA6 CODEMIC STORE CURRENT CODE MICRO	CMP30	2650
12702 0400010614 EQ CTL70 RETURN	COMPASS	6419
** CODE - DECLARE CHARACTER DATA CODE.	COMPASS	6421
	COMPASS	6422
	COMPASS	6423
	COMPASS	6424
12703 5110003152 CODE QUAL SA1 PASS2 CT+1	CMP30	2651
5221005206 SA2 CCCA+X1 GET CURRENT CODE	CMP30	2652
12704 26372 UX3, B7 X2	CMP30	2653
77607 SX6 -B7	CMP30	2654
7170000065 SX7 CONCAT	CMP30	2655
12705 5160003664 SA6 OCTAL+33 STORE IN LISTING LINE	CMP30	2656
54761 SA7 A6+B1	COMPASS	6433
54671 SA6 A7+B1	COMPASS	6434
12706 5110003145 SA1 CHAR	COMPASS	6435
0100005150 RJ CCC	COMPASS	6436
12707 0336012126 NG X6, ZLIST IF NO CHANGE	COMPASS	6437
10611 BX6 X1	COMPASS	6438
12710 5160003666 SA6 OCTAL+35	COMPASS	6439
0400012126 EQ ZLIST	COMPASS	6440
*** COL - SET COMMENT COLUMN.	COMPASS	6442
* COL AEXP	COMPASS	6443
* SETS THE COLUMN NUMBER AT WHICH COMMENT FIELD CAN BEGIN	COMPASS	6444
* WHEN VARIABLE FIELD IS BLANK.	COMPASS	6445
	COMPASS	6446

							COMPASS	6447	
							COMPASS	6448	
							COMPASS	6449	
1	12711	7110000017	COL.	QUAL	PASS1		COMPASS	6450	1
2		7160000003		SX1	15		COMPASS	6451	2
3	12712	0100006530		SX6	3		COMPASS	6452	3
4	12713	0311010614		RJ	SMC		COMPASS	6453	4
5		5110003254		NZ	X1,CTL70	IF ERRORS	COMPASS	6454	5
6	12714	10611		SA1	EXVAL		COMPASS	6455	6
7		7221777763		BX6	X1		COMPASS	6456	7
8	12715	0322012717		SX2	X1-12		COMPASS	6457	8
9		7160000014		PL	X2,COM1	IF AFTER COLUMN 12	COMPASS	6458	9
10	12716	0311012717		SX6	12		COMPASS	6459	10
11		7160000036		NZ	X1,COM1	IF NOT DEFAULT	COMPASS	6460	11
12	12717	5160003141	COM1	SX6	COMCOL		COMPASS	6461	12
13		5160003304		SA6	CCOL		COMPASS	6462	13
14	12720	0400010614		SA6	FLAG		COMPASS	6463	14
15				EQ	CTL70		COMPASS	6464	15
16									16
17									17
18									18
19			**	COL	- SET COMMENT COLUMN.		COMPASS	6465	19
20							COMPASS	6466	20
21							COMPASS	6467	21
22				QUAL	PASS2		COMPASS	6468	22
23	12721	5110003304	COL.	SA1	FLAG		COMPASS	6469	23
24		10611		BX6	X1		COMPASS	6470	24
25	12722	5160003141		SA6	CCOL		COMPASS	6471	25
26		7120000044		SX2	36	OUTPUT OCTAL	COMPASS	6472	26
27	12723	43300		MX3	0		COMPASS	6473	27
28		0100007773		RJ	PACK0		COMPASS	6474	28
29	12724	0400012126		EQ	ZLIST		COMPASS	6475	29
30									30
31									31
32									32
33									33
34			***	COMMENT	- IDENT TABLE COMMENT.		COMPASS	6477	34
35			*				COMPASS	6478	35
36			*				COMPASS	6479	36
37			*	COMMENT STRING			COMPASS	6480	37
38			*	ADDS COMMENT TO PREFIX TABLE IN BINARY OBJECT DECK.			COMPASS	6481	38
39			*	THE COMMENT IS IGNORED BY THE LOADER BUT IDENTIFIES THE			COMPASS	6482	39
40			*	RECORD FOR USE BY UTILITY PROGRAMS. THE STRING STARTS WITH			COMPASS	6483	40
41			*	THE FIRST NON-BLANK CHARACTER AND TERMINATES WITH THE LAST			COMPASS	6484	41
42			*	NON-BLANK CHARACTER.			COMPASS	6485	42
43							COMPASS	6486	43
44							COMPASS	6487	44
45				QUAL	PASS1		COMPASS	6488	45
46	12725	5110003144	COMMENT	SA1	COLUMN		COMPASS	6489	46
47		5120003261		SA2	LASTCOL		COMPASS	6490	47
48	12726	6261026436		SB6	X1+CARD-1		CMP30	2657	48
49		5222026437		SA2	X2+CARD		COMPASS	6492	49
50	12727	64721		SB7	A2+B1		CMP30	2658	50
51	12730	55221	CMT1	SA2	A2-B1	FIND LAST NON-BLANK CHARACTER	CMP30	2659	51
52		67771		SB7	B7-B1		CMP30	2660	52
53		6232777722		SB3	X2-1R		CMP30	2661	53
54	12731	0430012730		ZR	B3,CMT1		CMP30	2662	54
55									55
56									56
57									57
58									58
59									59
60									60

1

1

13002	5160003110		SA6	POSCTR		F4820	626
	76300		SX3	B0		F4820	627
	76400		SX4	B0		F4820	628
13003	0100025344		RJ	BINOUT		F4820	629
13004	0100025141		RJ	ZFOUP		F4820	630
13005	0200013012		JP	CON2		F4820	631
13006	0100006305	CON1.2	RJ	SCAD		F4820	632
13007	5150003257		SA5	EXREG	CHECK FOR A REGISTER	COMPASS	6566
	76610		SX6	B1		COMPASS	6567
13010	0305013012		ZR	X5,CON2		COMPASS	6568
	5160003322		SA6	AERR		COMPASS	6569
13011	5160003345		SA6	EFLG		COMPASS	6570
13012	5110003254	CON2	SA1	EXVAL	OUTPUT BINARY VALUE	COMPASS	6571
	5120003123		SA2	LWORD		F4820	633
13013	5130003255		SA3	EXREL		COMPASS	6573
	54431		SA4	A3+B1		COMPASS	6574
	43600		MX6	0		COMPASS	6575
13014	5160003110		SA6	POSCTR		COMPASS	6576
	0100025344		RJ	BINOUT		COMPASS	6577
13015	5110003254		SA1	EXVAL	OUTPUT OCTAL LIST	COMPASS	6578
	7120000044		SX2	36		COMPASS	6579
13016	7130000024		SX3	20		COMPASS	6580
	5140003114		SA4	MACHINE		COMPASS	6581
13017	0304013031		ZR	X4,CON3	IF CP	COMPASS	6582
	7120000036		SX2	30		COMPASS	6583
13020	5140003116		SA4	PPTYPE		CPSA281	231
	7244000003		SX4	X4+3		CPSA281	232
13021	0314013022		NZ	X4,CON2.1	IF NOT 180 PP ASSEMBLY	CPSA281	233
	7120000040		SX2	32		CPSA281	234
13022	5130003262	CON2.1	SA3	PPBYT		CPSA281	235
	5140004066		SA4	P2TEMP		COMPASS	6585
13023	76510		SX5	B1		COMPASS	6586
	13645		BX6	X4-X5		COMPASS	6587
	54640		SA6	A4		COMPASS	6588
13024	0306013031		ZR	X6,CON3	IF SECOND FIELD	COMPASS	6589
	5150006304		SA5	EXSTOP		COMPASS	6590
13025	7120000031		SX2	25		COMPASS	6591
	0305013031		ZR	X5,CON3	IF END OF LIST	COMPASS	6592
13026	0100007773		RJ	PACK0		COMPASS	6593
13027	0100025141		RJ	ZFOUP		CMP21	2
13030	0400012765		EQ	CON1.1	LOOP	CMP21	3
13031	0100023574	CON3	RJ	PACKOR		COMPASS	6595
13032	76600		SX6	B0	CLEAR DETAIL FLAG	COMPASS	6596
	5160003605		SA6	DETFLG		COMPASS	6597
13033	0100007720		RJ	LISTERG	LIST LINE	COMPASS	6598
13034	5110006304		SA1	EXSTOP		COMPASS	6599
	0301011134		ZR	X1,Z100	IF END OF LIST	COMPASS	6600
13035	0400012764		EQ	CON1		COMPASS	6601

1412THE

*** CONL - NUMERIC CONSTANT.

*
*

CPSA288 74
CPSA288 75
CPSA288 76

*SYM CONL EXP1,EXP2,...,EXPN
* (SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER.
* GENERATES FIELDS OF BINARY DATA. THE FIELD SIZE IS ONE WORD.
* SIMILAR TO *CON*, EXCEPT THAT IT OVERRIDES THE 12-BIT FIELD
* SIZE SPECIFIED FOR 180 PPU ASSEMBLIES BY (CIPPU ,S).
* CONL IS LEGAL ONLY FOR 180 PPU ASSEMBLIES.

CPSA288 77
CPSA288 78
CPSA288 79
CPSA288 80
CPSA288 81
CPSA288 82

CPSA288 83
CPSA288 84
CPSA288 85

13036 5130003116
7233000003

CONL

QUAL PASS1
SA3 PPTYPE
SX3 X3+3

CPSA288 86
CPSA288 87

13037 0303013041

ZR X3,CONL1 IF 180 PPU ASSEMBLY

CPSA288 88

13040 5160003345

SX6 B1 *CONL* ILLEGAL, POST 0-ERROR

CPSA288 89

13041 5160003321

SA6 EFLG
SA6 OERR

CPSA288 90
CPSA288 91

13041 5110003123

CONL1

SA1 LWORD SET FIELD SIZE FOR GENERATED DATA

CPSA288 92

13042 5160003125

BX6 X1
SA6 WWORD

CPSA288 93
CPSA288 94

0400012751

EQ CON.0 GO TO COMMON *CON* PROCESSING

CPSA288 95

** CONL - NUMERIC CONSTANT.

CPSA288 97

CPSA288 98

CPSA288 99

CPSA288 100

13043 5110003123

CONL

SA1 LWORD SET FIELD SIZE FOR GENERATED DATA

CPSA288 101

13044 5160003125

BX6 X1
SA6 WWORD

CPSA288 102
CPSA288 103

0400012763

EQ CON.0 GO TO COMMON *CON* PROCESSING

CPSA288 104

*** CPOP - DEFINE CP OPERATION CODE.

COMPASS 6603

*
*

COMPASS 6604
COMPASS 6605

*SYTX CPOP CTL,VAL,REG,TYP

CMP30 2680

* (SYTX) IS ABBREVIATED DESCRIPTION OF CP INSTRUCTION.

COMPASS 6607

* (CTL) = 4 - FORCE UPPER AFTER INSTRUCTION.

COMPASS 6608

* 2 - FORCE UPPER BEFORE INSTRUCTION.

COMPASS 6609

* 1 - 30-BIT INSTRUCTION.

COMPASS 6610

* (VAL) = 9-BIT VALUE OF OPERATION CODE.

COMPASS 6611

* (REG) = IJK. (I) = CODE FOR I-PORTION.

COMPASS 6612

* 1 - OP-CODE PORTION.

COMPASS 6613

* 2 - 2ND OR ONLY ADDRESS REGISTER.

COMPASS 6614

* 3 - 1ST OF 2 ADDRESS REGISTERS.

COMPASS 6615

* (TYP) = 6 OR 7 TO RESTRICT INSTRUCTION TO 6000 OR 7000.

CMP30 2681

COMPASS 6616

COMPASS 6617

13045 5110026437

CPPOP

QUAL PASS1
SA1 CARD SCAN OPERATION SYNTAX

COMPASS 6618

0100022501

RJ SOS

COMPASS 6619

COMPASS 6620

13046	0306010614		ZR	X6,CTL70	IF SYNTAX ERROR	COMPASS	6621
	7160000003		SX6	3	READ CTL	COMPASS	6622
13047	7110000003		SX1	3		COMPASS	6623
	0100006440		RJ	SCADCON		COMPASS	6624
13050	5110003254		SA1	EXVAL		COMPASS	6625
	7160000003		SX6	3	READ VAL	COMPASS	6626
13051	10711		BX7	X1		COMPASS	6627
	7110000011		SX1	9		COMPASS	6628
13052	5170003562		SA7	P1TEMPA		COMPASS	6629
	0100006440		RJ	SCADCON		COMPASS	6630
13053	5110003254		SA1	EXVAL		COMPASS	6631
	7160000003		SX6	3	READ REG	COMPASS	6632
13054	10711		BX7	X1		COMPASS	6633
	7110000011		SX1	9		COMPASS	6634
13055	5170003563		SA7	P1TEMPB		COMPASS	6635
	0100006440		RJ	SCADCON		COMPASS	6636
13056	5110003562		SA1	P1TEMPA		COMPASS	6637
	5110003254		SA1	EXVAL		CMP30	2682
13057	7160000003		SX6	3	READ TYP	CMP30	2683
	10711		BX7	X1		CMP30	2684
13060	7110000003		SX1	3		CMP30	2685
	5170003564		SA7	P1TEMPC		CMP30	2686
13061	0100006440		RJ	SCADCON		CMP30	2687
13062	5110003254		SA1	EXVAL	GET TYP	CMP30	2688
	76600		SX6	B0		CMP30	2689
13063	6271777771		SB7	X1-6		CMP30	2690
	0770013065		MI	B7,CPOP2	IF NOT 6 OR 7, ASSUME 0	CMP30	2691
13064	0717013065		GT	B7,B1,CPOP2		CMP30	2692
	76671		SX6	B7+B1		CMP30	2693
	20603		LX6	3		CMP30	2694
13065	5110003562	CP0P2	SA1	P1TEMPA		CMP30	2695
	54211		SA2	A1+B1		COMPASS	6638
	54321		SA3	A2+B1		CMP30	2696
13066	12161		BX1	X6+X1		CMP30	2697
	20133		LX1	27		COMPASS	6640
	20260		LX2	48		COMPASS	6641
13067	7160000055		SX6	1R		COMPASS	6642
	20322		LX3	18		COMPASS	6643
	12112		BX1	X1+X2		COMPASS	6644
13070	36663		IX6	X6+X3		COMPASS	6645
	12661		BX6	X6+X1		COMPASS	6646
	5110003565		SA1	P1TEMPD		COMPASS	6647
13071	6271777774		SB7	X1-3		COMPASS	6648
	0607013074		LE	B7,CPOP1	IF @ 3 ARGUMENTS	COMPASS	6649
13072	76710		SX7	B1		COMPASS	6650
	5170003320		SA7	LERR		COMPASS	6651
13073	5170003345		SA7	EFLG		COMPASS	6652
13074	43001	CP0P1	MX0	1	SET OPSYN BIT	COMPASS	6653
	20060		LX0	48		COMPASS	6654
	12206		BX2	X0+X6		COMPASS	6655
13075	5130003345		SA3	EFLG		COMPASS	6656
	5110003561		SA1	P1TEMP		COMPASS	6657
13076	0313010614		NZ	X3,CTL70		COMPASS	6658
	0100005374		RJ	ENTOP		COMPASS	6659
13077	0400010653		EQ	CTL300	RETURN	COMPASS	6660

** CPOP - DEFINE CP OPERATION CODE.

COMPASS 6662
COMPASS 6663
COMPASS 6664
COMPASS 6665
COMPASS 6666

12126

CPPOP

QUAL
EQUPASS2
ZLIST

*** CPSYN - CP INSTRUCTION SYNONYMOUS.

COMPASS 6668
COMPASS 6669
COMPASS 6670

*SYTX1

CPSYN SYTX2

THIS MAKES THE CP INSTRUCTION DESCRIBED BY (SYTX1)

SYNONYMOUS WITH THE CP INSTRUCTION DESCRIBED BY (SYTX2).

COMPASS 6671
COMPASS 6672
COMPASS 6673

QUAL

PASS1

13100 5110003303

CPSYN

SA1

OPTYPE

SAVE OPTYPE

COMPASS 6677

5120003144

SA2

COLUMN

COMPASS 6678

13101 10611

BX6

X1

COMPASS 6679

5160003562

SA6

P1TEMPA

COMPASS 6680

13102 5212026436

SA1

X2+CARD-1

SCAN OPERATION SYNTAX

COMPASS 6681

0100022501

RJ

SOS

COMPASS 6682

13103 0306010614

ZR

X6,CTL70

IF SYNTAX ERROR

COMPASS 6683

5110003561

SA1

P1TEMP

FIND EQUIVALENCE

COMPASS 6684

13104 0100006166

RJ

TLUOP

COMPASS 6685

13105 6170003322

SB7

AERR

COMPASS 6686

0306013116

ZR

X6,CPS2

IF ADDRESS FIELD NOT DEFINED

COMPASS 6687

13106 5110026437

SA1

CARD

SCAN OPERATION SYNTAX

COMPASS 6688

0100022501

RJ

SOS

COMPASS 6689

13107 6170003320

SB7

LERR

COMPASS 6690

5120003303

SA2

OPTYPE

CMP64G 16

13110 0306013116

ZR

X6,CPS2

IF LOCATION FIELD BAD

COMPASS 6691

5110003561

SA1

P1TEMP

CMP64G 17

13111 10622

BX6

X2

CMP64G 18

76010

SX0

B1

SET PROGRAM-DEFINED FLAG

CMP64G 19

21671

AX6

57

CMP64G 20

12360

BX3

X6+X0

CMP64G 21

13112 20057

+

LX0

47

CMP64G 22

0313013113

NZ

X3,*+1

IF NOT AN OPDEF

CMP64G 23

20012

LX0

57-47

CMP64G 24

13113 12220

+

BX2

X2+X0

CMP64G 25

0100005374

RJ

ENTOP

COMPASS 6697

13114 5110003562

CPS1

SA1

P1TEMPA

RESET OPTYPE

COMPASS 6698

10611

BX6

X1

COMPASS 6699

13115 5160003303

SA6

OPTYPE

COMPASS 6700

0400010653

EQ

CTL300

RETURN

COMPASS 6701

13116 76610

CPS2

SX6

B1

SET ERROR FLAG

COMPASS 6702

56670

SA6

B7

COMPASS 6703

5160003345

SA6

EFLG

COMPASS 6704

13117 0400013114

EQ

CPS1

RETURN

COMPASS 6705

** CPSYN - CP INSTRUCTION SYNONYMOUS.

COMPASS 6707

COMPASS 6708
COMPASS 6709
COMPASS 6710
COMPASS 6711

12126 CPSYN QUAL PASS2
EQU ZLIST

*** CTEXT - COMMON DECK TEXT.

COMPASS 6713

*

COMPASS 6714

*

COMPASS 6715

* CTEXT

COMPASS 6716

* SET XTEXT FLAG FOR LIST CONTROL.

COMPASS 6717

COMPASS 6718

COMPASS 6719

13120 0100020112

CTEXT

QUAL PASS1

RJ

CWI

WRITE INTERMEDIATE

COMPASS 6720

13121 5110003560

SA1

XLEV

INCREMENT NESTING LEVEL

COMPASS 6721

76610

SX6

B1

SET XTEXT FLAG

CMP036 8

73711

SX7

X1+B1

COMPASS 6722

13122 5160003317

SA6

LIBFLG

CMP036 9

54710

SA7

A1

READ NEXT CARD

COMPASS 6723

13123 0400010615

EQ

CTL100

CMP036 10

COMPASS 6724

** CTEXT - COMMON DECK TEXT.

COMPASS 6726

COMPASS 6727

COMPASS 6728

13124 0100023563

CTEXT

QUAL PASS2

RJ

LLA

LIST LOCATION ADDRESS

COMPASS 6729

13125 5110003401

SA1

LX+1

COMPASS 6730

0301012126

ZR

X1,ZLIST

IF NO LIST X

COMPASS 6731

13126 5120003145

SA2

CHAR

CHECK TITLE

COMPASS 6732

7262777722

SX6

X2-1R

COMPASS 6733

13127 0306012126

ZR

X6,ZLIST

IF NO TITLE

COMPASS 6734

5110003610

SA1

SUBTIT

SET NEW TITLE

COMPASS 6735

13130 0100006137

RJ

SNT

COMPASS 6736

13131 0316012126

NZ

X6,ZLIST

IF ALREADY IN XTEXT AND LIST X IS OFF

COMPASS 6737

0100024705

RJ

TLIST

TEST FOR LISTING

CMP036 11

13132 5110003602

SA1

LPCNT

FORCE EJECT

COMPASS 6738

5120003072

SA2

NEJF

N CONTROLLED PAGE SIZE

COMPASS 6739

13133 36712

IX7

X1+X2

CPSA181 18

54710

SA7

A1

COMPASS 6741

13134 5160003567

MX6

0

COMPASS 6742

43600

SA6

CTYPE

COMPASS 6743

0400012126

EQ

ZLIST

RETURN

COMPASS 6744

COMPASS 6745

*** CU - COMPARE UNCOLLATED (CMU INSTRUCTION).

CMP30 2699

*

CMP30 2700

*

CMP30 2701

*

CU L,KA,CA,KB,CB

CMP30 2702

*

(L) = DATA FIELD LENGTH IN CHARACTERS (@127).

CMP30 2703

*	(KA) = FIRST OPERAND FIELD FIRST WORD ADDRESS.	CMP30	2704
*	(CA) = FIRST OPERAND FIELD FIRST CHARACTER POSITION (0-9).	CMP30	2705
*	(KB) = SECOND OPERAND FIELD FIRST WORD ADDRESS.	CMP30	2706
*	(CB) = SECOND OPERAND FIELD FIRST CHARACTER POSITION (0-9).	CMP30	2707

12477	CU	QUAL	PASS1	CMP30	2710
		EQU	CC	CMP30	2711

**	CU - COMPARE UNCOLLATED (CMU INSTRUCTION).	CMP30	2713			
		CMP30	2714			
		CMP30	2715			
13135	7160000467	CU	QUAL	PASS2	CMP30	2716
			SX6	467B	CMP30	2717
	0400012511		EQ	CC1	CMP30	2718

***	DATA - DATA DECLARATION.	COMPASS	6747
*		COMPASS	6748
*		COMPASS	6749
*SYM	DATA ITEM1,ITEM2,...,ITEMN	COMPASS	6750
*	(SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER.	COMPASS	6751
*	SUBFIELDS, SEPARATED BY COMMAS, MAY BE NUMERIC OR CHARACTER	COMPASS	6752
*	DATA ITEMS.	COMPASS	6753

13136	5110003123	DATA	QUAL	PASS1		COMPASS	6755
			SA1	LWORD	PROCESS LOCATION	COMPASS	6756
	0100023377		RJ	YPRLOC		COMPASS	6757
13137	7120030053	DATA1	SX2	VALUES		COMPASS	6758
	7130000144		SX3	NLITS		COMPASS	6759
13140	43400		MX4	0		COMPASS	6760
	5150003123		SA5	LWORD		COMPASS	6761
13141	0100006565		RJ	SCD	SCAN DATA ITEM	COMPASS	6762
13142	6271777722		SB7	X1-1R		COMPASS	6763
	5120003114		SA2	MACHINE		COMPASS	6764
13143	0302013150		ZR	X2,DATA20	IF CP CODE	COMPASS	6765
	7223777776		SX2	X3-1		COMPASS	6766
13144	0312013150		NZ	X2,DATA20	IF MORE THAN 1 WORD	COMPASS	6767
	5150003123		SA5	LWORD		COMPASS	6768
13145	5120030053		SA2	VALUES		CPSA233	6
	63250		SB2	X5		CPSA233	7
	23222		AX2	B2,X2		CPSA233	8
13146	0302013150		ZR	X2,DATA20	IF VALUE FITS IN PP WORD	COMPASS	105
	76610		SX6	B1		COMPASS	6772
13147	5160003345		SA6	EFLG		COMPASS	6773
	5160003341		SA6	W7ERR		COMPASS	6774
13150	10133	DATA20	BX1	X3		COMPASS	6775
	0100023504		RJ	YUPLOC	UPDATE COUNTERS FOR WORD COUNT	COMPASS	6776
13151	5110003341		SA1	W7ERR		COMPASS	6777
13152	0570013153	+	NZ	B7,*+1	IF NOT END OF LINE	COMPASS	6778
	0311010614		NZ	X1,CTL70	LIST ERROR	COMPASS	6779

13153	0470010612		ZR	B7,CTL65	EXIT IF END OF FIELD	COMPASS	6780
	0100005444		RJ	GETCH	THROW AWAY COMMA	COMPASS	6781
13154	0400013137		EQ	DATA1	GO BACK FOR MORE	COMPASS	6782
** DATA - DATA DECLARATION.						COMPASS	6784
						COMPASS	6785
						COMPASS	6786
						COMPASS	6787
13155	0100025141	DATA	QUAL	PASS2		COMPASS	6788
			RJ	ZFOUP		COMPASS	6788
13156	76600	ZDATA0	SX6	B0	EVALUATE FIRST DATA ITEM	COMPASS	6789
	7120030053		SX2	VALUES		COMPASS	6790
13157	5160003322		SA6	AERR		COMPASS	6791
	7130000144		SX3	NLITS		COMPASS	6792
13160	43400		MX4	0		COMPASS	6793
	5150003123		SA5	LWORD		COMPASS	6794
13161	0100006565		RJ	SCD	SCAN DATA ITEM	COMPASS	6795
13162	10633		BX6	X3	WORD COUNT	COMPASS	6796
	7170030053		SX7	VALUES	ORIGIN	COMPASS	6797
13163	5160004066		SA6	P2TEMP		COMPASS	6798
	54761		SA7	A6+B1		COMPASS	6799
13164	5110003123	ZDATA1	SA1	LWORD	LIST LOCATION VALUE	COMPASS	6800
	0100025177		RJ	ZPRLOC		COMPASS	6801
13165	5150004066		SA5	P2TEMP	WORD COUNT	COMPASS	6802
	54151		SA1	A5+B1	LOCATION OF VALUE	COMPASS	6803
13166	0305013203		ZR	X5,ZDATA2	IF EMPTY DATA STRING	COMPASS	6804
	43600		MX6	0	GO TO BOTTOM OF WORD	COMPASS	6805
13167	5160003110		SA6	POSCTR		COMPASS	6806
	5120003123		SA2	LWORD		COMPASS	6807
13170	43300		MX3	0		COMPASS	6808
	10433		BX4	X3		COMPASS	6809
	73611		SX6	X1+B1		COMPASS	6810
13171	7275777776		SX7	X5-1		COMPASS	6811
	54610		SA6	A1		COMPASS	6812
	54750		SA7	A5		COMPASS	6813
13172	53110		SA1	X1		COMPASS	6814
	0100025344		RJ	BINOUT	CALL BINOUT(VALUE,LWORD,0,0)	COMPASS	6815
13173	5110004067		SA1	P2TEMPA		COMPASS	6816
	7120000044		SX2	36		COMPASS	6817
13174	7130000024		SX3	20		COMPASS	6818
	5140003114		SA4	MACHINE		COMPASS	6819
13175	0304013202		ZR	X4,ZDATA1A	IF CPU	F4820	634
	7222777764		SX2	X2-11	CORRECT FOR PP	F4820	635
13176	5140003116		SA4	PPTYPE		F4820	636
	5130003262		SA3	PPBYT		CPSA281	236
13177	0324013202		PL	X4,ZDATA1A		F4820	638
	6274000002		SB7	X4+2		CPSA218	5
13200	0770013202		MI	B7,ZDATA1A		CPSA197	30
	73441		SX4	X4+B1		F4820	639
	20401		LX4	1		F4820	640
13201	36224		IX2	X2+X4		F4820	641
	36334		IX3	X3+X4		F4820	642
13202	5211777776	ZDATA1A	SA1	X1-1		F4820	643
	0100007773		RJ	PACK0	CALL PACK0(VALUE,36-11*MACHINE,20 OR 4)	COMPASS	6824
13203	0100007720	ZDATA2	RJ	LISTERG		COMPASS	6825

13204	5110004066		SA1	P2TEMP		COMPASS	6826
	0311013164		NZ	X1,ZDATA1	IF MORE IN THIS DATA STRING	COMPASS	6827
13205	5110003145		SA1	CHAR	TEST FOR END OF STATEMENT	COMPASS	6828
	6271777722		SB7	X1-1R		COMPASS	6829
13206	0470011134		ZR	B7,Z100		COMPASS	6830
	0100005444		RJ	GETCH		COMPASS	6831
13207	0400013156		EQ	ZDATA0		COMPASS	6832
		***		DECMIC - DECIMAL CONVERSION.		COMPASS	6834
		*				COMPASS	6835
		*				COMPASS	6836
		*MNAME		DECMIC AEXP1,AEXP2		COMPASS	6837
		*		USING A DECIMAL CONVERSION, (AEXP1) IS CONVERTED INTO A		COMPASS	6838
		*		CHARACTER STRING. THE OPTIONAL PARAMETER (AEXP2) DEFINES		COMPASS	6839
		*		THE LENGTH OF THE RESULTING MICRO. IF THE FIELD IS LARGER		COMPASS	6840
		*		THAN REQUIRED, THE CHARACTERS ARE RIGHT JUSTIFIED WITH		COMPASS	6841
		*		LEADING ZERO FILL. IF (AEXP2) IS BLANK, THE CHARACTER		COMPASS	6842
		*		STRING HAS LEADING ZERO SUPPRESSION. A ZERO STRING		COMPASS	6843
		*		WILL PRODUCE ONE ZERO. MAXIMUM LENGTH IS 10 CHARACTERS.		COMPASS	6844
		*		(MNAME) IS THE MICRO NAME.		COMPASS	6845
						COMPASS	6846
						COMPASS	6847
						COMPASS	6848
13210	7160000003	DECMIC	QUAL	PASS1		COMPASS	6849
	7110000074		SX6	3		COMPASS	6850
13211	0100006440		SX1	60		COMPASS	6851
13212	5110003254		RJ	SCADCON		CPS052	1
	0100005214		SA1	EXVAL		COMPASS	6852
13213	5160003561	DMC1	RJ	CDEC		COMPASS	6853
	7160000003		SA6	P1TEMP		COMPASS	6854
13214	7110000017		SX6	3		COMPASS	6855
	0100006530		SX1	15		COMPASS	6856
13215	5120003561		RJ	SMC		COMPASS	6857
	5110003254		SA2	P1TEMP		COMPASS	6858
13216	10622		SA1	EXVAL		COMPASS	6859
	43700		BX6	X2		COMPASS	6860
	5160030217		MX7	0		COMPASS	6861
13217	54761		SA6	RELVEC		CMP18	25
	76610		SA7	A6+B1		COMPASS	6863
	0301013231		SX6	B1		CMP18	26
13220	7271777765		ZR	X1,DMC4	IF CHARACTER COUNT = 0	COMPASS	6865
	7160000003		SX7	X1-10		COMPASS	6866
13221	0331010661		SX6	3		CMP18	27
	0307013227		NG	X1,ERA	IF COUNT < 0	CMP18	28
13222	0327010661		ZR	X7,DMC3	IF COUNT = 10	COMPASS	6867
	10711		PL	X7,ERA	IF COUNT > 10	CMP18	29
	36211		BX7	X1		CMP18	30
13223	20102		IX2	X1+X1		CMP18	31
	36321		LX1	2		COMPASS	6875
	43001		IX3	X2+X1		COMPASS	6876
13224	6273777776		MX0	1		COMPASS	6877
	5110030217		SB7	X3-1		COMPASS	6878
13225	23070		SA1	RELVEC		CMP18	32
	6273777703		AX0	X0,B7		COMPASS	6880
			SB7	X3-60		COMPASS	6881

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1

* (AEXP) IS THE WORD COUNT. (AEXP)*10 (CP) OR (AEXP)*2 (PP)
* CHARACTERS BEYOND THE *,* ARE EXTRACTED. IF (AEXP) IS BLANK
* OR ZERO, THE FIRST CHARACTER AFTER THE COMMA IS CONSIDERED
* A DELIMITER, AND CHARACTERS ARE EXTRACTED UNTIL THE
* DELIMITER IS ENCOUNTERED AGAIN.

COMPASS 6917
COMPASS 6918
COMPASS 6919
COMPASS 6920
COMPASS 6921
COMPASS 6922
COMPASS 6923
COMPASS 6924
COMPASS 6925
COMPASS 6926
COMPASS 6927
COMPASS 6928
COMPASS 6929
CMP64G 26
COMPASS 6930
COMPASS 6931
COMPASS 6932
COMPASS 6933
CMP64G 27
COMPASS 6934
CMP64G 28
CMP64G 29
CMP64G 30
CMP64G 31
CMP64G 32
CMP64G 33
CMP64G 34
CMP64G 35
CMP64G 36
CMP64G 37
CMP64G 38
CMP64G 39
CMP64G 40
CMP149 1
CMP64G 41
CMP64G 42
CMP64G 43
CMP149 2
COMPASS 6961
COMPASS 6962
COMPASS 6963

			QUAL	PASS1		
			SA1	LWORD		
13250	5110003123	DIS	RJ	YPRLOC	PROCESS LOCATION	
	0100023377		SX6	3	EVALUATE WORD COUNT	
13251	7160000003		SX1	15		
	7110000017		RJ	SMC		
13252	0100006530		SA1	EXSTOP		
13253	5110006304		SA2	EXVAL		
	5120003254		SA3	AERR		
13254	5130003322		SA4	UERR		
	5140003327		BX5	X3+X4		
13255	12534		LX3	X2		
	22302		NZ	X5,CTL70	QUIT IF ERROR IN WORD COUNT FIELD	
	0315010614		ZR	X1,ERA	IF NO COMMA AFTER EXPRESSION	
13256	0301010661		NZ	X2,DIS1	IF WORD COUNT NON-ZERO	
	0312013265		SA2	COLUMN		
13257	5120003144		SX6	1RC		
	7160000003		SX7	X2-1	DELIMITED STRING, EFFECTIVELY	
13260	7272777776		SA6	CHAR	REPLACE *,* WITH *C* AND	
	5160003145		SA7	A2	MAKE SCAN BEGIN THERE	
13261	54720		MX4	0		
	43400		SX2	VALUES		
	7120030053		SX3	NLITS		
13262	7130000144		SA5	LWORD		
	5150003123		RJ	SCD	SCAN DATA ITEM	
13263	0100006565		MX2	0		
13264	43200		SA5	AERR		
	5150003322		BX6	X2		
13265	10622	DIS1	NG	X2,ERA	IF WORD COUNT IS NEGATIVE	
	0332010661		LX1	X3		
	22103		NZ	X5,ERA	IF A-ERROR	
13266	0315010661		SA6	FLAG		
	5160003304		RJ	YUPLOC		
13267	0100023504		EQ	CTL70		
13270	0400010614					

** DIS - DISPLAY CODED LINES.

COMPASS 6965
COMPASS 6966
COMPASS 6967
COMPASS 6968
COMPASS 6969
COMPASS 6970
COMPASS 6971
CMP64G 44
CMP64G 45
COMPASS 6972
CMP64G 46
COMPASS 6973

			QUAL	PASS2		
			SA1	LWORD		
13271	5110003123	DIS	RJ	ZPRLOC	PROCESS LOCATION	
	0100025177		MX7	0		
13272	43700		SX6	3		
	7160000003		SX1	15		
13273	7110000017		SA7	LOCSYM		
	5170003102		RJ	SMC	EVALUATE WORD COUNT	
13274	0100006530		SA1	AERR	CHECK IF PASS 1 FOUND ANY ERRORS	
13275	5110003322					

		5120003327		SA2	UERR	IN THE WORD COUNT FIELD	COMPASS	6974
	13276	5130003304		SA3	FLAG		CMP64G	47
		12112		BX1	X1+X2		CMP64G	48
1	13277	0311012126		NZ	X1,ZLIST	EXIT IF ERRORS	CMP64G	49
2		0313013306		NZ	X3,DIS1	IF WORD COUNT NON-ZERO	CMP64G	50
3	13300	5120003144		SA2	COLUMN		CMP64G	51
4		7160000003		SX6	1RC		CMP64G	52
5	13301	7272777776		SX7	X2-1	DELIMITED STRING, EFFECTIVELY	CMP64G	53
6		5160003145		SA6	CHAR	REPLACE *,* WITH *C* AND	CMP64G	54
7	13302	54720		SA7	A2	MAKE SCAN BEGIN THERE	CMP64G	55
8		7120030053		SX2	VALUES		CMP64G	56
9	13303	7130000144		SX3	NLITS		CMP64G	57
10		43400		MX4	0		CMP64G	58
11	13304	5150003123		SA5	LWORD		CMP64G	59
12		10622		BX6	X2		CMP64G	60
13	13305	5160004066		SA6	P2TEMP		CMP64G	61
14		0100006565		RJ	SCD	SCAN DATA ITEM	CMP64G	62
15	13306	5120003123	DIS1	SA2	LWORD		CMP64G	63
16		10633		BX6	X3	STORE WORD COUNT	CMP64G	64
17	13307	5160004067		SA6	P2TEMPA		CMP64G	65
18		0100025177		RJ	ZPRLOC	LIST LOCATION VALUE	CMP64G	66
19	13310	5110003304		SA1	FLAG		CMP64G	67
20		5120004066		SA2	P2TEMP		CMP64G	68
21	13311	0311013313		NZ	X1,DIS2	IF NOT DELIMITED	CMP64G	69
22		53120		SA1	X2	NEXT VALUE WORD	CMP64G	70
23		73621		SX6	X2+B1	INCREMENT ADDRESS	CMP64G	71
24	13312	10711		BX7	X1		CMP64G	72
25		54620		SA6	A2		CMP64G	73
26		0400013325		EQ	DIS4		CMP64G	74
27	13313	5110003145	DIS2	SA1	CHAR	CONSTRUCT BINARY WORD BY COLLECTING	CMP64G	75
28		5120003127		SA2	NCHARS	CHARACTERS AND CONVERTING THEM	CMP64G	76
29	13314	5130003151		SA3	CT		CMP64G	77
30		5140003116		SA4	PPTYPE	CHECK PPTYPE TO SET UP MASK	CPSA225	4
31	13315	43066		MX0	-6		CPSA225	5
32		0324013316		PL	X4,DIS2.5	IF NOT BCU, MCU, OR 180 PPU	CPSA281	237
33		43064		MX0	-8		F4820	644
34	13316		DIS2.5	BSS	0		CPSA225	9
35	13316	13777		BX7	X7-X7		CMP64G	79
36		63620		SB6	X2		CMP64G	80
37		63730		SB7	X3		CMP64G	81
38	13317	5211007312	DIS3	SA1	X1+STCA	CONVERT CHARACTER	CMP64G	82
39		23271		AX2	X1,B7		CMP64G	83
40		15320		BX3	-X0*X2		CMP069	12
41	13320	20706		LX7	6		CMP64G	85
42		67661		SB6	B6-B1		CMP64G	86
43		7117777722		SX1	B7-45		CPSA281	238
44	13321	0311013323		NZ	X1,DIS3A	IF NOT ASCII CONVERSION	CPSA281	239
45		20702		LX7	2		CPSA281	240
46	13322	7233000040		SX3	X3+ASC6T8	CONVERT 6-BIT ASCII TO 8-BIT	CPSA281	241
47	13323		DIS3A	BSS	0		CPSA281	242
48	13323	12773		BX7	X7+X3		CMP64G	87
49		0100005444		RJ	GETCH		CMP64G	88
50	13324	0560013317		NZ	B6,DIS3	IF NOT END OF WORD	CMP64G	89
51		10177		BX1	X7		CMP64G	90
52	13325	5120003123	DIS4	SA2	LWORD		CMP64G	91
53		76300		SX3	B0		CMP64G	92
54		43400		MX4	0		CMP64G	93

13326	10633		BX6	X3	POSITION AT BOTTOM OF WORD	CMP64G	94
	5170030053		SA7	VALUES	SAVE VALUE WORD	CMP64G	95
13327	5160003110		SA6	POSCTR		CMP64G	96
	0100025344		RJ	BINOUT	CALL BINOUT(VALUE,LWORD,0,0)	CMP64G	97
13330	5140003114		SA4	MACHINE		CMP64G	98
	7120000044		SX2	36		CMP64G	99
13331	7130000024		SX3	20		CMP64G	100
	0304013333		ZR	X4,*+2		CMP64G	101
13332	7222777764	+	SX2	X2-11	CORRECT FOR PP	CMP64G	102
	5130003262		SA3	PPBYT		CPSA281	243
13333	5110030053	+	SA1	VALUES	RECLAIM VALUE WORD	CMP64G	104
	0100007773		RJ	PACKO	CALL PACKO(VALUE,36-11*MACHINE,20 OR 4)	CMP64G	105
13334	0100007720		RJ	LISTERG	LIST LINE	CMP64G	106
13335	5110004067		SA1	P2TEMPA		CMP64G	107
	7231777776		SX3	X1-1	DECREMENT WORD COUNT	CMP64G	108
13336	0313013306		NZ	X3,DIS1	LOOP IF MORE	CMP64G	109
	0400011134		EQ	Z100		COMPASS	6998

*** DM - DIRECT MOVE (CMU INSTRUCTION).

*
*

* DM L,KS,CS,KD,CD
* (L) = DATA FIELD LENGTH IN CHARACTERS (@127).
* (KS) = SOURCE FIELD FIRST WORD ADDRESS.
* (CS) = SOURCE FIELD FIRST CHARACTER POSITION (0-9).
* (KD) = DESTINATION FIELD FIRST WORD ADDRESS.
* (CD) = DESTINATION FIELD FIRST CHARACTER POSITION (0-9).

12477 DM QUAL PASS1
EQU CC

** DM - DIRECT MOVE (CMU INSTRUCTION).

13337 7160000465 DM QUAL PASS2
0400012511 SX6 465B
EQ CC1

*** DUP - DUPLICATION.

*
*

*NAME DUP AEXP1,AEXP2
* (NAME) IS BLANK OR AN INSTRUCTION BRACKET NAME. (AEXP1) IS
* THE REPLICATION COUNT. (AEXP2) IF PRESENT SPECIFIES THE
* NUMBER OF SUCCEEDING LINES TO BE ASSEMBLED.

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	13340	7160000003	DUP	QUAL SX6	PASS1 3	EVALUATE REPLICATION COUNT	COMPASS COMPASS	7078 7079
		7110000017		SX1	15		COMPASS	7080
1	13341	0100006530		RJ	SMC		COMPASS	7081
2	13342	5120003102		SA2	LOCSYM		COMPASS	7082
3		10622		BX6	X2		COMPASS	7083
4		76111		SX1	B1+B1		COMPASS	7084
5	13343	5160003561		SA6	P1TEMP	SAVE LOCATION SYMBOL AS BRACKET NAME	COMPASS	7085
6		5130003254		SA3	EXVAL		COMPASS	7086
7	13344	43055		MX0	45	TRUNCATE DUP COUNT TO 15 BITS	COMPASS	7087
8		15330		BX3	-X0*X3		COMPASS	7088
9		73731		SX7	X3+B1		COMPASS	7089
10	13345	5170003562		SA7	P1TEMPA	SAVE REPLICATION COUNT	COMPASS	7090
11		73611		SX6	X1+B1		COMPASS	7091
12	13346	7110000017		SX1	15		COMPASS	7092
13		0100006530		RJ	SMC	EVALUATE CARD COUNT	COMPASS	7093
14	13347	5110003254		SA1	EXVAL		COMPASS	7094
15		10711		BX7	X1		COMPASS	7095
16	13350	5170003304		SA7	FLAG	SAVE CARD COUNT IN FLAG	COMPASS	7096
17		5110003467		SA1	L.DUPTAB	SAVE DUPTABLE SIZE	COMPASS	7097
18	13351	10611		BX6	X1		COMPASS	7098
19		5160003563		SA6	P1TEMPB		COMPASS	7099
20	13352	0100020105		RJ	CRL	CHECK RECURSION LIMIT	CPS004	3
21	13353	0100020112	DUP1	RJ	CWI		COMPASS	7100
22	13354	76610		SX6	B1	SET TEXT DEFINITION FLAG	COMPASS	7101
23		43700		MX7	0	CLEAR PUSHUP FLAG	COMPASS	7102
24		5160003310		SA6	TXNFLG		COMPASS	7103
25	13355	5170022000		SA7	PUSHUP		COMPASS	7104
26		0100020517		RJ	INPUT1		COMPASS	7105
27	13356	0311013421		NZ	X1,DUP6	IF PUSHUP OCCURRED	COMPASS	7106
28		0100006066		RJ	SETUP		COMPASS	7107
29	13357	5110026436		SA1	STYPE		COMPASS	7108
30		5120003103		SA2	IOP		COMPASS	7109
31	13360	6271777730		SB7	X1-1R*		COMPASS	7110
32		7130051604		SX3	3REND		COMPASS	7111
33	13361	0470013353		ZR	B7,DUP1	IF COMMENTS CARD	COMPASS	7112
34		13332		BX3	X3-X2		COMPASS	7113
35	13362	0303013546		ZR	X3,END	IF END CARD	COMPASS	7114
36		5110003254		SA1	EXVAL		COMPASS	7115
37	13363	7261777776		SX6	X1-1	DECREMENT CARD COUNTER	COMPASS	7116
38		54610		SA6	A1		COMPASS	7117
39	13364	0306013402		ZR	X6,DUP2	IF END OF COUNT CONTROLLED UP	COMPASS	7118
40		0326013372		PL	X6,DUP3	IF STILL IN COUNT CONTROLLED DUP	COMPASS	7119
41	13365	5110003103		SA1	IOP	CHECK FOR AN ENDD CARD	COMPASS	7120
42		5120012141		SA2	=0RENDD		COMPASS	7121
43	13366	13312		BX3	X1-X2	CHECK THE LOCATION SYMBOLS	COMPASS	7122
44		0313013372		NZ	X3,DUP3	IF NOT *ENDD*	COMPASS	7123
45	13367	5110003102		SA1	LOCSYM		COMPASS	7124
46		5120003561		SA2	P1TEMP		COMPASS	7125
47	13370	37312		IX3	X1-X2		COMPASS	7126
48		0301013374		ZR	X1,DUP4	IF LOCATION FIELD BLANK	COMPASS	7127
49	13371	0302013374		ZR	X2,DUP4	IF NO BRACKET NAME	COMPASS	7128
50		0303013374		ZR	X3,DUP4	IF BRACKET NAMES MATCH	COMPASS	7129
51	13372	7110000027	DUP3	PCARD	TEMTAB	PACK CARD INTO TEMTAB	COMPASS	7130
52	13373	0400013353		EQ	DUP1	AND CONTINUE TO ENTER DEFINITIONS	COMPASS	7131
53							COMPASS	7132
54			*			END OF DEFINITION BECAUSE OF ENDD STATEMENT.	COMPASS	7133

13374	0100020112	DUP4	RJ	CWI	WRITE ENDD CARD	COMPASS	7134
13375	43600		MX6	0		COMPASS	7135
	7170000055		SX7	1R		COMPASS	7136
13376	5160003263		SA6	SQLGN	PERMIT REPACKING	COMPASS	7137
	5150026437		SA5	CARD		COMPASS	7138
13377	54750		SA7	A5		COMPASS	7139
13400	54551	+	SA5	A5+B1	CLEAR	COMPASS	7140
	13475		BX4	X7-X5	OUT	COMPASS	7141
	54771		SA7	A7+B1	LOCATION	COMPASS	7142
13401	0314013400		NZ	X4,*-1	SYMBOL	COMPASS	7143
	0400013403		EQ	DUP5		COMPASS	7144
						COMPASS	7145
		*			END OF DEFINITION BECAUSE OF COUNT EXHAUSTED.	COMPASS	7146
						COMPASS	7147
						COMPASS	7148
13402	0100020112	DUP2	RJ	CWI		COMPASS	7149
13403	7110000027	DUP5	PCARD	TEMTAB	PACK AWAY LAST CARD	COMPASS	7150
13404	5110003470		SA1	L.TEMTAB	MOVE TEXT TO DUPTAB	COMPASS	7151
	5100000026		MANAGE	DUPTAB,X1		COMPASS	7152
13406	5110003470		SA1	L.TEMTAB		COMPASS	7153
	36223		IX2	X2+X3		COMPASS	7154
	37321		IX3	X2-X1		COMPASS	7155
13407	5120003431		SA2	O.TEMTAB		COMPASS	7156
	0100005515		RJ	MOVE		COMPASS	7157
13410	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042	119
13411	43700		MX7	0	CLEAR TEXT FLAG	COMPASS	7158
	7110000024		SX1	1RT		COMPASS	7159
	20166		LX1	54		COMPASS	7160
13412	5170003470		SA7	L.TEMTAB	DELETE TEXT IN TEMTAB	COMPASS	7161
	5170003310		SA7	TXTFLG		COMPASS	7162
13413	5100000026		ADDWORD	DUPTAB	ADD WORD TO DUP TABLE	COMPASS	7163
13414	5110003467		SA1	L.DUPTAB		COMPASS	7164
	7211777776		SX1	X1-1		COMPASS	7165
13415	5130003562		SA3	P1TEMPA		COMPASS	7166
	5140012142		SA4	=5R*DUP*		COMPASS	7167
13416	76211	+	SX2	B1+B1		COMPASS	7168
	54531		SA5	A3+B1		COMPASS	7169
	0100021731		RJ	PUSHDOWN		COMPASS	7170
13417	76610		SX6	B1		COMPASS	7171
	43700		MX7	0		COMPASS	7172
	5160003315		SA6	ECHFLG		COMPASS	7173
13420	5170003310		SA7	TXTFLG		COMPASS	7174
	0400010615		EQ	CTL100		COMPASS	7175
						COMPASS	7176
		*			ILLEGALLY NESTED DUP.	COMPASS	7177
						COMPASS	7178
13421	0100005102	DUP6	RJ	ASU	ACCUMULATE STORAGE USED	CMP042	120
13422	76610		SX6	B1	SET *E* ERROR	CMP042	121
	43700		MX7	0		COMPASS	7180
	5160003345		SA6	EFLG		COMPASS	7181
13423	5170003470		SA7	L.TEMTAB	CLEAR TEMTAB	COMPASS	7182
	5160003324		SA6	EERR		COMPASS	7183
13424	5170003310		SA7	TXTFLG		COMPASS	7184
	0400010623		EQ	CTL105	PROCESS CARD	COMPASS	7185

** DUP - DUPLICATE CODE.

COMPASS 7187
COMPASS 7188
COMPASS 7189

13425	7160000003	DUP	QUAL	PASS2
	7110000017		SX6	3
13426	0100006530		SX1	15
13427	0311012126		RJ	SMC
	5110003254		NZ	X1,ZLIST
13430	43055		SA1	EXVAL
	15110		MX0	-15
	7120000044		BX1	-X0*X1
13431	43300		SX2	36
	0100007773		MX3	0
13432	0400012126		RJ	PACK0
			EQ	ZLIST

COMPASS 7190
COMPASS 7191
COMPASS 7192
COMPASS 7193
COMPASS 7194
COMPASS 7195
CPS010 46
CPS010 47
COMPASS 7196
CPS010 48
COMPASS 7198
COMPASS 7199

*** ECHO - DUPLICATE CODE.

COMPASS 7201
COMPASS 7202
COMPASS 7203
COMPASS 7204
COMPASS 7205
COMPASS 7206
COMPASS 7207
COMPASS 7208
COMPASS 7209
COMPASS 7210
COMPASS 7211

13433	7160000003	ECHO	QUAL	PASS1	
	7110000017		SX6	3	EVALUATE CARD COUNT
13434	0100006530		SX1	15	
13435	5110003102		RJ	SMC	
	10611		SA1	LOCSYM	SAVE BRACKET NAME
	43700		BX6	X1	
13436	5160003566		MX7	0	
	5170003562		SA6	P1TEMPE	
13437	5170022000		SA7	P1TEMPA	CLEAR PARAMETER COUNT
	5110003473		SA7	PUSHUP	CLEAR PUSHUP FLAG
13440	5120003472		SA1	L.MARGS	SAVE TABLE LENGTHS
	5130003471		SA2	L.MARDIS	
13441	20144		SA3	L.ECHTAB	
	20222		LX1	36	
	12612		LX2	18	
	12663		BX6	X1+X2	
13442	5160003563		BX6	X6+X3	
13443	0100021304	ECH1	SA6	P1TEMPB	
13444	0316013446		RJ	PMACF	ISOLATE FORMAL PARAMETER
	0100021263		NZ	X6,ECH2	IF NAME FOUND
13445	0317013443		RJ	PMACE	SKIP VALUE
	0400013454		NZ	X7,ECH1	LOOP IF NOT END OF CARD
13446	0100021226	ECH2	EQ	ECH4	
13447	26171		RJ	PMA	PACK MACRO ARGUMENT
	67707		UX1,B7		SETUP DESCRIPTOR WORD...
			SB7	-B7	

COMPASS 7212
COMPASS 7213
COMPASS 7214
COMPASS 7215
COMPASS 7216
COMPASS 7217
COMPASS 7218
COMPASS 7219
COMPASS 7220
COMPASS 7221
COMPASS 7222
COMPASS 7223
COMPASS 7224
COMPASS 7225
COMPASS 7226
COMPASS 7227
COMPASS 7228
COMPASS 7229
COMPASS 7230
COMPASS 7231
COMPASS 7232
CMP029 25
CMP029 26
CMP029 27
CMP165 13
CMP165 14
CMP165 15

		27171	PX1	B7	- CHARACTER COUNT	CMP165	16
		20122	LX1	59-41		CMP165	17
	13450	27101	PX1	B0	CHARACTER OFFSET	CMP165	18
		20114	LX1	41-29		CMP165	19
		27101	PX1	B0	WORD OFFSET	CMP165	20
		20136	LX1	29-59		CMP165	21
	13451	5100000031	ADDWORD	MARDIS		CMP165	22
	13452	5110003145	SA1	CHAR	CHECK FOR END OF FIELD	COMPASS	7249
		6271777722	SB7	X1-1R		COMPASS	7250
	13453	0570013443	NZ	B7,ECH1	LOOP TO END OF ECHO	COMPASS	7251
	13454	76610	SX6	B1		CMP029	37
		5160003310	SA6	TXTFLG		COMPASS	7276
	13455	0100020105	RJ	CRL	CHECK RECURSION LIMIT	CPS004	4
	13456	0100020112	RJ	CWI	WRITE CARD	COMPASS	7277
	13457	0100020517	RJ	INPUT1	READ NEXT CARD	COMPASS	7278
	13460	0311013524	NZ	X1,ECH9	IF PUSHUP OCCURRED	CMP029	38
		0100006066	RJ	SETUP		COMPASS	7280
	13461	5110012141	SA1	=0REND		COMPASS	7281
		0100021175	RJ	PEC	PROCESS END CARD	COMPASS	7282
	13462	0100021133	RJ	PDC	PROCESS DEFINITION CARD	COMPASS	7283
	13463	7110000027	PCARD	TEMTAB		COMPASS	7284
	13464	5120003254	SA2	EXVAL	CHECK LINE COUNT	COMPASS	7285
		7262777776	SX6	X2-1		COMPASS	7286
	13465	54620	SA6	A2		COMPASS	7287
		0306013470	ZR	X6,ECH6	IF END OF COUNT	COMPASS	7288
	13466	0326013457	PL	X6,ECH5	IF IN LINE COUNT CONTROL	COMPASS	7289
		5110003565	SA1	P1TEMPD		COMPASS	7290
	13467	0301013457	ZR	X1,ECH5	IF NOT ENDD CARD	COMPASS	7291
	13470	5110003562	SA1	P1TEMPA		CMP029	39
		0301013516	ZR	X1,ECH8	IF NO PARAMETERS	CMP029	40
	13471	5120003433	SA2	O.MARDIS		CMP029	41
		5130003472	SA3	L.MARDIS		CMP029	42
	13472	36223	IX2	X2+X3		CMP029	44
		63210	SB2	X1		CMP029	45
		63320	SB3	X2		CMP029	46
	13473	57132	SA1	B3-B2	CHECK ARGUMENT VALUES	CMP029	49
		67221	SB2	B2-B1		CMP029	50
		26671	UX6,B7	X1		CMP165	23
	13474	0470013516	ZR	B7,ECH8	IF NULL ARGUMENT	CMP165	24
		0520013473	NZ	B2,ECH7	LOOP	CMP029	54
	13475	7110000024	SX1	1RT	PACK TERMINATOR	CMP029	55
		20166	LX1	-6		COMPASS	7293
	13476	5100000027	ADDWORD	TEMTAB		COMPASS	7294
	13477	5110003470	SA1	L.TEMTAB	MOVE TEXT TO ECHTAB	COMPASS	7295
		5100000030	MANAGE	ECHTAB,X1		COMPASS	7296
	13501	5110003470	SA1	L.TEMTAB		COMPASS	7297
		36223	IX2	X2+X3		COMPASS	7298
		37321	IX3	X2-X1		COMPASS	7299
	13502	5120003431	SA2	O.TEMTAB		COMPASS	7300
		0100005515	RJ	MOVE		COMPASS	7301
	13503	0100005102	RJ	ASU	ACCUMULATE STORAGE USED	CMP042	122
	13504	43700	MX7	0	CLEAR TEXT FLAG	COMPASS	7302
		5170003310	SA7	TXTFLG		COMPASS	7303
	13505	5170003470	SA7	L.TEMTAB	CLEAR TEMTAB	COMPASS	7304
		5110003563	SA1	P1TEMPB	PUSH DOWN STACK	COMPASS	7305
	13506	7120000005	SX2	5		COMPASS	7306
		73110	SX1	X1		COMPASS	7307

		10311		BX3	X1		COMPASS	7308
	13507	5140012143		SA4	=6R*ECHO*		COMPASS	7309
		43500		MX5	0		COMPASS	7310
1	13510	0100021731		RJ	PUSHDOWN		COMPASS	7311
2	13511	5110003423		SA1	O.STACK	RESET MARGS AND MARDIS ORG	COMPASS	7312
3		5120003462		SA2	L.STACK		COMPASS	7313
4	13512	36112		IX1	X1+X2		COMPASS	7314
5		5221777774		SA2	X1-3		COMPASS	7315
6	13513	5110003563		SA1	P1TEMPB		COMPASS	7316
7		43030		MX0	-36		COMPASS	7317
8		21122		AX1	18		COMPASS	7318
9	13514	11602		BX6	X0*X2		COMPASS	7319
10		36661		IX6	X6+X1		COMPASS	7320
11		54620		SA6	A2		COMPASS	7321
12		76610		SX6	B1	SET ECHO FLAG	COMPASS	7322
13	13515	5160003315		SA6	ECHFLG		COMPASS	7323
14		0400010615		EQ	CTL100	RETURN	CMP029	56
15							CMP029	57
16			*		ENTRY ON NO PARAMETERS OR AT LEAST ONE NULL ARGUMENT.		CMP029	58
17							CMP029	59
18	13516	0100005102	ECH8	RJ	ASU	ACCUMULATE STORAGE USED	CMP042	123
19	13517	5110003563		SA1	P1TEMPB	RESTORE TABLE LENGTHS	CMP042	124
20		21122		AX1	18		CMP029	61
21		73610		SX6	X1		CMP029	62
22	13520	21122		AX1	18		CMP029	63
23		73710		SX7	X1		CMP029	64
24		5160003472		SA6	L.MARDIS		CMP029	65
25	13521	5170003473		SA7	L.MARGS		CMP029	66
26		13666		BX6	X6-X6		CMP029	67
27	13522	5160003470		SA6	L.TEMTAB	CLEAR TEMTAB	CMP029	68
28		5160003310		SA6	TXTFLG	CLEAR TEXT FLAG	CMP029	69
29	13523	0400010615		EQ	CTL100	RETURN	COMPASS	7346
30							COMPASS	7347
31			*		ENTRY ON ILLEGAL NESTING OF ECHO.		COMPASS	7348
32							COMPASS	7349
33	13524	0100005102	ECH9	RJ	ASU	ACCUMULATE STORAGE USED	CMP042	125
34	13525	43700		MX7	0	CLEAR TEXT FLAG	CMP042	126
35		5170003310		SA7	TXTFLG		CMP042	127
36		76610		SX6	B1	SET *E* ERROR	COMPASS	7351
37	13526	5170003470		SA7	L.TEMTAB		COMPASS	7352
38		5160003345		SA6	EFLG		COMPASS	7353
39	13527	5110003563		SA1	P1TEMPB		COMPASS	7354
40		5160003324		SA6	EERR		COMPASS	7355
41	13530	5120003472		SA2	L.MARDIS		COMPASS	7356
42		21122		AX1	18		COMPASS	7357
43		73610		SX6	X1		COMPASS	7358
44	13531	37526	+	IX5	X2-X6		COMPASS	7359
45		0325013532		PL	X5,*+1	IF MARDIS WAS NOT PUSHED UP	COMPASS	7360
46		73620		SX6	X2		COMPASS	7361
47	13532	54620		SA6	A2	PUSHUP MARDIS	COMPASS	7362
48		5120003473		SA2	L.MARGS		COMPASS	7363
49		21122		AX1	18		COMPASS	7364
50	13533	37521	+	IX5	X2-X1		COMPASS	7365
51		0325013534		PL	X5,*+1	IF MARGS WAS NOT PUSHED UP	COMPASS	7366
52		73120		SX1	X2		COMPASS	7367
53	13534	10611		BX6	X1	PUSHUP MARGS	COMPASS	7368
54		54620		SA6	A2		COMPASS	7369

0400010623

EQ

CTL105

PROCESS CARD

COMPASS 7370

** ECHO - DUPLICATE CODE.

COMPASS 7372

COMPASS 7373

COMPASS 7374

COMPASS 7375

COMPASS 7376

12126

ECHO

QUAL PASS2
EQU ZLIST

*** EJECT - START NEW PAGE.

COMPASS 7378

COMPASS 7379

COMPASS 7380

COMPASS 7381

COMPASS 7382

COMPASS 7383

COMPASS 7384

COMPASS 7385

COMPASS 7386

10653

EJECT

QUAL PASS1
EQU CTL300

** EJECT - START NEW PAGE.

COMPASS 7388

COMPASS 7389

COMPASS 7390

COMPASS 7391

COMPASS 7392

COMPASS 7393

COMPASS 7394

CPSA181 19

COMPASS 7396

COMPASS 7397

COMPASS 7398

COMPASS 7399

13535 0100025234
13536 76610

EJECT

QUAL PASS2
RJ ZTLIST
SX6 B1

TEST FOR LISTINGS IN FORCE

5110003602
13537 5120003072
5160003567

SA1 LPCNT
SA2 NEJF
SA6 CTYPE

CAUSE PAGE EJECT
N CONTROLLED PAGE SIZE

13540 36712
54710
0400012126

IX7 X1+X2
SA7 A1
EQ ZLIST

*** ELSE - UNCONDITIONALLY SKIP/ASSEMBLE CODE.

COMPASS 7401

COMPASS 7402

COMPASS 7403

COMPASS 7404

COMPASS 7405

COMPASS 7406

COMPASS 7407

COMPASS 7408

COMPASS 7409

COMPASS 7410

COMPASS 7411

COMPASS 7412

COMPASS 7413

COMPASS 7414

13541 5110003102
5120003557
13542 5130003556

ELSE

QUAL PASS1
SA1 LOCSYM
SA2 IFNAME
SA3 IFCNT

1
2

13562	0400014447	0100005515	RJ	MOVE		COMPASS	7466
			EQ	HEREPK	PACK END CARD	COMPASS	7467
						COMPASS	7468
		*		FINAL END CARD.		COMPASS	7469
						COMPASS	7470
13563	0100020062	END1	RJ	COB	CLOSE OUT ALL BLOCKS	COMPASS	7471
13564	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	COMPASS	7472
13565	43700		MX7	0		COMPASS	7473
	5170003316		SA7	RMTFLG		COMPASS	7474
	10677		BX6	X7		COMPASS	7475
13566	5160003556		SA6	IFCNT		COMPASS	7476
	5170003462		SA7	L.STACK		COMPASS	7477
13567	5160003314		SA6	MACFLG		COMPASS	7478
	5170003315		SA7	ECHFLG		COMPASS	7479
13570	5160003310		SA6	TXTFLG		COMPASS	7480
	5170003317		SA7	LIBFLG		COMPASS	7481
13571	5170003313		SA7	SYSFLG		COMPASS	7483
	5160003560		SA6	XLEV		CMP036	12
13572	5170003463		SA7	L.RMTAB		COMPASS	7484
	5160003465		SA6	L.RASTAB		COMPASS	7485
13573	5170003467		SA7	L.DUPTAB		COMPASS	7486
	5160003472		SA6	L.MARDIS		COMPASS	7487
13574	5170003473		SA7	L.MARGS		COMPASS	7488
	5160003466		SA6	L.LASTAB		COMPASS	7489
13575	0100020346		RJ	GSM	GENERATE SYSTEMS MACRO TEXT	COMPASS	7490
13576	5110003040		SA1	LSYSMAC	RESET MACRO DEFINITIONS	COMPASS	7491
	5120003060		SA2	EOFINP		CMP30	2740
13577	10611		BX6	X1		COMPASS	7492
	43700		MX7	0		COMPASS	7493
	5170003474		SA7	L.MICTAB		COMPASS	7494
13600	5160003443		SA6	L.MACDEF		COMPASS	7495
	0302013604		ZR	X2,END2	IF NOT LAST ASSEMBLY OF BATCH	CMP30	2744
13601	43600		MX6	0		CMP30	2745
	5170003444		SA7	L.SSYMS	CLEAR SYSTEM TEXT TABLES	CMP30	2746
	54660		SA6	A6		CMP30	2747
13602	5170003445		SA7	L.SYSMIC		CMP30	2748
	5160003175		SA6	SSTCNT		CMP30	2749
13603	5170003442	END4	SA7	L.OPTAB	CLEAR OP CODE TABLE	CMP30	2750
	0400013627		EQ	END5A		CMP30	2751
13604	5110003050	END2	SA1	LCMOPC		CMP30	2752
	0311013603		NZ	X1,END4	IF OP CODE TABLE IS IN LCM	CMP30	2753
13605	5110003442		SA1	L.OPTAB	CLEAR OUT INSERTIONS FROM OPTAB BY	CMP30	2754
	5100000026		MANAGE	DUPTAB,X1	RE-DOING IT	COMPASS	7497
13607	10133		BX1	X3		COMPASS	7498
	22302		LX3	X2		COMPASS	7499
	5120003403		SA2	0.OPTAB		COMPASS	7500
13610	0100005515		RJ	MOVE		COMPASS	7501
13611	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP30	2755
13612	5120003403		SA2	0.OPTAB		COMPASS	7502
	7160000400		SX6	2*NOPCT		COMPASS	7503
13613	36362		IX3	X6+X2		COMPASS	7505
	5160003442		SA6	L.OPTAB		COMPASS	7506
13614	0100005250		RJ	CLS	CLEAR OP CODE TABLE	CMP30	2756
13615	6170000071		SB7	57		CMP64G	110
13616	5130003430	END5	SA3	0.DUPTAB		CMP30	2757
	5140003467		SA4	L.DUPTAB		CMP30	2758
13617	7263000002		SX6	X3+2		CMP30	2759

13620	53130	7274777775		SX7	X4-2		CMP30	2760
				SA1	X3	LOAD OP CODE ENTRY	CMP30	2761
		53231		SA2	X3+B1		CMP30	2762
		43514		MX5	12		CMP64G	119
		15315		BX3	-X5*X1		CMP64G	120
13621	0304013627			ZR	X4,END5A	IF END OF TABLE	CMP64G	121
		54630		SA6	A3		CMP30	2763
		54740		SA7	A4		CMP30	2764
13622	23472			AX4	X2,B7		CMP64G	122
		76010		SX0	B1		CMP64G	123
		12540		BX5	X4+X0		CMP64G	124
13623	20214		+	LX2	59-47		CMP64G	126
		0315013624		NZ	X5,*+1	IF NOT A MACRO	CMP64G	127
		20262		LX2	47-57		CMP64G	128
13624	0303013616		+	ZR	X3,END5	IF ZERO WORD	CMP64G	129
		0332013616		MI	X2,END5	IF PROGRAMMER DEFINED	CMP64G	130
13625	10133			BX1	X3		CMP64G	131
		54220		SA2	A2		CMP64G	132
		0100005374		RJ	ENTOP	ENTER OP CODE TABLE	CMP64G	133
13626	6170000071			SB7	57		CMP64G	134
		0400013616		EQ	END5		CMP64G	135
13627	7110000024		END5A	SX1	2*NCARDS	RESTORE SEQUENCE FIELDS	CMP64G	136
		7120030027		SX2	ENDSEQ		COMPASS	7534
13630	7130030003			SX3	SEQ		COMPASS	7535
		0100005515		RJ	MOVE		COMPASS	7536
13631	0100020123			RJ	DSL	DEFINE SYMBOL LITERALS	COMPASS	7537
13632	5110003154			SA1	UI+1	RELOCATE USE TABLE	COMPASS	7538
		0100022403		RJ	RUT		COMPASS	7539
13633	10600			BX6	X0	PROGRAM LENGTH	COMPASS	7540
		20647		LX6	39	EXTEND SIGN	COMPASS	7541
		21647		AX6	39		COMPASS	7542
13634	5160003266			SA6	ENDP		COMPASS	7543
		5160003104		SA6	ORGCTR		COMPASS	7544
13635	43600			MX6	0		COMPASS	7545
		54661		SA6	A6+B1		COMPASS	7546
		22200		LX2	X0		COMPASS	7547
13636	5150003130			SA5	ABSFG		COMPASS	7548
		76311		SX3	B1+B1		COMPASS	7549
		37335		IX3	X3-X5		COMPASS	7550
13637	37635			IX6	X3-X5		COMPASS	7551
		54661		SA6	A6+B1		COMPASS	7552
		7140000000		SX4	0		COMPASS	7553
13640	37555			IX5	X5-X5		COMPASS	7554
		0100023063		RJ	YDEFLOC	DEFINE END CARD LOCATION SYMBOL	COMPASS	7555
13641	0100022364			RJ	RST	RELOCATE SYMBOL TABLE	COMPASS	7556
13642	5110003457		END7	SA1	L.SEGTAB		COMPASS	7572
		5120003164		SA2	SI		COMPASS	7573
13643	37712			IX7	X1-X2		COMPASS	7574
		7277777773		SX7	X7-4		COMPASS	7575
13644	0317013645		+	NZ	X7,*+1	IF SEGMENT CARDS	COMPASS	7576
		0100022323		RJ	RSL	RECORD SEGMENT LENGTH	COMPASS	7577
13645	0100020052			RJ	AVO	ADVANCE OVERLAY	COMPASS	7578
13646	0100022346			RJ	RSS	RECORD SEGMENT START	COMPASS	7579
13647	0100022323			RJ	RSL	RECORD SEGMENT LENGTH	COMPASS	7580
13650	0100022331			RJ	RSG	RELOCATE SEGMENT TABLE	COMPASS	7581
13651	0100023001			RJ	WINTER		COMPASS	7582
13652	0100022037			RJ	RCD	RESTORE CHARACTER DATA	CPS011	72

COMPASS	7583
CMP22	1
CMP22	2

COMPASS 7610
COMPASS 7611
COMPASS 7612

13674	0100025177		RJ	ZPRLOC		COMPASS	7613
13675	0100006036		RJ	SCLIST	SCAN POTENTIAL TRANSFER NAME	COMPASS	7614
13676	5110003130		SA1	ABSFG	CHECK VALIDITY OF TRANSFER NAME	COMPASS	7615
		0311013703	NZ	X1,ZEND1		COMPASS	7616
13677	0100006223		RJ	VFYLINK		COMPASS	7617
13700	5160003102		SA6	LOCSYM	SAVE TRANSFER NAME	COMPASS	7618
		0307013703	ZR	X7,ZEND1	IF NO FORMAT ERROR	CPS002	33
13701	76710		SX7	B1		CPS002	34
		5170003322	SA7	AERR		COMPASS	7624
13702	5170003345		SA7	EFLG		COMPASS	7625
13703	0100007737	ZEND1	RJ	LIST2L	PRINT *END* CARD AND A BLANK LINE	CMP057	1
13704	43600		MX6	0		CMP057	2
		5160003441	SA6	L.INTER	CLEAR INTERMEDIATE TABLE	CMP042	133
						CMP042	134
			*	TERMINATE BINARY OUTPUT.		CMP042	135
						CMP042	136
13705	0100025401		RJ	DBSSZ	DUMP BSSZ CODE	CMP042	137
13706	0100026031		RJ	DLAST	DUMP TERMINAL LOADER CARDS	CMP042	138
13707	0100025534		RJ	DDUMP	DUMP ABSOLUTE BINARY OUTPUT	CMP042	139
13710	5120000241		SA2	B		CMP30	2786
		0302013741	ZR	X2,ZEND10	IF NO BINARY FILE	CMP30	2787
13711	5110003102		SA1	LOCSYM		CMP042	140
		5120003130	SA2	ABSFG		CMP042	141
13712	0301013720		ZR	X1,ZEND3	IF NO TRANSFER NAME	CMP042	142
		0312013720	NZ	X2,ZEND3	IF ABSOLUTE ASSEMBLY	CMP042	143
13713	0100006262		RJ	LJUST		CMP042	144
13714	5110012144		SA1	=46000001BS36		CMP042	145
		10611	BX6	X1		CMP042	146
13715	5170004026		SA7	BINREC+1		CMP042	147
		55671	SA6	A7-B1		CMP042	148
						CMP30	2788
			RM	IFEQ	CP#RM,0	CMP30	2789
		64660	WRITEW	B,A6,2	DUMP XFER CARD	CMP042	149
			RM	ELSE		CMP30	2790
			SA1	B-1		CMP30	2791
			NZ	X1,ZEND2	IF NOT *W* RECORDS	CMP30	2792
			PUT	B,BINREC,20		CMP30	2793
			EQ	ZEND3		CMP30	2794
		ZEND2	PUTP	B,BINREC,20		CMP30	2795
		RM	ENDIF			CMP30	2796
						CMP30	2797
13720	7120000241	ZEND3	WEOR	B		CMP30	2798
13722	5110007307		SA1	/DATA/STCW	RESET CHARACTER STORE FOR 6-BIT/NON-ASCII	CPSA293	88
		10611	BX6	X1		CPSA293	89
13723	5160007276		SA6	/DATA/STC0	*** SAFE CODE-MODIFICATION ***	CPSA293	90
		5110003147	SA1	ERCNT		CMP042	151
13724	5120000115		SA2	CP.ERRCT		CMP30	2799
		5130003121	SA3	SYNAME		CMP042	153
13725	5140003601		SA4	DKCNT		CMP042	154
		0301013736	ZR	X1,ZEND7	IF NO ERRORS	CMP042	155
13726	0332013736		MI	X2,ZEND7	IF *D* OPTION SET (DEBUG MODE)	CMP042	156
		0303013730	ZR	X3,ZEND5	IF NO SYSTEM TEXT GENERATED	CMP042	157
13727	73441		SX4	X4+B1		CMP042	158
13730	0100023523	ZEND5	RJ	BKS	ERASE ALL BINARY OUTPUT INCLUDING SYSTEXT	CMP30	2800
13731	5110000114		SA1	CP.ABORT		CMP30	2801
		20136	LX1	59-29		CP139CP	165
13732	0331013737		MI	X1,ZEND8	IF *A* OPTION SET (ABORT IF ERROR)	CP139CP	166

			RM	IFEQ	CP#RM,0		CMP30	2802
							CMP30	2803
							CMP30	2804
1		6160012145		SB6	=C*ERRORS IN ASSEMBLY*		CMP042	162
2	13733	66711		WRITEW	X2,B6,2		CMP042	163
3	13734	7170000024		WRITER	X2 WRITE ERROR RECORD		CMP042	164
4	13735	0400013741		EQ	ZEND10		CMP042	165
5	13736	0303013741	ZEND7	ZR	X3,ZEND10 IF NO SYSTEM TEXT GENERATED		CMP042	166
6		0100023523		RJ	BKS ERASE ALL NON-SYSTEXT BINARY OUTPUT		CMP30	2805
7	13737	7170000034	ZEND8	WRITEF	X2 WRITE EOF AND BACKSPACE OVER IT		CMP042	168
8	13740	7170000040		BKSP	X2		CMP042	169
9							CMP30	2806
10			RM	ELSE			CMP30	2807
11							CMP30	2808
12				PUT	B,ZENDB,20 *ERRORS IN ASSEMBLY*		CMP30	2809
13				SA1	B-1		CMP30	2810
14				NZ	X1,ZEND10 IF NOT *W* RECORDS		CMP30	2811
15				WEOR	B		CMP30	2812
16				EQ	ZEND10		CMP30	2813
17			ZEND7	ZR	X3,ZEND10 IF NO SYSTEM TEXT GENERATED		CMP30	2814
18				RJ	BKS ERASE ALL NON-SYSTEXT BINARY OUTPUT		CMP30	2815
19			ZEND8	ENDFILE	B		CMP30	2816
20				SX4	B1 WRITE EOF AND BACKSPACE OVER IT		CMP30	2817
21				RJ	BKS		CMP30	2818
22							CMP30	2819
23			RM	ENDIF			CMP30	2820
24							CMP042	170
25			*	RESTORE	SYSTEM SYMBOL TABLE.		CMP042	171
26							CMP042	172
27	13741	0100005102	ZEND10	RJ	ASU ACCUMULATE STORAGE USED		CMP042	173
28	13742	5110003175		SA1	SSTCNT		CMP042	174
29		43600		MX6	0		CMP042	175
30	13743	6170000021		SB7	ERRTAB-QVTAB-2		CMP042	176
31		5160003452		SA6	L.QVTAB+1		CMP042	177
32	13744	67771	+	SB7	B7-B1 EMPTY TABLES NO LONGER NEEDED		CMP042	178
33		54661		SA6	A6+B1		CMP042	179
34		0570013744		NZ	B7,*		CMP042	180
35	13745	5160003476		SA6	L.MEMORY		CMP042	181
36		0301013760		ZR	X1,ZEND20 IF NO SYSTEM SYMBOLS DEFINED		CMP042	182
37	13746	20101		LX1	1		CMP042	183
38		5100000003		MANAGE	SSYMS,X1 MAKE ROOM IN SYSTEM SYMBOL TABLE		CMP042	184
39	13750	36223		IX2	X2+X3		CMP042	185
40		5130003175		SA3	SSTCNT		CMP042	186
41		63730		SB7	X3		CMP30	2821
42	13751	5110003410		SA1	0.SYMTAB		CMP042	187
43		5130012147		SA3	=00000007000007777777B		CMP30	2822
44	13752	67501		SB5	-B1		CP096A	352
45		6160000033		SB6	59-32		CP096A	353
46		73111		SX1	X1+B1		CP096A	354
47	13753	53510	ZEND15	RX5	X1		CP096A	355
48		73415		SX4	X1+B5		CP096A	356
49		7211000002		SX1	X1+2		CMP042	190
50	13754	22665		LX6	X5,B6		CP096A	357
51		0326013753		PL	X6,ZEND15 IF NOT A SYSTEM SYMBOL		CP096A	358
52		53440		RX4	X4		CP096A	359
53	13755	7222777775		SX2	X2-2		CMP042	195
54		67771		SB7	B7-B1		CMP042	196
55								
56								
57								
58								
59								
60								

13756	22604	11735	BX7	X3*X5	COPY SYMBOL TABLE ENTRY	CMP30	2823
			LX6	X4	TO SYSTEM SYMBOL TABLE	CMP042	198
	53721		SA7	X2+B1		CMP042	199
		53620	SA6	X2		CMP042	200
13757	0570013753		NZ	B7,ZEND15		CMP042	201
		0100005102	RJ	ASU	ACCUMULATE STORAGE USED	CMP042	202
						COMPASS	7735
			*	PRODUCE ASSEMBLER STATISTICS.		COMPASS	7736
						COMPASS	7737
13760	5110012150	ZEND20	SA1	=H*STORAGE USED*		COMPASS	7738
		54211	SA2	A1+B1		COMPASS	7739
		10611	BX6	X1		COMPASS	7740
13761	22702		LX7	X2		COMPASS	7741
		5160003673	SA6	LINE		COMPASS	7742
		54761	SA7	A6+B1		COMPASS	7743
13762	5110004054		SA1	REFI0		CMP042	203
		5120003373	SA2	LR+1		CMP042	204
13763	5130003043		SA3	MAXCORE		CMP042	205
		0301013772	ZR	X1,ZEND26	IF NO REFTAB OVERFLOW	CMP042	206
13764	0302013772		ZR	X2,ZEND26	IF NO REFERENCE WANTED	CMP042	207
		5110004053	SA1	LOSTREF		CMP042	208
13765	7160011563		SX6	PRTB		CPS247	10
		6170000010	SB7	L.QVTAB-L.INTER		CMP042	210
13766	36661		IX6	X6+X1		CMP042	211
		5110003442	SA1	L.INTER+1		CMP042	212
13767	67771	ZEND23	SB7	B7-B1	COMPUTE STORAGE NEEDED BY PASS 3	CMP042	213
		36661	IX6	X6+X1		CMP042	214
		54111	SA1	A1+B1		CMP042	215
13770	0570013767		NZ	B7,ZEND23		CMP042	216
		37236	IX2	X3-X6		CMP042	217
13771	0322013772		PL	X2,ZEND26	IF NOT GREATER THAN MAXCORE	CMP042	218
		10366	BX3	X6	UPDATE MAXCORE	CMP042	219
		54630	SA6	A3		CMP042	220
13772	7120000112	ZEND26	SX2	100B+10D	ADD THE TEN UNUSED WORDS AND	CMP042	221
		43066	MX0	-6	INCREASE TO NEXT MULTIPLE OF 100B	CMP042	222
		36332	IX3	X3+X2		CMP042	223
13773	11103		BX1	X0*X3		CMP042	224
		5120003116	SA2	PPTYPE		CPS0343	10
		10722	BX7	X2	SAVE PPTYPE	CPS0343	11
13774	43600		MX6	0	CLEAR PPTYPE SO MEMORY USED IS OCTAL	CPS0343	12
		54620	SA6	A2		CPS0343	13
		5170014226	SA7	ZENDC		CPS0343	14
13775	7120000042		SX2	34		CPS028	308
		43300	MX3	0		COMPASS	7747
13776	0100007773		RJ	PACK0		COMPASS	7748
						CPS028	309
			IF	DEF,MODL76		CPSA134	75
			SA1	=5RB SCM	ASSEMBLED IF MODEL 76 ASSEMBLY (SCM)	CPSA134	76
			ELSE	1		CPSA134	77
13777	5110012152		SA1	=5RB CM	ASSEMBLED IF NOT MODEL 76 ASSEMBLY	CPSA134	78
						CPS028	314
		43066	MX0	-6		CPS028	315
		15610	BX6	-X0*X1		CPS028	316
14000	5160003671		SA6	OCTAL+38		CPS028	317
		21106	AX1	6		CPS028	318
14001	15610	+	BX6	-X0*X1		CPS028	319
		21106	AX1	6		CPS028	320

14002	0311014001	55661	SA6	A6-B1		CPS028	321
			NZ	X1,*-1		CPS028	322
		5130003172	SA3	ALCM	MAXIMUM ECS/LCM USED	CPS028	323
14003	0303014011		ZR	X3,ZEND28	IF NONE	CPS028	324
			IF	-DEF,LCMTYP		CPS028	325
			SA1	=5RB ECS		CPSA134	79
			ELSE	1		CPS028	327
		5110012153	SA1	=5RB LCM		F7540CP	132
						CPS028	329
14004	15610		BX6	-X0*X1		CPS028	330
		5160003655	SA6	OCTAL+26		CPS028	331
		21106	AX1	6		CPS028	332
14005	15610		BX6	-X0*X1		CPS028	333
		21106	AX1	6		CPS028	334
						CPS028	335
		55661	SA6	A6-B1		CPS028	336
14006	0311014005		NZ	X1,*-1		CPS028	337
		7120000112	SX2	100B+10D	ADD THE TEN UNUSED WORDS AND	CPS028	338
14007	36332		IX3	X3+X2	INCREASE TO NEXT MULTIPLE OF 100B	CPS028	339
		11103	BX1	X0*X3		CPS028	340
		7120000026	SX2	22		CPS028	341
14010	43300		MX3	0		CPS028	342
		0100007773	RJ	PACK0		CPS028	343
14011	5110014226		SA1	ZENDC	RESTORE PPTYPE FOR REFERENCE TABLE	CPS0343	15
		10611	BX6	X1		CPS0343	16
14012	5160003116		SA6	PPTYPE		CPS0343	17
		5110003170	SA1	STCNT	STATEMENT COUNT	CPS0343	18
14013	0100005270		RJ	CONDEC		COMPASS	7750
14014	5110012154		SA1	=10HSTATEMENTS		COMPASS	7751
		20606	LX6	6		COMPASS	7752
		10711	BX7	X1		COMPASS	7753
14015	5160003675		SA6	LINE+2		COMPASS	7754
		54761	SA7	A6+B1		COMPASS	7755
14016	5110003171		SA1	SYMCNT	OUTPUT SYMBOL COUNT	COMPASS	7756
		0100005270	RJ	CONDEC		COMPASS	7757
14017	5110012155		SA1	=H*SYMBOLS*		COMPASS	7758
		20606	LX6	6		COMPASS	7759
		10711	BX7	X1		COMPASS	7760
14020	5160003677		SA6	LINE+4		COMPASS	7761
		54761	SA7	A6+B1		COMPASS	7762
14021	5110003122		SA1	INVENT	OUTPUT INVENTED SYMBOL COUNT	COMPASS	7763
		5120012156	SA2	=6R0000000		COMPASS	7764
14022	43030		MX0	24		COMPASS	7765
		15610	BX6	-X0*X1		COMPASS	7766
		13162	BX1	X6-X2		COMPASS	7767
14023	0301014027		ZR	X1,ZEND30	IF NO INVENTED SYMBOLS	CMP042	225
		5120012157	SA2	=4L		COMPASS	7769
14024	5130012160		SA3	=H*INVENTED SYMBOLS*		COMPASS	7770
		54131	SA1	A3+B1		COMPASS	7771
		36662	IX6	X6+X2		COMPASS	7772
14025	20606		LX6	6		COMPASS	7773
		10733	BX7	X3		COMPASS	7774
		54671	SA6	A7+B1		COMPASS	7775
		54761	SA7	A6+B1		COMPASS	7776
14026	10611		BX6	X1		COMPASS	7777
		54671	SA6	A7+B1		COMPASS	7778
14027	0100007732		RJ	LISTL		CMP042	226

14030	5110003077		SA1	TLINE	ASSEMBLY TIME MESSAGE	COMPASS	7780
	5160003673		SA6	LINE		CPS0340	8
14031	43201		MX2	1		CPS0340	9
	43066		MX0	-6		CPS0340	10
14032	15610	ZEND30.1	BX6	-X0*X1		CPS0340	11
	55661		SA6	A6-B1		CPS0340	12
	20166		LX1	-6		CPS0340	13
	20206		LX2	6		CPS0340	14
14033	0322014032		PL	X2,ZEND30.1		CPS0340	15
	54211		SA2	A1+B1		COMPASS	7781
	10611		BX6	X1		COMPASS	7782
14034	54321		SA3	A2+B1		CPS240	17
	22702		LX7	X2		COMPASS	7783
	5170003673		SA7	LINE		CPS0340	16
14035	10633		BX6	X3		CPS240	18
	54671		SA6	A7+B1		CPS240	19
	6170003173		SB7	ATIME		CMP30	2824
14036	0100005317		RJ	CPTIME	CONVERT ASSEMBLY TIME	CMP30	2825
14037	5160003675		SA6	LINE+2		CPS0340	17
	5110012162		SA1	=0HSECONDS		COMPASS	7808
14040	10611		BX6	X1		COMPASS	7809
	54661		SA6	A6+B1		COMPASS	7810
	43600		MX6	0		COMPASS	7811
14041	5110004053		SA1	LOSTREF		COMPASS	7812
	0100005270		RJ	CONDEC		COMPASS	7814
14042	5110012163		SA1	=H*REFERENCES*		COMPASS	7815
	20606		LX6	6		COMPASS	7816
14043	5160003677		SA6	LINE+4		CPS0340	18
	10711		BX7	X1		COMPASS	7818
	54761		SA7	A6+B1		COMPASS	7819
14044	0100007737		RJ	LIST2L		COMPASS	7820
						COMPASS	7821
						COMPASS	7822
		*		DECODE ERROR COUNT FOR LISTINGS AND DISPLAY.		COMPASS	7823
						COMPASS	7824
14045	5110003120		SA1	IDNAM		CMP11	5
	5120003600		SA2	DKNAM		CMP11	6
14046	13621		BX6	X2-X1		CMP11	7
	0306014050		ZR	X6,ZEND40	IF IDNAM = DKNAM	CMP042	227
14047	0100005351		RJ	DIM	DISPLAY IDENT MESSAGE	CMP11	11
14050	5110003150	ZEND40	SA1	WECNT		CMP042	228
	0301014061		ZR	X1,ZEND50	IF NO WARNING ERRORS	CMP042	229
14051	0100005270		RJ	CONDEC	CONVERT TO DECIMAL	COMPASS	7827
14052	5160014222		SA6	ZMSG		CMP042	230
	6276222243		SB7	X6-3R 1		CMP042	231
14053	5110003226		SA1	ASMM+1		COMPASS	7836
	5120012164		SA2	=H* WARNING M*		COMPASS	7837
14054	5130012165		SA3	=H*ESSAGE IN ESSAGES IN*		COMPASS	7838
	10622		BX6	X2		COMPASS	7839
	54661		SA6	A6+B1		CMP042	232
14055	0470014056	+	ZR	B7,*+1	IF 1 ERROR	COMPASS	7842
	54331		SA3	A3+B1		COMPASS	7843
14056	22703	+	LX7	X3		CMP042	233
	10611		BX6	X1		CMP042	234
	54761		SA7	A6+B1		COMPASS	7848
	54671		SA6	A7+B1		COMPASS	7849
14057	7110014222		JOBMSG	ZMSG,R		CMP042	235

14061	5110003147	ZEND50	SA1	ERCNT		CMP042	236
	0301014075		ZR	X1,ZEND60	IF NO FATAL ERRORS	CMP042	237
14062	0100005270		RJ	CONDEC	CONVERT TO DECIMAL	COMPASS	7853
14063	5160003673		SA6	LINE		COMPASS	7854
	6276222243		SB7	X6-3R 1		COMPASS	7855
14064	5120012167		SA2	=H+ ERRORS IN+		COMPASS	7856
	5110003120		SA1	IDNAM		COMPASS	7857
14065	0570014066	+	NZ	B7,*+1		COMPASS	7858
	5120012170		SA2	=H+ ERROR IN+		COMPASS	7859
14066	10722		BX7	X2		COMPASS	7860
	5160014222		SA6	ZMSG		COMPASS	7861
	54761		SA7	A6+B1		COMPASS	7862
14067	5170003674		SA7	LINE+1		COMPASS	7863
	0100006262		RJ	LJUST		COMPASS	7864
14070	20666		LX6	54		COMPASS	7865
	5160003675		SA6	LINE+2		COMPASS	7866
14071	5110003226		SA1	ASMM+1		COMPASS	7869
	10611		BX6	X1		COMPASS	7870
14072	5160014224		SA6	ZMSG+2		COMPASS	7871
	7110014222		MESSAGE	ZMSG,,R		COMPASS	7872
14074	0100007714		RJ	LISTERF		COMPASS	7873
						COMPASS	7874
		*		PRINT ERROR DIRECTORY.		COMPASS	7875
						COMPASS	7876
14075	0100010014	ZEND60	RJ	PET	PROCESS ERROR TABLE	CMP042	238
14076	5110003474		SA1	L.ERRTAB		COMPASS	7878
	0301014166		ZR	X1,ZEND90		CMP042	239
14077	5110012171		SA1	=1H	SET UP SUBTITLE	COMPASS	7880
	7120003610		SX2	SUBTIT		COMPASS	7881
14100	7130003620		SX3	SUBTIT+8		COMPASS	7882
	0100005600		RJ	PRESET		COMPASS	7883
14101	5110003602		SA1	LPCNT	CAUSE PAGE EJECT	COMPASS	7884
	5120003073		SA2	PSIZE		COMPASS	7885
14102	36712		IX7	X1+X2		COMPASS	7886
	54710		SA7	A1		COMPASS	7887
	5110012172		SA1	=H*	ERROR DIRECTORY.*	COMPASS	7888
14103	54211		SA2	A1+B1		COMPASS	7889
	10611		BX6	X1		COMPASS	7890
	22702		LX7	X2		COMPASS	7891
14104	5160003610		SA6	SUBTIT		COMPASS	7892
	54761		SA7	A6+B1		COMPASS	7893
	54121		SA1	A2+B1		COMPASS	7894
14105	10611		BX6	X1		COMPASS	7895
	54671		SA6	A7+B1		COMPASS	7896
	5120003073		SA2	PSIZE		CPSA208	25
14106	0312014114		NZ	X2,ZEND61	IF PAGE EJECT NOT SUPPRESSED	CPSA208	26
	7100000002		SX0	2	ELSE PRINT BLANK LINES	CPSA208	27
14107	0100007505		RJ	LBL		CPSA208	28
14110	5110003602		SA1	LPCNT	CHECK FOR END OF PAGE	CPSA208	29
	7100000002		SX0	2		CPSA208	30
14111	5120000123		SA2	CP.PS		CPSA208	31
	36610		IX6	X1+X0	INCREMENT LINE COUNT	CPSA208	32
	37262		IX2	X6-X2		CPSA208	33
14112	54610		SA6	A1		CPSA208	34
	0322014114		PL	X2,ZEND61		CPSA208	35
14113	0100007575		RJ	LHDS	AND PRINT SUBTITLE LINE	CPSA208	36
14114		ZEND61	BSS	0		CPSA208	37

14114	5110003435		SA1	O.ERRTAB	SORT THE ERROR TABLE	COMPASS	7897
	5120003474		SA2	L.ERRTAB		COMPASS	7898
14115	43074		MX0	60		COMPASS	7899
	0100026240		RJ	DSORT		COMPASS	7900
14116	43600		MX6	0		COMPASS	7901
	5160004066		SA6	P2TEMP	INDEX TO ERRTAB	COMPASS	7902
14117	5110012175	ZEND64	SA1	=10HTYPE	ERROR	CMP042	240
	43066		MX0	54		COMPASS	7904
	15610		BX6	-X0*X1		COMPASS	7905
14120	6170000011		SB7	9		COMPASS	7906
	5160003654		SA6	OCTAL+25		COMPASS	7907
14121	67771	+	SB7	B7-B1		COMPASS	7908
	21106		AX1	6		COMPASS	7909
	15610		BX6	-X0*X1		COMPASS	7910
	55661		SA6	A6-B1		COMPASS	7911
14122	0570014121		NZ	B7,*-1		COMPASS	7912
	5110004066		SA1	P2TEMP		COMPASS	7913
14123	5120003435		SA2	O.ERRTAB		COMPASS	7914
	36012		IX0	X1+X2		COMPASS	7915
	53100		SA1	X0	ERRTAB ENTRY	COMPASS	7916
14124	10711		BX7	X1		COMPASS	7917
	21136		AX1	30	ISOLATE ERROR TYPE	COMPASS	7918
	10411		BX4	X1		COMPASS	7919
14125	5221004072		SA2	X1+ERRLETS		COMPASS	7920
	10622		BX6	X2		COMPASS	7921
	20102		LX1	2		COMPASS	7922
14126	36014		IX0	X1+X4		COMPASS	7923
	5170004070		SA7	P2TEMPB	ERROR TYPE	COMPASS	7924
14127	5160003641		SA6	OCTAL+14		COMPASS	7925
	5220004117		SA2	X0+ERDIR	FETCH COMMENTS	COMPASS	7926
14130	54321		SA3	A2+B1		COMPASS	7927
	10622		BX6	X2		COMPASS	7928
	22703		LX7	X3		COMPASS	7929
	54231		SA2	A3+B1		COMPASS	7930
14131	54421		SA4	A2+B1		COMPASS	7931
	54141		SA1	A4+B1		COMPASS	7932
	5160003673		SA6	LINE		COMPASS	7933
14132	54761		SA7	A6+B1		COMPASS	7934
	10622		BX6	X2		COMPASS	7935
	22704		LX7	X4		COMPASS	7936
	54671		SA6	A7+B1		COMPASS	7937
14133	54761		SA7	A6+B1		COMPASS	7938
	10611		BX6	X1		COMPASS	7939
	54671		SA6	A7+B1		COMPASS	7940
14134	0100007714		RJ	LISTERF		COMPASS	7941
14135	5110012177		SA1	1+=20H	OCCURRED ON PAGES	COMPASS	7942
	43066		MX0	54		COMPASS	7943
	66210		SB2	B1		COMPASS	7944
14136	7160000055		SX6	1R		COMPASS	7945
	5160003671		SA6	OCTAL+38		COMPASS	7946
14137	15610	ZEND68	BX6	-X0*X1		CMP042	241
	6170000011		SB7	9		COMPASS	7948
	55661		SA6	A6-B1		COMPASS	7949
14140	21106	+	AX1	6		COMPASS	7950
	15610		BX6	-X0*X1		COMPASS	7951
	67771		SB7	B7-B1		COMPASS	7952
	55661		SA6	A6-B1		COMPASS	7953

1412THE

14141	0570014140		NZ	B7,*-1		COMPASS	7954
	67221		SB2	B2-B1		COMPASS	7955
	55111		SA1	A1-B1		COMPASS	7956
14142	0620014137		PL	B2,ZEND68		CMP042	242
	43600		MX6	0		COMPASS	7958
14143	5160004067		SA6	P2TEMPA	ELEMENT COUNT	COMPASS	7959
						COMPASS	7960
14144	5110004066	ZEND70	SA1	P2TEMP	TABLE INDEX	CMP042	243
	54211		SA2	A1+B1	ELEMENT COUNT	COMPASS	7962
	54321		SA3	A2+B1	OLD ENTRY	COMPASS	7963
14145	5140003435		SA4	0.ERRTAB		COMPASS	7964
	36014		IX0	X1+X4		COMPASS	7965
	73611		SX6	B1+X1		COMPASS	7966
14146	53400		SA4	X0	FETCH ENTRY	COMPASS	7967
	13743		BX7	X4-X3		COMPASS	7968
	54610		SA6	A1		COMPASS	7969
	21736		AX7	30		COMPASS	7970
14147	0317014160		NZ	X7,ZEND80	IF END OF PAGE LIST FOR THIS ERROR	CMP042	244
	5130003474		SA3	L.ERRTAB		COMPASS	7972
14150	37736		IX7	X3-X6		COMPASS	7973
	0337014161		MI	X7,ZEND82	IF END OF TABLE	CMP042	245
	73640		SX6	X4		COMPASS	7975
14151	7272777766		SX7	X2-9		COMPASS	7976
	5160004071		SA6	P2TEMPC		COMPASS	7977
14152	0317014154		NZ	X7,ZEND75	IF LINE NOT FULL	CMP042	246
	54720		SA7	A2		COMPASS	7979
14153	0100007732		RJ	LISTL		COMPASS	7980
14154	5110004071	ZEND75	SA1	P2TEMPC		CMP042	247
	0100005270		RJ	CONDEC		COMPASS	7982
14155	20606		LX6	6		COMPASS	7983
	76010		SX0	B1		COMPASS	7984
	5120004067		SA2	P2TEMPA		COMPASS	7985
14156	73721		SX7	X2+B1		COMPASS	7986
	36660		IX6	X6+X0		COMPASS	7987
	5262003673		SA6	X2+LINE		COMPASS	7988
14157	54720		SA7	A2		COMPASS	7989
	0400014144		EQ	ZEND70		CMP042	248
						CMP042	249
14160	10611	ZEND80	BX6	X1	RESET LOOP COUNTER	CMP042	250
	54660		SA6	A6		COMPASS	7992
14161	5110004067	ZEND82	SA1	P2TEMPA		CMP042	251
	5221003672		SA2	X1+LINE-1		COMPASS	7994
14162	76010		SX0	B1		COMPASS	7995
	37620		IX6	X2-X0		COMPASS	7996
	54620		SA6	A2		COMPASS	7997
14163	0100007737		RJ	LIST2L		COMPASS	7998
14164	5110004066		SA1	P2TEMP		COMPASS	7999
	5120003474		SA2	L.ERRTAB		COMPASS	8000
14165	37612		IX6	X1-X2		CMP042	252
	0336014117		MI	X6,ZEND64	IF NOT END OF TABLE	CMP042	253
	54620		SA6	A2		CMP042	254
						COMPASS	8031
		*		PROCESS REFERENCE TABLE.		COMPASS	8032
						COMPASS	8033
14166	0100010036	ZEND90	RJ	PRT	PROCESS REFERENCE TABLE	CMP042	255
						CMP30	2826
		*		MAINTAIN LISTING OUTPUT PAGE PARITY.		CMP30	2827

14167	43652		MX6	42		CMP30	2828
	5110000231		SA1	E		CPSA142	115
	11161		BX1	X6*X1		CPSA142	116
14170	0301014175		ZR	X1,ZEND92	IF NO ERROR LIST	CPSA142	117
	5110000120		SA1	CP.EPAG		CPSA142	118
14171	43602		MX6	2		CPSA142	119
	11661		BX6	X6*X1	SAVE ERROR PAGE PROPAGATION FLAG	CPS236	62
	5120003217		SA2	EPCNT		CPSA142	121
14172	12662		BX6	X6+X2	INSERT ERROR PAGE COUNT FOR THIS SUBROUTINE	CPSA142	122
	0302014173		ZR	X2,ZEND91	IF ERROR PAGE COUNT ZR DONT MODIFY CP.EPAG	CPSA142	123
	54610		SA6	A1	ELSE MODIFY CP.EPAG	CPSA142	124
14173	5110000117	ZEND91	SA1	CP.PAGE		CPSA142	125
	0321014175		PL	X1,ZEND92	IF PAGE PROPAGATION ON	CPSA142	126
14174	76600		SX6	B0		CPSA142	127
	5160003217		SA6	EPCNT	CLEAR ERROR FILE PAGE COUNT	CPSA142	128
14175	5110000116	ZEND92	SA1	CP.LISTF		CPSA142	129
	0301014216		ZR	X1,ZEND98	IF LONG LIST OFF	CPSA142	130
14176	5110003060	ZEND95	SA1	EOFINP		CPSA142	131
	5120003216		SA2	PGCNT		CMP30	2835
14177	0301014205		ZR	X1,ZEND96	IF NOT END OF SOURCE INPUT	CMP30	2836
	5110000121		SA1	CP.BLF		CMP30	2837
14200	0301014216		ZR	X1,ZEND98	IF BL IS OFF.	CPSA181	20
	20273		LX2	-1		CPSA181	21
	76610		SX6	B1		CMP30	2838
14201	0322014216		PL	X2,ZEND98	IF PAGE COUNT IS EVEN	CMP30	2839
	20201		LX2	1		CMP30	2840
	36626		IX6	X2+X6	ADD ONE TO PAGE COUNT	CMP30	2841
14202	54620		SA6	A2		CMP30	2842
						CMP30	2843
						CMP30	2844
	6160012200		IFEQ	CP#RM,0,2		CMP30	2845
			WRITEW	0,(=2L1),1	WRITE BLANK PAGE	CMP30	2846
			ELSE	1		CMP30	2847
			PUT	0,ZENDA,10		CMP30	2848
						CMP30	2849
14204	0400014216		EQ	ZEND98		CMP30	2850
14205	5110000117	ZEND96	SA1	CP.PAGE		CMP30	2851
	0321014216		PL	X1,ZEND98	IF PROPAGATING PAGE NUMBERS	CMP30	2852
14206	20273		LX2	-1		CMP30	2853
	76600		SX6	B0	CLEAR PAGE COUNT	CMP30	2854
	54620		SA6	A2		CMP30	2855
14207	0322014213		PL	X2,ZEND97	IF PAGE COUNT WAS EVEN	CMP30	2856
	5110000121		SA1	CP.BLF		CMP30	2857
14210	0301014213		ZR	X1,ZEND97	IF PAGE PARITY SUPPRESSED	CPSA235	6
						CPSA235	7
						CMP30	2858
	6160012200		IFEQ	CP#RM,0,2		CMP30	2859
			WRITEW	0,(=2L1),1	WRITE BLANK PAGE	CMP30	2860
			ELSE	1		CMP30	2861
			PUT	0,ZENDA,10		CMP30	2862
						CMP30	2863
14213	5110000231	ZEND97	SA1	E		CMP30	2864
	0301014216		ZR	X1,ZEND98	IF NO ERROR FILE	CMP30	2865
14214	7120000221		WEOR	0		CMP30	2866
						CMP19	109
		*		FINAL WRAPUP.		CMP19	110
						CMP19	111
14216	43600	ZEND98	MX6	0		CMP30	2866

	5160003447			SA6	L.SYMTAB	EMPTY ASSEMBLY TABLES	COMPASS	8055
14217	6170000027			SB7	NTABLES-USETAB-1		CP096A	360
	5160003450			SA6	L.USETAB		CP096A	361
14220	67771		+	SB7	B7-B1		COMPASS	8056
	54661			SA6	A6+B1		COMPASS	8057
	0570014220			NZ	B7,*		COMPASS	8058
14221	0400010404			EQ	EXITP2	EXIT FROM PASS2	COMPASS	8066
							COMPASS	8067
				IFNE	CP#RM,0,2		CMP30	2867
			ZENDA	LIT	1H1		CMP30	2868
			ZENDB	DATA	C+ERRORS IN ASSEMBLY+		CMP30	2869
14222		4	ZMSG	BSS	4	ROOM FOR ERROR MESSAGE	COMPASS	8068
14226		1	ZENDC	BSS	1	PPTYPE	CPS0343	19
			***		ENDD - END DUPLICATION.		COMPASS	8070
			*				COMPASS	8071
			*				COMPASS	8072
			*NAME	ENDD			COMPASS	8073
			*		TERMINATES RANGE OF (DUP) IF SECOND ADDRESS EXPRESSION WAS		COMPASS	8074
			*		OMITTED IN PRECEDING (DUP). (NAME) IS AN INSTRUCTION		COMPASS	8075
			*		BRACKET NAME.		COMPASS	8076
							COMPASS	8077
							COMPASS	8078
				QUAL	PASS1		COMPASS	8079
	10653	ENDD		EQU	CTL300		COMPASS	8080
			**		ENDD - END DUPLICATION.		COMPASS	8082
							COMPASS	8083
							COMPASS	8084
				QUAL	PASS2		COMPASS	8085
	12126	ENDD		EQU	ZLIST		COMPASS	8086
			***		ENDIF - CONDITIONAL ASSEMBLY TERMINATOR.		COMPASS	8088
			*				COMPASS	8089
			*				COMPASS	8090
			*NAME	ENDIF			COMPASS	8091
			*		(NAME) IS THE INSTRUCTION BRACKET NAME OR BLANK.		COMPASS	8092
			*		(ENDIF) IS IGNORED IF IT APPEARS WITHIN A LINE COUNT		COMPASS	8093
			*		CONTROLLED RANGE.		COMPASS	8094
							COMPASS	8095
							COMPASS	8096
				QUAL	PASS1		COMPASS	8097
14227	5110003556		ENDIF	SA1	IFCNT		COMPASS	8098
	5120003102			SA2	LOCSYM		COMPASS	8099
14230	5130003557			SA3	IFNAME	BRACKET NAME	COMPASS	8100
	0321010653			PL	X1,CTL300		COMPASS	8101
14231	37423			IX4	X2-X3	COMPARE LOCSYM WITH IF LABEL	COMPASS	8102
	0304014233			ZR	X4,ENDIF1	JUMP ON A MATCH	COMPASS	8103

** ENDX - END OF COMMON DECK TEXT.

COMPASS 8146
COMPASS 8147
COMPASS 8148
COMPASS 8149
COMPASS 8150

12126

ENDX

QUAL
EQUPASS2
ZLIST

*** ENTRY - ENTRY POINTS.

COMPASS 8152
COMPASS 8153
COMPASS 8154* ENTRY SYM1,SYM2,...,SYMN
* DECLARES ENTRY POINTS. MAXIMUM OF 7 CHARACTERS PER SYMBOL
* THE FIRST CHARACTER MUST BE A CHARACTER FROM A TO Z.COMPASS 8155
COMPASS 8156
COMPASS 8157

QUAL

PASS1

14241 5110003114

ENTRY

SA1

MACHINE

ERROR IF PP CODING

COMPASS 8161

0311010647

NZ

X1,CTL80

14242 43600

MX6

0

COMPASS 8162
CMP30 2870

5160003561

ENTRY1

SA6

P1TEMP

CLEAR CONDITIONAL FLAG

CMP30 2871

14243 5110003145

SA1

CHAR

COMPASS 8163

6271777722

SB7

X1-1R

COMPASS 8164

14244 0470010614

ZR

B7,CTL70

STOP ON BLANK

CMP1 3

0100006036

RJ

SCLIST

FETCH NEXT ITEM

COMPASS 8167

14245 0306014243

ZR

X6,ENTRY1

IGNORE EMPTY FIELD

COMPASS 8168

0100006223

RJ

VFYLINK

CHECK SYMBOL FORMAT

COMPASS 8169

14246 0307014251

ZR

X7,ENTRY2

COMPASS 8170

76610

SX6

B1

COMPASS 8171

14247 5160003322

SA6

AERR

NOTE BAD SYMBOL

COMPASS 8172

5160003345

SA6

EFLG

COMPASS 8173

14250 0400014243

EQ

ENTRY1

GO BACK FOR MORE

COMPASS 8174

14251 5110003415

ENTRY2

SA1

O.EPTAB

SEARCH EPTAB FOR THIS ENTRY

COMPASS 8175

5120003454

SA2

L.EPTAB

COMPASS 8176

14252 5130003561

SA3

P1TEMP

CMP30 2872

6272777776

SB7

X2-1

COMPASS 8177

14253 0302014256

ZR

X2,ENTRY4

IF TABLE EMPTY

COMPASS 8178

43001

MX0

1

CMP30 2873

14254 53517

ENTRY3

SA5

X1+B7

COMPASS 8179

67771

SB7

B7-B1

COMPASS 8180

15450

BX4

-X0*X5

CMP30 2874

37264

IX2

X6-X4

CMP30 2875

14255 0302014261

ZR

X2,ENTRY5

IF DUPLICATE NAME

CMP30 2876

0670014254

PL

B7,ENTRY3

COMPASS 8183

14256 12163

ENTRY4

BX1

X6+X3

CMP30 2877

5100000013

ADDWORD

EPTAB

ADD ENTRY TO EPTAB

COMPASS 8185

14260 0400014243

EQ

ENTRY1

CMP30 2878

14261 36163

ENTRY5

IX1

X6+X3

CLEAR CONDITIONAL FLAG IF SYMBOL IS

CMP30 2879

11615

BX6

X1*X5

DECLARED BY BOTH *ENTRY* AND *ENTRYC*

CMP30 2880

54650

SA6

A5

CMP30 2881

14262 0400014243

EQ

ENTRY1

AND RETURN FOR MORE ENTRY POINTS

COMPASS 8186

** ENTRY - ENTRY POINTS.

COMPASS 8188

							COMPASS	8189	
							COMPASS	8190	
							COMPASS	8191	
1	14263	5110003345	ENTRY	SA1	EFLG		COMPASS	8192	1
2		0311012126		NZ	X1,ZLIST	IF ERROR IN PASS 1	COMPASS	8193	2
3	14264	7160000005		SX6	1RE		COMPASS	8194	3
4		5160004055		SA6	REFLET		COMPASS	8195	4
5	14265	43100		MX1	0	SET BLANK QUALIFIER	CMP19	113	5
6		0100006151		RJ	SQV		CMP19	114	6
7	14266	5110003145	ENT1	SA1	CHAR		COMPASS	8196	7
8		6271777722		SB7	X1-1R		COMPASS	8197	8
9	14267	0470014301		ZR	B7,ENT6	STOP ON BLANK	COMPASS	8198	9
10		0100006036		RJ	SCLIST	FETCH NEXT ITEM	COMPASS	8199	10
11	14270	0306014266		ZR	X6,ENT1	IGNORE EMPTY FIELD	CPS010	50	11
12		43700		MX7	0		COMPASS	8201	12
13		10166		BX1	X6		COMPASS	8202	13
14	14271	5170006302		SA7	EXERR		COMPASS	8203	14
15		0100025263		RJ	ZTLUSYM	LOOK UP SYMBOL	COMPASS	8204	15
16	14272	5110006275		SA1	ELVAL	SET U-ERROR IF EXTERNAL	COMPASS	8207	16
17		5120006277		SA2	ELEXT		COMPASS	8208	17
18	14273	76610		SX6	B1		COMPASS	8209	18
19		5130006302		SA3	EXERR	CHECK EXPRESSION ERROR	COMPASS	8210	19
20		12232		BX2	X3+X2		COMPASS	8211	20
21	14274	5140006276		SA4	ELREL		CPS010	51	21
22		0312014277		NZ	X2,ENT4	IF BAD ENTRY POINT	COMPASS	8212	22
23	14275	7274777375		SX7	X4-402B		CPS251	5	23
24		0337014266		MI	X7,ENT1	IF NOT NEGATIVE COMMON RELOCATION	CPS251	6	24
25	14276	5160003332	ENT3	SA6	NERR		CMP30	2886	25
26		0400014300		EQ	ENT5		COMPASS	8216	26
27	14277	5160003327	ENT4	SA6	UERR		COMPASS	8217	27
28	14300	5160003345	ENT5	SA6	EFLG		COMPASS	8218	28
29		0400014266		EQ	ENT1	LOOP	COMPASS	8219	29
30	14301	5110003113	ENT6	SA1	QVAL+1	RESTORE QUAL VALUE	CMP19	115	30
31		7160000055		SX6	1R		CMP19	116	31
32	14302	10711		BX7	X1		CMP19	117	32
33		5160004055		SA6	REFLET		COMPASS	8221	33
34		55711		SA7	A1-B1		CMP19	118	34
35	14303	0400012126		EQ	ZLIST		COMPASS	8222	35
36									36
37									37
38									38
39									39
40			***	ENTRYC	-	CONDITIONAL ENTRY POINTS.	CMP30	2888	40
41			*				CMP30	2889	41
42			*				CMP30	2890	42
43			*	ENTRYC	SYM1,SYM2,...,SYMN		CMP30	2891	43
44			*	DECLARES	CONDITIONAL ENTRY POINTS. MAXIMUM OF 7 CHARACTERS		CMP30	2892	44
45			*	PER SYMBOL. FIRST CHARACTER MUST BE A LETTER FROM A TO Z.			CMP30	2893	45
46			*	IN A RELOCATABLE ASSEMBLY, IF THE VALUE OF A CONDITIONAL			CMP30	2894	46
47			*	ENTRY POINT IS RELATIVE TO A COMMON BLOCK, LOADER IGNORES			CMP30	2895	47
48			*	THE DECLARATION IF THAT COMMON BLOCK WAS FIRST DECLARED BY			CMP30	2896	48
49			*	AN EARLIER SUBPROGRAM. IF SYMBOL VALUE IS ABSOLUTE OR			CMP30	2897	49
50			*	LOCAL, (ENTRYC) IS THE SAME AS (ENTRY).			CMP30	2898	50
51							CMP30	2899	51
52							CMP30	2900	52
53				QUAL	PASS1		CMP30	2901	53
54	14304	5110003130	ENTRYC	SA1	ABSFG		CMP30	2902	54
55									55
56									56
57									57
58									58
59									59
60									60

14305	43601	0311014241	NZ	X1,ENTRY	IF ABSOLUTE ASSEMBLY	CMP30	2903
			MX6	1		CMP30	2904
		5160003561	SA6	P1TEMP	SET CONDITIONAL FLAG	CMP30	2905
14306	0400014243		EQ	ENTRY1		CMP30	2906

 ** ENTRYC - CONDITIONAL ENTRY POINTS.

CMP30	2908
CMP30	2909
CMP30	2910
CMP30	2911
CMP30	2912

14263	ENTRYC	QUAL	PASS2
		EQ	ENTRY

 *** EQU - SYMBOL DEFINITION.

COMPASS	8224
COMPASS	8225
COMPASS	8226
COMPASS	8227
COMPASS	8228
COMPASS	8229
COMPASS	8230

*
*
*SYM EQU EXP
* (SYM) IS ASSIGNED THE VALUE OF THE ADDRESS EXPRESSION.

14307	5110003317		EQU	QUAL	PASS1
		22611		SA1	LIBFLG
				LX6	X1,B1
14310	0400016634		EQ		EQU1

COMPASS	8231
COMPASS	8232
COMPASS	8233
COMPASS	8234

 ** EQU - SYMBOL DEFINITION.

COMPASS	8236
COMPASS	8237
COMPASS	8238
COMPASS	8239
COMPASS	8240
COMPASS	8241

14311	43600		EQU	QUAL	PASS2
		0400016657		MX6	0
			EQ		SETEQU

 *** ERR - FORCED ERROR.

COMPASS	8243
COMPASS	8244
COMPASS	8245
COMPASS	8246
COMPASS	8247
COMPASS	8248

*
*
*TYPE ERR
* AN ERROR OF TYPE (TYPE) IS PRODUCED. IF (TYPE) IS MISSING
* OR NOT VALID, A *P* ERROR IS PRODUCED.

10614	ERR	QUAL	PASS1
		EQ	CTL70

COMPASS	8249
COMPASS	8250
COMPASS	8251
COMPASS	8252

 ** ERR - FORCED ERROR.

COMPASS	8254
---------	------

				QUAL	PASS2		COMPASS	8255
							COMPASS	8256
							COMPASS	8257
1	14312	5110003102	ERR	SA1	LOCSYM	CHECK ERROR TYPE	COMPASS	8258
2		6170000025		SB7	LEFLG		COMPASS	8259
3	14313	5120004072		SA2	ERRLETS		COMPASS	8260
4		66600		SB6	B0		COMPASS	8261
5		76710		SX7	B1		COMPASS	8262
6	14314	13612	ERR1	BX6	X1-X2		COMPASS	8263
7		0306014317		ZR	X6,ERR2	IF ERROR TYPE FOUND	COMPASS	8264
8		66661		SB6	B6+B1		COMPASS	8265
9	14315	54221		SA2	A2+B1		COMPASS	8266
10		0567014314		NE	B6,B7,ERR1	LOOP	COMPASS	8267
11	14316	6160000011		SB6	PERR-ERFLAGS		COMPASS	8268
12	14317	5176003320	ERR2	SA7	ERFLAGS+B6	SET ERROR	COMPASS	8269
13		5170003345		SA7	EFLG		COMPASS	8270
14	14320	0400012126		EQ	ZLIST		COMPASS	8271
15								
16								
17								
18								
19			***	ERRXX - CONDITIONAL ERROR.			COMPASS	8273
20			*				COMPASS	8274
21			*				COMPASS	8275
22			*TYPE	ERRXX	AEXP		COMPASS	8276
23			*	TESTS AEXP ACCORDING TO MNEMONIC TEST *XX*. IF (TYPE) IS			COMPASS	8277
24			*	BLANK, A *P* ERROR IS GENERATED IF THE TEST IS TRUE. IF			COMPASS	8278
25			*	(TYPE) IS NOT BLANK, A (TYPE) ERROR IS GENERATED.			COMPASS	8279
26			*				COMPASS	8280
27			*	XX	TEST		COMPASS	8281
28			*				COMPASS	8282
29			*	MI	MINUS		CMP30	2913
30			*	NG	NEGATIVE		COMPASS	8283
31			*	NZ	NOT-ZERO		COMPASS	8284
32			*	PL	POSITIVE		COMPASS	8285
33			*	ZR	ZERO		COMPASS	8286
34							COMPASS	8287
35							COMPASS	8288
36				QUAL	PASS1		COMPASS	8289
37		10614	ERRMI	EQU	CTL70		CMP30	2914
38		10614	ERRNG	EQU	CTL70		COMPASS	8290
39		10614	ERRNZ	EQU	CTL70		COMPASS	8291
40		10614	ERRPL	EQU	CTL70		COMPASS	8292
41		10614	ERRZR	EQU	CTL70		COMPASS	8293
42								
43								
44								
45								
46			**	ERRXX - CONDITIONAL ERROR.			COMPASS	8295
47							COMPASS	8296
48							CMP30	2915
49			*TYPE	ERRMI	AEXP		CMP30	2916
50							CMP30	2917
51				QUAL	PASS2		CMP30	2918
52	14321		ERRMI	BSS	0		CMP30	2919
53							COMPASS	8297
54			*TYPE	ERRNG	AEXP		COMPASS	8298
55								
56								
57								
58								
59								
60								

COMPASS	8299
COMPASS	8300
COMPASS	8301
COMPASS	8302
COMPASS	8303
COMPASS	8304
COMPASS	8305
COMPASS	8306
COMPASS	8307
COMPASS	8308
COMPASS	8309
COMPASS	8310
COMPASS	8311
COMPASS	8312
COMPASS	8313
COMPASS	8314
COMPASS	8315
COMPASS	8316
COMPASS	8317
COMPASS	8318
COMPASS	8319
COMPASS	8320
COMPASS	8322
COMPASS	8323
COMPASS	8324
COMPASS	8325
COMPASS	8326
COMPASS	8327
COMPASS	8328
COMPASS	8329
COMPASS	8330
COMPASS	8331
COMPASS	8332
COMPASS	8333
COMPASS	8336
COMPASS	8337
COMPASS	8338
COMPASS	8339
COMPASS	8340
COMPASS	8341
COMPASS	8342
COMPASS	8343
COMPASS	8344
COMPASS	8345

								COMPASS	8352	
								COMPASS	8353	
								COMPASS	8354	
1	14335	5110003130		EXT	SA1	ABSFG		COMPASS	8355	1
2		0311010647			NZ	X1,CTL80	COMPLAIN IF ABSOLUTE CODING	COMPASS	8356	2
3	14336	43100			MX1	0	SET BLANK QUALIFIER	CMP19	119	3
4		0100006151			RJ	SQV		CMP19	120	4
5	14337	5110003145		EXT1	SA1	CHAR		COMPASS	8357	5
6		6271777722			SB7	X1-1R	QUIT ON BLANK	COMPASS	8358	6
7	14340	0470014371			ZR	B7,EXT5		CMP19	121	7
8		0100006036			RJ	SCLIST		COMPASS	8361	8
9	14341	0306014337			ZR	X6,EXT1	IGNORE EMPTY FIELD	COMPASS	8362	9
10		0100006223			RJ	VFYLINK		COMPASS	8363	10
11	14342	0307014345			ZR	X7,EXT2		COMPASS	8364	11
12		76610			SX6	B1		COMPASS	8365	12
13	14343	5160003322			SA6	AERR	COMPLAIN OF TOO LONG AN EXT NAME	COMPASS	8366	13
14		5160003345			SA6	EFLG		COMPASS	8367	14
15	14344	0400014337			EQ	EXT1		COMPASS	8368	15
16	14345	5160003561		EXT2	SA6	P1TEMP		COMPASS	8369	16
17		0100006200			RJ	TLUSYMT	LOOK UP SYMBOL	COMPASS	8371	17
18	14346	20234			LX2	59-31	CHECK IF EXTERNAL	COMPASS	8372	18
19		0332014360			NG	X2,EXT4	JUMP IF ALREADY EXTERNAL	COMPASS	8373	19
20		20201			LX2	1		COMPASS	8374	20
21	14347	0332014365			NG	X2,EXT3	JUMP IF CURRENTLY DEFINED	COMPASS	8375	21
22		5120003456			SA2	L.EXTAB		CPS0253	4	22
23	14350	6272777000			SB7	X2-777B		CPS0253	5	23
24		0670014367			PL	B7,EXT4A	IF EXCEEDS 511 EXTERNALS	CPS0253	6	24
25	14351	76110			MANAGE	EXTAB,1	EXTER INTO EXTAB	COMPASS	8376	25
26	14353	6273777776			SB7	X3-1		COMPASS	8377	26
27		5110003561			SA1	P1TEMP		COMPASS	8378	27
28	14354	10611			BX6	X1		COMPASS	8379	28
29		53627			SA6	X2+B7		COMPASS	8380	29
30		10433			BX4	X3	EXTERNAL SYMBOL NUMBER	COMPASS	8381	30
31		76500			SX5	B0		COMPASS	8382	31
32	14355	10166			BX1	X6		COMPASS	8383	32
33		43200			MX2	0		COMPASS	8384	33
34		76300			SX3	B0		COMPASS	8385	34
35	14356	0100023067			RJ	YDEFSYM	DEFINE SYMBOL	COMPASS	8386	35
36	14357	0400014337			EQ	EXT1	AND GO BACK FOR MORE	COMPASS	8387	36
37	14360	53430		EXT4	RX4	X3	KNOWN EXTERNAL, FETCH EQUIVALENT	CP096A	362	37
38		43047			MX0	39		COMPASS	8389	38
39		15240			BX2	-X0*X4		COMPASS	8390	39
40	14361	0312014365			NZ	X2,EXT3		COMPASS	8391	40
41		43063			MX0	51		COMPASS	8392	41
42		21425			AX4	21		COMPASS	8393	42
43	14362	15240			BX2	-X0*X4	EXTRACT EXTERNAL NUMBER	COMPASS	8394	43
44		5130003417			SA3	0.EXTAB		COMPASS	8395	44
45	14363	6273777776			SB7	X3-1		COMPASS	8396	45
46		53427			SA4	X2+B7		COMPASS	8397	46
47		13341			BX3	X4-X1		COMPASS	8398	47
48	14364	0303014337			ZR	X3,EXT1	ERROR IF NOT PRIMITIVE EXTERNAL	COMPASS	8399	48
49	14365	76610		EXT3	SX6	B1	COMPLAIN OF DUPLICATE SYMBOL	COMPASS	8400	49
50		5160003345			SA6	EFLG		COMPASS	8401	50
51	14366	5160003323		+	SA6	DERR		COMPASS	8402	51
52		0400014337			EQ	EXT1		COMPASS	8403	52
53								CPS0253	7	53
54	14367	76610		EXT4A	SX6	B1		CPS0253	8	54
55										55
56										56
57										57
58										58
59										59
60										60

		5160003345		SA6	EFLG		CPS0253	9
14370	5160003326			SA6	FERR		CPS0253	10
14371	5110003113		EXT5	SA1	QVAL+1	RESTORE QUAL VALUE	CMP19	122
		10611		BX6	X1		CMP19	123
		55611		SA6	A1-B1		CMP19	124
14372	0400010653			EQ	CTL300		CMP19	125
		**	EXT - EXTERNAL NAMES.					COMPASS 8405
							COMPASS	8406
							COMPASS	8407
							COMPASS	8408
14373	43100		EXT	QUAL	PASS2		CPS003	1
		0100006151		MX1	0			
14374	5110003145		EXT1	RJ	SQV	SET BLANK QUALIFIER	CMP041	11
		6271777722		SA1	CHAR		CMP041	12
				SB7	X1-1R		CMP041	13
14375	0470014403			ZR	B7,EXT2	STOP ON BLANK	CMP041	14
		0100006036		RJ	SCLIST	FETCH NEXT ITEM	CMP041	15
14376	0306014374			ZR	X6,EXT1	IGNORE EMPTY FIELD	CMP041	16
		10166		BX1	X6		CPS003	2
14377	0100006200			RJ	TLUSYMT	LOOK UP SYMBOL	CMP041	17
14400	0303014374			ZR	X3,EXT1	IF NOT FOUND	CPS003	3
		7110000030		SX1	1RX		CMP041	18
14401	0100023545			RJ	ENTREF	ENTER REFERENCE TABLE	CMP041	19
14402	0400014374			EQ	EXT1	LOOP	CMP041	20
14403	5110003113		EXT2	SA1	QVAL+1	RESTORE QUAL VALUE	CMP041	21
		10711		BX7	X1		CMP041	22
		55711		SA7	A1-B1		CMP041	23
14404	0400012126			EQ	ZLIST		CMP041	24
		***	HERE - ASSEMBLE RMT CODE.					COMPASS 8411
		*					COMPASS	8412
		*					COMPASS	8413
		*NAME	HERE				COMPASS	8414
		*	SAVED REMOTE INSTRUCTIONS ARE ASSEMBLED AT THIS POINT.					COMPASS 8415
		*	(NAME) = NAME OF LABELED REMOTE GROUP.					COMPASS 8416
							COMPASS	8417
							COMPASS	8418
				SEG	PSEUDO-OP PROCESSING (F-Q).		CMP30	2921
				QUAL	PASS1		COMPASS	8419
14405	7160000024		HERE	SX6	1RT		COMPASS	8420
		5160026436		SA6	STYPE	SET TERMINATION	COMPASS	8421
14406	76710			SX7	B1		COMPASS	8422
		5170003310		SA7	TXTFLG	SET TEXT DEFINITION FLAG	COMPASS	8423
		43600		MX6	0	PERMIT REPACKING	COMPASS	8424
14407	5160003263			SA6	SQLGN		COMPASS	8425
		0100020105		RJ	CRL	CHECK RECURSION LIMIT	CPS004	5
14410	0100020112			RJ	CWI		COMPASS	8426
14411	5110003465			SA1	L.RASTAB		COMPASS	8427
		10611		BX6	X1		COMPASS	8428
14412	5160003561			SA6	P1TEMP		COMPASS	8429
		5110003102		SA1	LOCSYM		COMPASS	8430

14413	5120003264		SA2	BADLOC		COMPASS	8431
	0301014447		ZR	X1,HEREPK	IF UNLABELED RMT	COMPASS	8432
14414	76610		SX6	B1		COMPASS	8433
	0302014416		ZR	X2,HRE1	IF NO LOCATION ERROR	COMPASS	8434
14415	5160003320		SA6	LERR		COMPASS	8435
	5160003345		SA6	EFLG		COMPASS	8436
14416	5140003425	HRE1	SA4	O.LRMTAB	SEARCH FOR START OF LABELED RMT	COMPASS	8437
	5130003464		SA3	L.LRMTAB		COMPASS	8438
14417	63640		SB6	X4		COMPASS	8439
	63736		SB7	B6+X3		COMPASS	8440
	43014		MX0	12		COMPASS	8441
14420	5110003102		SA1	LOCSYM		COMPASS	8442
14421	0467014445	HRE2	EQ	B6,B7,HRE6	IF END OF LABELED RMT	COMPASS	8443
	56260		SA2	B6		COMPASS	8444
	13621		BX6	X2-X1		COMPASS	8445
14422	66661		SB6	B6+B1		COMPASS	8446
	0316014421		NZ	X6,HRE2	LOOP	COMPASS	8447
	76760		SX7	B6	SEARCH FOR END OF GROUP	COMPASS	8448
14423	0467014426	HRE3	EQ	B6,B7,HRE4	IF END OF LABELED RMT	COMPASS	8449
	56260		SA2	B6		COMPASS	8450
	11602		BX6	X0*X2		COMPASS	8451
14424	66661		SB6	B6+B1		COMPASS	8452
	0302014423		ZR	X2,HRE3	LOOP IF END-OF-LINE	COMPASS	8453
14425	0316014423		NZ	X6,HRE3	LOOP IF NOT NEXT LABEL	COMPASS	8454
	67661		SB6	B6-B1		COMPASS	8455
14426	37674	HRE4	IX6	X7-X4	SET REMOTE INDEX	COMPASS	8456
	5160003562		SA6	P1TEMPA		COMPASS	8457
	76260		SX2	B6	SET LENGTH	COMPASS	8458
14427	37627		IX6	X2-X7		COMPASS	8459
	54661		SA6	A6+B1		COMPASS	8460
	0306014436		ZR	X6,HRE5	IF ZERO LENGTH RMT	COMPASS	8461
14430	73160		MANAGE	RASTAB,X6	TRANSFER TEXT	COMPASS	8462
14432	5110003563		SA1	P1TEMPB		COMPASS	8463
	5140003425		SA4	O.LRMTAB		COMPASS	8464
14433	55511		SA5	A1-B1		COMPASS	8465
	36323		IX3	X2+X3		COMPASS	8466
	37331		IX3	X3-X1		COMPASS	8467
	36245		IX2	X4+X5		COMPASS	8468
14434	0100005515		RJ	MOVE		COMPASS	8469
14435	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042	256
14436	5110003464	HRE5	SA1	L.LRMTAB	DELETE TEXT FROM LRMTAB	COMPASS	8470
	5120003425		SA2	O.LRMTAB		COMPASS	8471
14437	5130003562		SA3	P1TEMPA		COMPASS	8472
	54431		SA4	A3+B1		COMPASS	8473
	76510		SX5	B1		COMPASS	8474
14440	36721		IX7	X2+X1		COMPASS	8475
	36332		IX3	X3+X2		COMPASS	8476
	36234		IX2	X3+X4		COMPASS	8477
	37335		IX3	X3-X5		COMPASS	8478
14441	37623		IX6	X2-X3		COMPASS	8479
	37616		IX6	X1-X6		COMPASS	8480
	37172		IX1	X7-X2		COMPASS	8481
	54610		SA6	A1		COMPASS	8482
14442	0306014445		ZR	X6,HRE6	IF END OF LABELED RMT TABLE	COMPASS	8483
	0301014416		ZR	X1,HRE1	IF NO DATA TO MOVE	COMPASS	8484
14443	0100005515		RJ	MOVE		COMPASS	8485
14444	0400014416		EQ	HRE1	LOOP	COMPASS	8486

14445	7110000024	HRE6	PCARD	RASTAB	PACK TERMINATION CARD	COMPASS	8487
14446	5140003102		SA4	LOCSYM		COMPASS	8488
	0400014461		EQ	HEREPK1		COMPASS	8489
		*		END CARD PROCESSING COMES HERE TO ASSEMBLE ALL WAITING		COMPASS	8490
		*		RMT CODE.		COMPASS	8491
						COMPASS	8492
						COMPASS	8493
14447	7110000022	HEREPK	PCARD	RMTAB	PACK TERMINATION CARD	COMPASS	8494
14450	5110003465		SA1	L.RASTAB		COMPASS	8495
	10611		BX6	X1		COMPASS	8496
14451	5160003561		SA6	P1TEMP		COMPASS	8497
	5110003463		SA1	L.RMTAB		COMPASS	8498
14452	5100000024		MANAGE	RASTAB,X1		COMPASS	8499
14453	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042	257
14454	5120003426		SA2	O.RASTAB		CMP042	258
	5130003465		SA3	L.RASTAB		CMP042	259
14455	5110003463		SA1	L.RMTAB		COMPASS	8500
	36232		IX2	X3+X2		COMPASS	8501
	37321		IX3	X2-X1		COMPASS	8502
14456	5120003424		SA2	O.RMTAB		COMPASS	8503
	43600		MX6	0		COMPASS	8504
	54610		SA6	A1		COMPASS	8505
14457	0100005515		RJ	MOVE		COMPASS	8506
14460	5140012201		SA4	=5R*RMT*		COMPASS	8507
14461	5110003561	HEREPK1	SA1	P1TEMP		COMPASS	8508
	7120000003		SX2	3	TYPE 3	COMPASS	8509
14462	73310		SX3	X1		COMPASS	8510
	43500		MX5	0		COMPASS	8511
	0100021731		RJ	PUSHDOWN		COMPASS	8512
14463	76610		SX6	B1		COMPASS	8513
	5160003316		SA6	RMTFLG		COMPASS	8514
	43700		MX7	0		COMPASS	8515
14464	5170003310		SA7	TXTFLG		COMPASS	8516
	0400010615		EQ	CTL100		COMPASS	8517
		**		HERE - ASSEMBLE RMT CODE.		COMPASS	8519
						COMPASS	8520
						COMPASS	8521
			QUAL	PASS2		COMPASS	8522
	12126	HERE	EQU	ZLIST		COMPASS	8523
		***		IDENT - PROGRAM IDENTIFIER.		COMPASS	8525
		*				COMPASS	8526
		*				COMPASS	8527
		*		IDENT NAME,ORIGIN,ENTRY,L1,L2		COMPASS	8528
		*		IDENT DECLARES THE START OF THE PROGRAM. IF IDENT OCCURS		COMPASS	8529
		*		IN THE MIDDLE OF A PROGRAM, THE ACCUMULATED BINARY		COMPASS	8530
		*		IS WRITTEN OUT AND A NEW BINARY IS STARTED.		COMPASS	8531
		*		(NAME) IS THE NAME OF THE OVERLAY GENERATED.		COMPASS	8532
		*		(ORIGIN) IS THE FIRST WORD ADDRESS OF THE OVERLAY.		COMPASS	8533
		*		FOR A CP ABSOLUTE PROGRAM -		COMPASS	8534

* (ENTRY) SPECIFIES THE ENTRY POINT.
* (L1,L2) IS THE OVERLAY LEVEL NUMBER. (0,0) IS
* ASSUMED FOR THE FIRST OVERLAY AND (1,0) IS
* ASSUMED IF (L1,L2) IS MISSING.

COMPASS 8535
COMPASS 8536
COMPASS 8537
COMPASS 8538
COMPASS 8539
COMPASS 8540
COMPASS 8541
COMPASS 8542
COMPASS 8543
COMPASS 8544
CMP19 126
CMP19 127
COMPASS 8545
COMPASS 8546
COMPASS 8547
COMPASS 8548
COMPASS 8549
COMPASS 8550
CMP030 1
CMP030 2
CMP030 3
CMP030 4
CMP030 5
RSM4159 9
RSM4159 10
CMP30 2922
CMP030 9
CMP30 2923
CMP030 11
CMP030 12
CMP030 13
CMP030 14
CMP030 15
CMP030 16
CMP030 17
COMPASS 8554
COMPASS 8555
COMPASS 8556
COMPASS 8557
COMPASS 8558
COMPASS 8559
COMPASS 8560
COMPASS 8561
CMP030 18
CMP030 19
CMP030 20
CMP030 21
CMP030 22
COMPASS 8562
COMPASS 8563
COMPASS 8564
COMPASS 8565
COMPASS 8566
CPS002 35
COMPASS 8568
COMPASS 8569
COMPASS 8571

			IDENT	QUAL	PASS1		
14465	5110003130			SA1	ABSFG		
	0301010647			ZR	X1,CTL80	IF RELOCATABLE CP CODE	
14466	0100020062			RJ	COB	CLOSE OUT BLOCKS	
14467	43600			MX6	0		
	5160003102			SA6	LOCSYM		
14470	0100020123			RJ	DSL	DEFINE SYMBOL LITERALS	
14471	5110003154			SA1	UI+1	RELOCATE USE TABLE	
	0100022403			RJ	RUT		
14472	10600			BX6	X0	OVERLAY LENGTH	
	20647			LX6	-21	EXTEND SIGN	
	21647			AX6	-21		
14473	5160003561			SA6	P1TEMP		
	5110003105			SA1	ORGCTR+1	RELOCATE ORIGIN	
14474	0311014475		+	NZ	X1,*+1	IF NOT ABSOLUTE BLOCK	
	5110003154			SA1	UI+1		
14475	5120003411			SA2	0.USETAB		
	5130003153			SA3	UI		
14476	36223			IX2	X2+X3	BASE ADDRESS OF BLOCK GROUP	
	20102			LX1	2		
	36312			IX3	X1+X2		
14477	5223777775			SA2	X3-2	BLOCK ORIGIN	
	5110003104			SA1	ORGCTR		
14500	43047			MX0	-21		
	15220			BX2	-X0*X2		
	36612			IX6	X1+X2		
	43700			MX7	0		
14501	54610			SA6	A1		
	54761			SA7	A6+B1		
	0100022364			RJ	RST	RELOCATE SYMBOL TABLE	
14502	5110003457			SA1	L.SEGTAB		
	5120003164			SA2	SI		
14503	10611			BX6	X1		
	37712			IX7	X1-X2		
	54620			SA6	A2		
14504	7277777773			SX7	X7-4		
	0317014510			NZ	X7,IDT1	IF SEGMENT CARDS	
14505	5110003561			SA1	P1TEMP	RESET ORG	
	43700			MX7	0		
	10611			BX6	X1		
14506	5160003104			SA6	ORGCTR		
	54761			SA7	A6+B1		
14507	0100022323			RJ	RSL	RECORD SEGMENT LENGTH	
14510	0100020052		IDT1	RJ	AVO	ADVANCE OVERLAY	
14511	0100020024			RJ	AUT	ALLOCATE USE TABLE	
14512	0100022346			RJ	RSS	RECORD SEGMENT START	
14513	0100006036			RJ	SCLIST	READ OVERLAY NAME	
14514	0100006223			RJ	VFYLINK		
14515	43600			MX6	0	RESET ORG AND LOC COUNTERS	
	5120003104			SA2	ORGCTR		
	10722			BX7	X2		

76	1
77	

14573	00000000031715014673		VFD	42/0RCOM,18/IFCOM	COMPASS	8679
14574	00000000141703014702		VFD	42/0RLOC,18/IFLOC	COMPASS	8680
14575	00000000053024014705		VFD	42/0REXT,18/IFEXT	COMPASS	8681
14576	00000000040506014711		VFD	42/0RDEF,18/IFDEF	COMPASS	8682
	14	LIFMODS	EQU	*-IFMODS	COMPASS	8683
		*	IF	LCM,EXP,LNCT	CP096A	367
					CP096A	368
					CP096A	369
14577	7110000074	IFLCM	SX1	60	CP096A	370
	0100006305		RJ	SCAD	CP096A	371
14600	5110003255		SA1	EXREL	CP096A	372
	5120003411		SA2	0.USETAB	CP096A	373
14601	5130003153		SA3	UI	CP096A	374
	76600		SX6	B0	CP096A	375
	20102		LX1	2	CP096A	376
14602	0301014716		ZR	X1,IF4 IF ABSOLUTE	CP096A	377
	6271777773		SB7	X1-4	CP096A	378
14603	36223		IX2	X2+X3	CP096A	379
	53127		SA1	X2+B7 FETCH BLOCK NAME	CP096A	380
	43601		MX6	1	CP096A	381
	11661		BX6	X6*X1 TRUE IF BLOCK NAME COMPLEMENTED	CP096A	382
14604	0400014716		EQ	IF4	CP096A	383
		*	IF	MAC,NAME,LNCT	CP096A	384
					CP096A	385
					CP096A	386
14605	0100006036	IFMAC	RJ	SCLIST SCAN NAME	CP096A	387
14606	10166		BX1	X6	CP096A	388
	76610		SX6	B1	CP096A	389
	0301014716		ZR	X1,IF4 IF BLANK, CONDITION IS TRUE	CP096A	390
14607	5120003303		SA2	OPTYPE	CP096A	391
	10622		BX6	X2 SAVE OPTYPE	CP096A	392
14610	5160003562		SA6	P1TEMPA	CP096A	393
	0100006166		RJ	TLUOP LOOK UP OPCODE	CP096A	394
14611	5110003562		SA1	P1TEMPA	CP096A	395
	10711		BX7	X1 RESTORE OPTYPE	CP096A	396
14612	5170003303		SA7	OPTYPE	CP096A	397
	0400014716		EQ	IF4	CP096A	398
		*	IF	MIC,NAME,LNCT	COMPASS	8684
					COMPASS	8685
					COMPASS	8686
14613	0100006036	IFMIC	RJ	SCLIST LOOK UP SYMBOL	COMPASS	8687
14614	10766		BX7	X6	CMP30	2928
	43600		MX6	0	CMP30	2929
	0307014716		ZR	X7,IF4 IF NULL MICRO NAME	CMP30	2930
14615	0100022621		RJ	TLUMIC LOOK UP MICRO	CMP30	2931
14616	76640		SX6	B4	CMP30	2932
	76710		SX7	B1	CMP146A	1
	5170003304		SA7	FLAG	CMP146A	2
14617	0400014716		EQ	IF4	COMPASS	8697
		*	IF	SET,SYM,LNCT	COMPASS	8698
					COMPASS	8699
					COMPASS	8700
14620	7160000004	IFSET	SX6	4 SET BIT MASK	CMP029	74
14621	5160003562	IFS1	SA6	P1TEMPA	CMP19	129
	5110003145		SA1	CHAR	CMP19	130
14622	6271777727		SB7	X1-1R/	CMP19	131
	0470014627		ZR	B7,IFS2 IF SLASH	CMP19	132

14623	0100006025		RJ	SCITEM	SCAN UNQUALIFIED SYMBOL	CMP19	133
14624	0306014653		ZR	X6,IFS7	IF NO SYMBOL	CMP19	134
	10166		BX1	X6		CMP19	135
14625	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL	CMP19	136
14626	0313014643		NZ	X3,IFS4	IF FOUND	CMP19	137
	0400014655		EQ	IFS8		CMP19	138
14627	0100005444	IFS2	RJ	GETCH	SKIP LEADING SLASH	CMP19	139
14630	5110003145		SA1	CHAR		CMP19	140
	7261777727		SX6	X1-1R/		CMP19	141
14631	0306014633		ZR	X6,IFS3	IF BLANK QUALIFIER	CMP19	142
	0100006025		RJ	SCITEM	SCAN QUALIFIER NAME	CMP19	143
14632	6271777727		SB7	X1-1R/		CMP19	144
	0570014653		NZ	B7,IFS7	IF NO TRAILING SLASH	CMP19	145
14633	10166	IFS3	BX1	X6		CMP19	146
	0100006151		RJ	SQV	SET QUALIFIER VALUE	CMP19	147
14634	0100005444		RJ	GETCH	SKIP TRAILING SLASH	CMP19	148
14635	0100006025		RJ	SCITEM	SCAN SYMBOL	CMP19	149
14636	0306014652		ZR	X6,IFS6	IF NO SYMBOL	CMP19	150
	5110003112		SA1	QVAL		CMP19	151
14637	12116		BX1	X1+X6		CMP19	152
	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL	CMP19	153
14640	5140003113		SA4	QVAL+1		CMP19	154
	10644		BX6	X4	RESTORE QUALIFIER VALUE	CMP19	155
	55641		SA6	A4-B1		CMP19	156
14641	0303014655		ZR	X3,IFS8	IF SYMBOL NOT FOUND	CMP19	157
	7233777776		SX3	X3-1		CP096A	399
14642	53130		RX1	X3		CP096A	400
	13415		BX4	X1-X5		CMP19	159
	0314014655		NZ	X4,IFS8	IF NOT SPECIFIED QUALIFIER	CMP19	160
14643	5110003562	IFS4	SA1	P1TEMPA		CMP27	10
	20235		LX2	59-30		CMP029	75
	11612		BX6	X1*X2	EXTRACT BIT	CMP27	12
14644	0322014655		PL	X2,IFS8	IF SYMBOL NOT DEFINED	CMP19	162
	5110003145		SA1	CHAR	LOOK AT NEXT CHARACTER	CMP19	163
14645	6271777722		SB7	X1-1R		CMP19	164
	0470014716		ZR	B7,IF4	IF BLANK	CMP27	13
14646	0571014653		NE	B7,B1,IFS7	IF NOT COMMA	CMP19	166
	5160003562		SA6	P1TEMPA		CMP029	76
14647	0100005444		RJ	GETCH	SKIP COMMA	CMP19	167
14650	5110003562		SA1	P1TEMPA		CMP27	15
	10611		BX6	X1		CMP27	16
14651	0400014716		EQ	IF4		COMPASS	8708
14652	5140003113	IFS6	SA4	QVAL+1	RESTORE QUALIFIER VALUE	CMP19	170
	10644		BX6	X4		CMP19	171
	55641		SA6	A4-B1		CMP19	172
14653	76610	IFS7	SX6	B1	SET ADDRESS ERROR	CMP19	173
	5160003345		SA6	EFLG		CMP19	174
14654	5160003322		SA6	AERR		CMP19	175
	0400010653		EQ	CTL300		CMP19	176
14655	76610	IFS8	SX6	B1	SET UNDEFINED SYMBOL ERROR	CMP19	177
	5160003345		SA6	EFLG		COMPASS	8710
14656	5160003327		SA6	UERR		COMPASS	8711
	0400010653		EQ	CTL300		COMPASS	8712
						COMPASS	8713
		*	IF	SST,SYM,LNCT		COMPASS	8714
						COMPASS	8715
14657	7160000002	IFSST	SX6	2	SST BIT MASK	CMP029	77

	0400014621			EQ	IFS1			CMP19	179
								COMPASS	8724
			*	IF	REL,EXP,LNCT			COMPASS	8725
1								COMPASS	8726
2	14660	7110000074	IFREL	SX1	60			COMPASS	8727
3		0100006305		RJ	SCAD			COMPASS	8728
4	14661	5110003255		SA1	EXREL			COMPASS	8729
5		10611		BX6	X1			COMPASS	8730
6	14662	0400014716		EQ	IF4			COMPASS	8731
7								COMPASS	8732
8			*	IF	ABS,EXP,LNCT			COMPASS	8733
9								COMPASS	8734
10	14663	7110000074	IFABS	SX1	60			COMPASS	8735
11		0100006305		RJ	SCAD			COMPASS	8736
12	14664	5110003255		SA1	EXREL			COMPASS	8737
13		5120003256		SA2	EXEXT			COMPASS	8738
14	14665	43600		MX6	0			COMPASS	8739
15		12121		BX1	X2+X1			COMPASS	8740
16		0311014716		NZ	X1,IF4			COMPASS	8741
17	14666	76610		SX6	B1			COMPASS	8742
18		0400014716		EQ	IF4			COMPASS	8743
19								COMPASS	8744
20			*	IF	REG,EXP,LNCT			COMPASS	8745
21								COMPASS	8746
22	14667	76610	IFREG	SX6	B1	PREVENT U-ERRORS		CMP146	2
23		5160003200		SA6	IFDF			CMP146	3
24	14670	7110000074		SX1	60			CMP146	4
25		0100006305		RJ	SCAD			COMPASS	8748
26	14671	5110003257		SA1	EXREG			COMPASS	8749
27		10611		BX6	X1			COMPASS	8750
28	14672	0400014714		EQ	IFNOU			COMPASS	8752
29								COMPASS	8753
30			*	IF	COM,EXP,LNCT			COMPASS	8754
31								COMPASS	8755
32	14673	7110000074	IFCOM	SX1	60			COMPASS	8756
33		0100006305		RJ	SCAD			COMPASS	8757
34	14674	43600		MX6	0			COMPASS	8758
35		76500		SX5	B0			COMPASS	8759
36		5110003255		SA1	EXREL			COMPASS	8760
37	14675	43064	IFCOMLOC	MX0	60-8			COMPASS	8761
38		0301014716		ZR	X1,IF4			COMPASS	8762
39		15110		BX1	-X0*X1			COMPASS	8763
40	14676	20102		LX1	2			CMP30	2933
41		6271777775		SB7	X1-2			CMP30	2934
42	14677	5110003411		SA1	0.USETAB			COMPASS	8768
43		5130003153		SA3	UI			COMPASS	8769
44	14700	36113		IX1	X1+X3			COMPASS	8770
45		53217		SA2	X1+B7			COMPASS	8771
46		76010		SX0	B1			COMPASS	8772
47		11302		BX3	X0*X2			COMPASS	8773
48	14701	13653		BX6	X5-X3			COMPASS	8774
49		0400014716		EQ	IF4			COMPASS	8775
50								COMPASS	8776
51			*	IF	LOC,EXP,LNCT			COMPASS	8777
52								COMPASS	8778
53	14702	7110000074	IFLOC	SX1	60			COMPASS	8779
54		0100006305		RJ	SCAD			COMPASS	8780
55									
56									
57									
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60									

14703	43600		MX6	0		COMPASS	8781
	76510		SX5	B1		COMPASS	8782
	5110003255		SA1	EXREL		COMPASS	8783
14704	0400014675		EQ	IFCOMLOC		COMPASS	8784
		*	IF	EXT,EXP,LNCT		COMPASS	8785
						COMPASS	8786
						COMPASS	8787
14705	76610	IFEXT	SX6	B1	PREVENT U-ERRORS	CMP146	5
	5160003200		SA6	IFDF		CMP146	6
14706	7110000074		SX1	60		CMP146	7
	0100006305		RJ	SCAD		COMPASS	8789
14707	5110003256		SA1	EXEXT		COMPASS	8790
	10611		BX6	X1		COMPASS	8791
14710	0400014714		EQ	IFNOU		COMPASS	8793
						COMPASS	8794
		*	IF	DEF,EXP,LNCT		COMPASS	8795
						COMPASS	8796
14711	76610	IFDEF	SX6	B1	PREVENT U-ERRORS	CMP146	8
	5160003200		SA6	IFDF		CMP146	9
14712	7110000074		SX1	60		CMP146	10
	0100006305		RJ	SCAD		COMPASS	8798
14713	5110003200		SA1	IFDF	UNDEFINED SYMBOL CAUSES IFDF = 2	CMP146	11
	7261777775		SX6	X1-2		CMP146	12
		*			DEF EXT REG DONT GIVE U ERRORS	COMPASS	8801
14714	76700	IFNOU	SX7	B0		CMP146	13
	5170003200		SA7	IFDF	CLEAR IF DEF FLAG	CMP146	14
	76710		SX7	B1	SIGNAL PASS 2 TO PREVENT U-ERRORS	CMP146	15
14715	5170003304		SA7	FLAG		CMP146	16
	0400014717		EQ	IF4A		COMPASS	8804
						COMPASS	8805
		*	N.B.	X6 " 0 IF CONDITION TRUE, X6 = 0 IF FALSE.		COMPASS	8806
						COMPASS	8807
14716	5110003327	IF4	SA1	UERR		COMPASS	8808
	0311010614		NZ	X1,CTL70		COMPASS	8809
14717	5110003561	IF4A	SA1	P1TEMP		COMPASS	8810
	0306014721		ZR	X6,IF5	JUMP IF CONDITION FALSE	COMPASS	8811
14720	0301015052		ZR	X1,IFXXN0	IF TRUTH WANTED	COMPASS	8812
	0400010653		EQ	CTL300		COMPASS	8813
14721	0311015052	IF5	NZ	X1,IFXXN0	JUMP IF FALSENESS WANTED	COMPASS	8814
	0400010653		EQ	CTL300		COMPASS	8815
		**	IF	- TEST SYMBOL OR EXPRESSION ATTRIBUTE.		COMPASS	8817
						COMPASS	8818
						COMPASS	8819
			QUAL	PASS2		COMPASS	8820
14722	5110003373	IF	SA1	LR+1	CHECK FOR REFERENCE AND F-LIST	COMPASS	8821
	5120003361		SA2	LF+1		COMPASS	8822
14723	11612		BX6	X1*X2		COMPASS	8823
	0306012126		ZR	X6,ZLIST	IF NO REFERENCE OF IF STATEMENTS	COMPASS	8824
14724	5110003145		SA1	CHAR		CP096A	401
	6271777731		SB7	X1-1R-		CP096A	402
14725	0570014726	+	NZ	B7,*+1	SKIP MINUS PREFIX	CP096A	403
	0100005444		RJ	GETCH		CP096A	404
14726	0100006036	+	RJ	SCLIST	SCAN ATTRIBUTE NAME	CP096A	405

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14746	13276		BX2	X7-X6		COMPASS	8875
	0302014750		ZR	X2,IFC2		COMPASS	8876
14747	0650014745		PL	B5,*-2		COMPASS	8877
	0400010647		EQ	CTL80		COMPASS	8878
14750	0570010647	IFC2	NZ	B7,CTL80	ERROR IF MODIFIER NOT FOLLOWED BY ,	COMPASS	8879
	63650		SB6	X5		COMPASS	8880
	21522		AX5	18		COMPASS	8881
14751	13050		BX0	X5-X0	CORRECT FOR TRUTH CONDITION	COMPASS	8882
	53506		SA5	B6+X0		COMPASS	8883
	10655		BX6	X5		COMPASS	8884
	76410		SX4	B1		COMPASS	8885
14752	43000		MX0	0		COMPASS	8886
	54111		SA1	A1+B1	FETCH DELIMITER	COMPASS	8887
	5160015001		SA6	IFCT		COMPASS	8888
14753	5120003261		SA2	LASTCOL		COMPASS	8889
	10711		BX7	X1		COMPASS	8890
14754	5272026437		SA7	X2+CARD		CMP12	4
	54771		SA7	A7+B1		COMPASS	8892
	54211		SA2	A1+B1	SEARCH FOR SECOND DELIMITER	COMPASS	8893
14755	13572	+	BX5	X7-X2		COMPASS	8894
	54221		SA2	A2+B1		COMPASS	8895
	0315014755		NZ	X5,*		COMPASS	8896
14756	55221		SA2	A2-B1		COMPASS	8897
14757	0331014761	IFC3	MI	X1,IFC3A	IF NOT AT END OF FIRST STRING	CMP165	25
	54111		SA1	A1+B1	FETCH NEXT CHARACTER	CMP165	26
	13317		BX3	X1-X7		CMP165	27
14760	0313014761		NZ	X3,IFC3A	IF NOT DELIMITER	CMP165	28
	7110777776		SX1	-1		CMP165	29
14761	0332014763	IFC3A	MI	X2,IFC3B	IF NOT AT END OF SECOND STRING	CMP165	30
	54221		SA2	A2+B1	FETCH NEXT CHARACTER	CMP165	31
	13327		BX3	X2-X7		CMP165	32
14762	0313014763		NZ	X3,IFC3B	IF NOT DELIMITER	CMP165	33
	7120777776		SX2	-1		CMP165	34
14763	0310014764	IFC3B	NZ	X0,*+1	IF INEQUALITY HAS BEEN FOUND	CMP165	35
	37012		IX0	X1-X2	MAKE STRING COMPARISON	COMPASS	8913
14764	0322014757	+	PL	X2,IFC3	LOOP UNTIL END OF SECOND STRING	CMP165	36
	7062751341		SX6	A2-CARD+1		COMPASS	8916
14765	5160003144		SA6	COLUMN		COMPASS	8917
	5110003261		SA1	LASTCOL		COMPASS	8918
14766	37216		IX2	X1-X6		CMP12	5
	7160000055		SX6	1R	RESTORE BLANKS AT END OF STATEMENT	CMP12	6
14767	5261026437		SA6	X1+CARD		CMP12	7
	54661		SA6	A6+B1		CMP12	8
14770	7277777722		SX7	X7-1R		COMPASS	8920
14771	0307014772	+	ZR	X7,*+1	IF BLANK DELIMITER	COMPASS	8921
	0332014775		NG	X2,IFC5	IF MISSING SECOND DELIMITER	CMP12	9
14772	0100005444		RJ	GETCH	THROW AWAY COMMA	COMPASS	8923
14773	6271777722		SB7	X1-1R		COMPASS	8924
	0470015001		ZR	B7,IFCT	IF TERMINATOR IS BLANK	COMPASS	8925
14774	0471014777		EQ	B7,B1,IFC4	IF TERMINATOR IS COMMA	COMPASS	8926
14775	76610	IFC5	SX6	B1		COMPASS	8927
	5160003322		SA6	AERR		COMPASS	8928
14776	5160003345		SA6	EFLG		COMPASS	8929
	0400010614		EQ	CTL70	RETURN	COMPASS	8930
14777	0100005444	IFC4	RJ	GETCH	THROW COMMA AWAY	COMPASS	8931
15000	0570015001		NZ	B7,IFCT		COMPASS	8932
	0100005444		RJ	GETCH	THROW KNOWN COMMA AWAY	COMPASS	8933

1412THE

COMPASS 8934
COMPASS 8935

COMPASS	8937
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COMPASS 8982
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* IFMI EXPR, LNCT

CMP30 2993
CMP30 2994
CMP30 2995
CMP30 2996

15111 43674 IFMI MX6 60

** IFZZ - TEST SIGN OF EXPRESSION VALUE.

CMP30 2998
CMP30 2999
CMP30 3000
CMP30 3001
CMP30 3002
CMP30 3003
CMP30 3004
CMP30 3005
CMP30 3006
CMP30 3007
CMP30 3008
CMP30 3009
CMP30 3010
CMP30 3011

15112 5160003561 IFZZ SA6 P1TEMP SAVE SIGN CONDITION
7110000074 SX1 60

15113 0100006305 RJ SCAD EVALUATE EXPRESSION
15114 5110003254 SA1 EXVAL

15115 5130003327 5120003561 SA2 P1TEMP
SA3 UERR
13412 BX4 X1-X2 INVERT SIGN FOR IFMI

20373 LX3 59 U-ERROR FORCES SUCCESS

15116 15543 BX5 -X3*X4
0325010653 PL X5,CTL300 IF CONDITION MET OR U-ERROR

15117 0400015052 EQ IFXXNO GO INITIATE SKIPPING

** IFZZ - TEST SIGN OF EXPRESSION VALUE.

CMP30 3013
CMP30 3014
CMP30 3015
CMP30 3016
CMP30 3017
CMP30 3018
CMP30 3019
CMP30 3020
CMP30 3021
CMP30 3022
CMP30 3023
CMP30 3024
CMP30 3025
CMP30 3026
CMP30 3027
CMP30 3028
CPS010 57
CPS010 58
CPS010 59
CPS010 60
CMP30 3029

15120 IFPL BSS 0
15120 IFMI BSS 0
15120 5110003373 SA1 LR+1 CHECK FOR REFERENCE AND F-LIST

15121 12612 5120003361 SA2 LF+1
BX6 X1+X2
0306012126 ZR X6,ZLIST IF NO REFERENCE OF IF-STATEMENTS

15122 7160000006 SX6 1RF
5160004055 SA6 REFLET SET REFERENCE TYPE *F*

15123 7110000074 SX1 60
0100006305 RJ SCAD SCAN EXPRESSION

15124 7160000055 SX6 1R
5160004055 SA6 REFLET RESTORE BLANK REFERENCE TYPE

15125 5110003254 SA1 EXVAL
7120000044 SX2 36

15126 43300 MX3 0

0100007773 RJ PACKO CALL PACKO (EXVAL, 36, 0)
15127 0400012126 EQ ZLIST RETURN

*** IRP - INDEFINITE REPEAT.

COMPASS 9139
COMPASS 9140
COMPASS 9141
COMPASS 9142
COMPASS 9143
COMPASS 9144

*
*
* IRP P1
* (P1) IS THE PARAMETER LIST FOR ITERATION INSIDE A MACRO.
* IRP IS A NULL OPERATION OUTSIDE A MACRO. THE CARD IMAGES

* BETWEEN THE OPENING (IRP) AND TERMINATING (IRP) ARE REPEATED
* WITH SUCCESSIVE PARAMETERS FROM THE LIST P1 SUBSTITUTED FOR
* THE FORMAL MACRO PARAMETER.

COMPASS 9145
COMPASS 9146
COMPASS 9147

1								COMPASS	9148	1
2								COMPASS	9149	2
3				QUAL	PASS1			COMPASS	9150	3
4		10653	IRP	EQU	CTL300			COMPASS	9151	4
5										5
6										6
7										7
8										8
9			**		IRP - INDEFINITE REPEAT.			COMPASS	9153	9
10								COMPASS	9154	10
11								COMPASS	9155	11
12				QUAL	PASS2			COMPASS	9156	12
13		12126	IRP	EQU	ZLIST			COMPASS	9157	13
14										14
15										15
16										16
17										17
18			***		LCC - LOADER CONTROL CARD.			COMPASS	9159	18
19			*					COMPASS	9160	19
20			*					COMPASS	9161	20
21			*	LCC	STRING			COMPASS	9162	21
22			*		CHARACTER STRING IS PASSED TO BINARY OUTPUT FOR SUBSEQUENT			COMPASS	9163	22
23			*		RECOGNITION BY THE LOADER.			COMPASS	9164	23
24								COMPASS	9165	24
25								COMPASS	9166	25
26				QUAL	PASS1			COMPASS	9167	26
27	15130	5110003130	LCC	SA1	ABSFG	TEST FOR VALIDITY OF OPERATION		COMPASS	9168	27
28		0311010647		NZ	X1,CTL80	INVALID IN PP AND ABSOLUTE CP CODES		COMPASS	9169	28
29	15131	5120000241	+	SA2	B			COMPASS	9170	29
30		0302010614		ZR	X2,CTL70	IF NO BINARY FILE		CMP30	3030	30
31								CMP30	3031	31
32			RM	IFEQ	CP#RM,0			CMP30	3032	32
33	15132	7120000241		RECALL	B	WAIT FOR BINARY		COMPASS	9172	33
34			RM	ENDIF				CMP30	3040	34
35								CMP30	3041	35
36	15133	6170000012		SB7	10	CONSTRUCT LOADER DIRECTIVE CARD		COMPASS	9173	36
37		5120003144		SA2	COLUMN			COMPASS	9174	37
38	15134	5212026436		SA1	CARD-1+X2			COMPASS	9175	38
39		5160030217		SA6	RELVEC			COMPASS	9176	39
40	15135	6150777722		SB5	-1R			COMPASS	9177	40
41		66410		SB4	B1			COMPASS	9178	41
42	15136	66370	LCC1	SB3	B7			COMPASS	9179	42
43		43600		MX6	0			COMPASS	9180	43
44	15137	20606	LCC2	LX6	6			COMPASS	9181	44
45		67331		SB3	B3-B1			COMPASS	9182	45
46		63215		SB2	X1+B5			COMPASS	9183	46
47		12616		BX6	X1+X6			COMPASS	9184	47
48	15140	54111		SA1	A1+B1			COMPASS	9185	48
49		0420015144		ZR	B2,LCC4	IF BLANK COLUMN WAS FOUND		COMPASS	9186	49
50	15141	0530015137		NZ	B3,LCC2			COMPASS	9187	50
51		54661		SA6	A6+B1	STORE WORD		COMPASS	9188	51
52	15142	0400015136		EQ	LCC1	AND GO BACK FOR MORE		COMPASS	9189	52
53	15143	20606	LCC3	LX6	6	APPEND ZERO BYTES TO WORD		COMPASS	9190	53
54		67331		SB3	B3-B1			COMPASS	9191	54
55										55
56										56
57										57
58										58
59										59
60										60

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15160	5110003302	5120003461	SA2	L.TLDS	LENGTH OF TABLE	CPS2608	42
			SA1	K.TLDS	CONTROL WORD POINTER	CPS2608	43
		37121	IX1	X2-X1	WC OF CURRENT LDSET TABLE	CPS2608	44
15161	0302015203		ZR	X2,LDS4	IF FIRST LDSET	CPS2608	45
		6271770077	SB7	X1-7700B		CPS2608	46
15162	0670015203		PL	B7,LDS4	IF APPROACHING OVERFLOW CONDITION	CPS2608	47
			RM	ENDIF		CPS2608	48
		0400015165	EQ	LDS2		CP147	87
15163	5110003145		LDS1	SA1	CHAR	CP147	88
		6271777722	SB7	X1-1R	FETCH CURRENT CHARACTER	CP147	89
15164	0470010614		ZR	B7,CTL70	IF END OF OPTIONS	CP147	90
		0100005444	RJ	GETCH	GET NEXT CHARACTER	CP147	91
15165	66200		LDS2	SB2	B0	CPS173	16
		0100005774	RJ	SCE	ALLOW AS SEPARATORS , = / - SPACE	CPS173	17
15166	0306015163		ZR	X6,LDS1	SCAN ELEMENT	CP147	93
		5110015365	SA1	LDSA-1	IF NULL ELEMENT	CP147	94
15167	43052		MX0	42		CP147	95
15170	54111		LDS3	SA1	A1+B1	CP147	96
		11201	BX2	X0*X1	LOOK UP KEYWORD	CP147	97
		0301015362	ZR	X1,LDE3	IF END OF KEYWORD TABLE	CP147	98
15171	13226		BX2	X2-X6		CP147	99
		0312015170	NZ	X2,LDS3	LOOP	CP147	100
15172	0720015361		NG	B2,LDE2	TEST SEPARATOR CODE	CP147	101
		0712015361	GT	B2,B1,LDE2	IF NOT SPACE COMMA OR =	CP147	102
15173	15110		BX1	-X0*X1	EXTRACT PARAMETERS	CP147	103
		20166	LX1	-6		CP147	104
		43071	MX0	-3		CP147	105
		15210	BX2	-X0*X1		CP147	106
15174	5242015406		SA4	LDSB+X2-1	FETCH PROCESSOR ADDRES	CP147	107
		21103	AX1	3		CP147	108
		73610	SX6	X1	SAVE PROCESSOR PARAMETER	CP147	109
15175	21103		AX1	3	CREATE HEADER WORD	CP147	110
		10744	BX7	X4		CP147	111
		12116	BX1	X1+X6	INSERT FLAG BIT	CP147	112
15176	5170003562		SA7	P1TEMPA	STORE PROCESSOR ADDRESS	CP147	113
		76620	SX6	B2		CP147	114
		54671	SA6	A7+B1	STORE SEPARATOR CODE IN P1TEMPB	CP147	115
15177	5100000020		ADDWORD	TLDS	PUT HEADER WORD IN TLDS	CP147	116
15200	37732		IX7	X3-X2	LWA+1 - ORIGIN	CP147	117
		5170003561	SA7	P1TEMP	SAVE L.TLDS	CP147	118
		54571	SA5	A7+B1	FETCH PROCESSOR ADDRESS	CP147	119
15201	54451		SA4	A5+B1	FETCH SEPARATOR CODE	CP147	120
		63350	SB3	X5		CP147	121
		63240	SB2	X4		CP147	122
15202	0233000000		JP	B3	JUMP TO PROCESSOR	CP147	123
						CP147	124
			**	BUILD NEW CONTROL WORD		CPS2608	49
						CPS2608	50
			RM	IFEQ	CP#RM,0	CPS2608	51
15203	0100005472		LDS4	RJ	LDHDR	CPS2608	52
15204	0400015165			EQ	LDS2	CPS2608	53
			RM	ENDIF		CPS2608	54
						CPS2608	55
						CPS2608	56
			**	PROCESS REWIND, NOREWIND.		CP147	125
						CP147	126
						CP147	127

15205	0520015364	LDS10	NZ	B2,LDE4	IF =	CP147	128
	0400015163		EQ	LDS1		CP147	129
						CP147	130
		**		PROCESS LIB, OMIT, USE, USEP, COMMON = NAME1/NAME2/.../NAMEN.		CP147	131
						FEAT184N	7
15206	0420015163	LDS20	ZR	B2,LDS1	IF NOT =	CP147	133
	76000		SX0	B0		CP147	134
15207	0100005444	LDS21	RJ	GETCH	GET CHARACTER	CP147	135
15210	66211		SB2	B1+B1	ALLOW AS SEPARATORS , / SPACE	CP147	136
	0100005774		RJ	SCE	SCAN ELEMENT	CPS173	18
15211	76720		SX7	B2	SAVE SEPARATOR CODE	CP147	137
	5170003563		SA7	P1TEMPB		CP147	138
15212	0306015215		ZR	X6,LDS22	IF EMPTY ELEMENT	CP147	139
	5100000020		ADDWORD	TLDS	ADD ELEMENT TO TLDS	CP147	140
15214	76010		SX0	B1		CP147	141
15215	5140003563	LDS22	SA4	P1TEMPB	FETCH SEPARATOR CODE	CP147	142
	6234777775		SB3	X4-2		CP147	143
15216	0430015207		ZR	B3,LDS21	IF /	CP147	144
	0300015223		ZR	X0,LDS23	IF NO ENTRIES ADDED	CP147	145
15217	5120003422		SA2	0.TLDS		CP147	146
	5130003461		SA3	L.TLDS		CP147	147
15220	5150003561		SA5	P1TEMP	FETCH POINTER TO HEADER WORD	CP147	148
	37735		IX7	X3-X5	WORD COUNT	CP147	149
	36525		IX5	X2+X5		CP147	150
15221	5215777776		SA1	X5-1	INSERT WORD COUNT INTO HEADER WORD	CP147	151
	20744		LX7	36		CP147	152
	12617		BX6	X1+X7		CP147	153
15222	54610		SA6	A1		CP147	154
15223	0314015361	LDS23	NZ	X4,LDE2	IF NOT SPACE OR COMMA	CP147	155
	0400015163		EQ	LDS1		CP147	156
						CP147	157
						CP147	158
						CP147	159
		**		PROCESS PRESET, PRESETA = P		CP147	160
						CP147	161
15224	0420015163	LDS30	ZR	B2,LDS1	IF NOT =	CP147	162
	0100005444		RJ	GETCH	GET NEXT CHARACTER	CP147	163
15225	6231777722		SB3	X1-1R		CP147	164
	0430015163		ZR	B3,LDS1	IF SPACE	CP147	165
15226	0431015163		EQ	B3,B1,LDS1	IF COMMA	CP147	166
	6231777731		SB3	X1-1R-		CP147	167
15227	0703015362		GT	B3,LDE3	IF FIRST CHARACTER NOT ALPHANUM.	CP147	168
	6231777744		SB3	X1-1R0		CP147	169
15230	0630015241		PL	B3,LDS32	IF FIRST CHAR IS 0-9 OR + OR -	CP147	170
	66200		SB2	B0	ALLOW AS SEPARATORS , = / - SPACE	CPS173	19
15231	0100005774		RJ	SCE	SCAN ELEMENT	CP147	171
15232	5140012202		SA4	=4LNONE		CP147	172
	13464		BX4	X6-X4		CP147	173
15233	0304015163		ZR	X4,LDS1	IF *NONE*	CP147	174
	5140015415		SA4	LDSC-1		CP147	175
15234	43052		MX0	42		CP147	176
15235	54441	LDS31	SA4	A4+B1	LOOK UP PRESET WORD	CP147	177
	11104		BX1	X0*X4		CP147	178
	0304015362		ZR	X4,LDE3	IF NOT FOUND	CP147	179
15236	13116		BX1	X1-X6		CP147	180
	0311015235		NZ	X1,LDS31	LOOP	CP147	181
	15140		BX1	-X0*X4	EXTRACT INDEX TO LDS.	FEAT184N	8

15237	5211015427		SA1	X1+LDS	FETCH VALUE.	FEAT184N	9
	76600		SX6	B0	INDICATE NO CONSTANT SCANNED	CP147	190
15240	5160003563		SA6	P1TEMPB		CP147	191
	0400015250		EQ	LDS33		CP147	192
						CP147	193
15241	5110003133	LDS32	SA1	NBASE	SAVE ASSUMED NUMBER BASE	CP147	194
	7160000010		SX6	8		CP147	195
15242	10711		BX7	X1		CP147	196
	54610		SA6	A1	ASSUME OCTAL	CP147	197
	5170003563		SA7	P1TEMPB		CP147	198
15243	5110003123		SA1	LWORD	SCAN CONSTANT	CP147	199
	7160000003		SX6	3		CP147	200
15244	0100006440		RJ	SCADCON		CP147	201
15245	5120003563		SA2	P1TEMPB	RESTORE BASE	CP147	202
	10622		BX6	X2		CP147	203
15246	5160003133		SA6	NBASE		CP147	204
	0311015362		NZ	X1,LDE3	IF SCADCON DETECTED ERROR	CP147	205
15247	5110003254		SA1	EXVAL		CP147	206
15250	5100000020	LDS33	ADDWORD	TLDS	PUT VALUE INTO TLDS	CP147	207
15251	55261		SA2	A6-B1	FETCH HEADER WORD	CP147	208
	76410		SX4	B1		CP147	209
	20444		LX4	36		CP147	210
	12624		BX6	X2+X4	SET WORD COUNT TO 1	CP147	211
15252	54620		SA6	A2	RESTORE HEADER WORD	CP147	212
	5130003563		SA3	P1TEMPB		CP147	213
15253	0313015256		NZ	X3,LDS34	IF CONSTANT WAS SCANNED	CP147	214
	5110003145		SA1	CHAR		CP147	215
15254	6271777722		SB7	X1-1R		CP147	216
	0470015163		ZR	B7,LDS1	IF SPACE	CP147	217
15255	0471015163		EQ	B7,B1,LDS1	IF COMMA	CP147	218
	0400015361		EQ	LDE2	ERROR	CP147	219
15256	5110006304	LDS34	SA1	EXSTOP	EXSTOP=0 IF SPACE, =1 IF COMMA	CP147	220
	0311015165		NZ	X1,LDS2	IF COMMA	CP147	221
15257	0400010614		EQ	CTL70	IF SPACE	CP147	222
						CP147	223
						CP147	224
		**		PROCESS ERR = P.		CP147	225
						CP147	226
15260	0420015163	LDS40	ZR	B2,LDS1	IF NOT =	CP147	227
	0100005444		RJ	GETCH	GET NEXT CHARACTER	CP147	228
15261	66200		SB2	B0	ALLOW AS SEPARATORS , = / - SPACE	CPS173	20
	0100005774		RJ	SCE	SCAN ELEMENT	CP147	229
15262	0306015271		ZR	X6,LDS42	IF EMPTY ELEMENT	CP147	230
	5120015437		SA2	LDSE-1		CP147	231
15263	43052		MX0	42		CP147	232
15264	54221	LDS41	SA2	A2+B1	LOOK UP ERR KEYWORD	CP147	233
	11402		BX4	X0*X2		CP147	234
	0302015362		ZR	X2,LDE3	IF NOT FOUND	CP147	235
15265	13446		BX4	X4-X6		CP147	236
	0314015264		NZ	X4,LDS41	LOOP	CP147	237
	15420		BX4	-X0*X2		CP147	238
15266	5120003561		SA2	P1TEMP	GET POINTER TO HEADER WORD	CP147	239
	5130003422		SA3	0.TLDS		CP147	240
15267	36223		IX2	X2+X3		CP147	241
	5222777776		SA2	X2-1	FETCH HEADER WORD	CP147	242
	12624		BX6	X2+X4	INSERT KEYWORD CODE	CP147	243
15270	54620		SA6	A2	RESTORE HEADER WORD	CP147	244

15271	0520015361	LDS42	NZ	B2,LDE2	IF NOT SPACE OR COMMA	CP147	245
	0400015163		EQ	LDS1		CP147	246
						CP147	247
		**		PROCESS MAP = P/LFN.		CP147	248
						CP147	249
						CP147	250
15272	0420015163	LDS50	ZR	B2,LDS1	IF NOT =	CP147	251
	0100005444		RJ	GETCH	GET NEXT CHARACTER	CP147	252
15273	6231777727		SB3	X1-1R/		CP147	253
	0430015313		ZR	B3,LDS53	IF /	CP147	254
15274	13777		BX7	X7-X7	INITIALIZE VALUE TO ZERO	CP147	255
	10377		BX3	X7	INITIALIZE FLAG TO 0	CP147	256
	5140015444		SA4	LDSF	MASK FOR NSBEX	CP147	257
15275	5150015445		SA5	LDSG	NSBEX CODES AND FLAGS	CP147	258
15276	63710	LDS51	SB7	X1	COMPUTE MAP TYPE	CP147	259
	23674		AX6	X4,B7		CP147	260
	20673		LX6	59		CP147	261
15277	0326015303		PL	X6,LDS52	IF NOT MAP TYPE	CP147	262
	66677		SB6	B7+B7	COMPUTE SHIFT COUNT	CP147	263
	22665		LX6	X5,B6		CP147	264
15300	43070		MX0	-4		CP147	265
	15260		BX2	-X0*X6	EXTRACT VALUE	CP147	266
	12727		BX7	X2+X7	INSERT VALUE	CP147	267
	43001		MX0	1		CP147	268
15301	11606		BX6	X0*X6	EXTRACT FLAG	CP147	269
	12336		BX3	X3+X6	OR IT TO OLD FLAG	CP147	270
	0100005444		RJ	GETCH	GET NEXT CHARACTER	CP147	271
15302	0400015276		EQ	LDS51	LOOP	CP147	272
						CP147	273
15303	5120012203	LDS52	SA2	=02060000B	MASK FOR SPACE COMMA SLASH	CP147	274
	22672		LX6	X2,B7		CP147	275
15304	0326015361		PL	X6,LDE2	IF NOT SPACE COMMA OR SLASH	CP147	276
	14000		BX0	-X0		CP147	277
	36407		IX4	X0+X7	MAP TYPE LOGICAL VALUE	CP147	278
15305	11643		BX6	X4*X3	AND(LOGICAL VALUE,FLAG)	CP147	279
	0336015362		MI	X6,LDE3	IF N WITH OTHER LETTERS	CP147	280
	15540		BX5	-X0*X4		CP147	281
15306	12453		BX4	X5+X3	COMPUTE S BIT (0 IF NO LETTERS)	CP147	282
	12774		BX7	X7+X4		CP147	283
	22717		LX7	B1		CP147	284
15307	5120003561		SA2	P1TEMP	GET POINTER TO HEADER WORD	CP147	285
	5130003422		SA3	0.TLDS		CP147	286
15310	36223		IX2	X2+X3		CP147	287
	5222777776		SA2	X2-1	FETCH HEADER WORD	CP147	288
	12627		BX6	X2+X7	INSERT TYPE AND S-BIT INTO HEADER WORD	CP147	289
15311	54620		SA6	A2	RESTORE HEADER WORD	CP147	290
	6231777727		SB3	X1-1R/		CP147	291
15312	0530015163		NZ	B3,LDS1	IF NOT /	CP147	292
						CP147	293
15313	0100005444	LDS53	RJ	GETCH	GET NEXT CHARACTER	CP147	294
15314	66200		SB2	B0	ALLOW AS SEPARATORS , = / - SPACE	CPS173	21
	0100005774		RJ	SCE	SCAN FILE NAME	CP147	295
15315	0306015163		ZR	X6,LDS1	IF EMPTY ELEMENT	CP147	296
	76720		SX7	B2		CP147	297
15316	5170003563		SA7	P1TEMPB	SAVE SEPARATOR CODE	CP147	298
	5100000020		ADDWORD	TLDS		CP147	299
15320	76710		SX7	B1		CP147	300

	20744		LX7	36		CP147	301
		5026777776	SA2	A6-1	FETCH HEADER WORD	CP147	302
15321	12627		BX6	X2+X7	INSERT WORD COUNT	CP147	303
	54620		SA6	A2	RESTORE HEADER WORD	CP147	304
		5110003563	SA1	P1TEMPB	FETCH SEPARATOR CODE	CP147	305
15322	0311015361		NZ	X1,LDE2	IF NOT SPACE OR COMMA	CP147	306
		0400015163	EQ	LDS1		CP147	307
						CP147	308
						CP147	309
		**	PROCESS SUBST = NAME11-NAME12/.../NAMEN1-NAMEN2.			CP147	310
						CP147	311
15323	0420015163	LDS60	ZR	B2,LDS1	IF NOT =	CP147	312
15324	0100005444	LDS61	RJ	GETCH	GET NEXT CHARACTER	CP147	313
15325	66210		SB2	B1	ALLOW AS SEPARATORS , / - SPACE	CPS173	22
	0100005774		RJ	SCE	SCAN ELEMENT - 1ST OF PAIR	CP147	314
15326	6132777774		SB3	B2-3		CP147	315
	0530015355		NZ	B3,LDE1	IF NOT -	CP147	316
15327	5100000020		ADDWORD	TLDS		CP147	317
15330	0100005444		RJ	GETCH	GET NEXT CHARACTER	CP147	318
15331	66210		SB2	B1	ALLOW AS SEPARATORS , / - SPACE	CPS173	23
	0100005774		RJ	SCE	SCAN ELEMENT - 2ND OF PAIR	CP147	319
15332	76720		SX7	B2	SAVE SEPARATOR CODE	CP147	320
	5170003563		SA7	P1TEMPB		CP147	321
15333	5100000020		ADDWORD	TLDS		CP147	322
15334	5140003563		SA4	P1TEMPB	FETCH SEPARATOR	CP147	323
	6234777775		SB3	X4-2		CP147	324
15335	0430015324		ZR	B3,LDS61	IF /	CP147	325
	5150003561		SA5	P1TEMP	FETCH POINTER TO HEADER WORD	CP147	326
15336	37332		IX3	X3-X2		CP147	327
	37735		IX7	X3-X5	WORD COUNT	CP147	328
	36525		IX5	X2+X5		CP147	329
15337	5215777776		SA1	X5-1	FETCH HEADER WORD	CP147	330
	20744		LX7	36		CP147	331
	12617		BX6	X1+X7	INSERT WORD COUNT INTO HEADER WORD	CP147	332
15340	54610		SA6	A1	RESTORE HEADER WORD	CP147	333
	0314015361		NZ	X4,LDE2	IF NOT SPACE OR COMMA	CP147	334
15341	0400015163		EQ	LDS1		CP147	335
						CP147	336
						CP147	337
		**	PROCESS PD=N, PS=M			FEAT184N	10
						FEAT184N	11
15342	0420015163	LDS70	ZR	B2,LDS1	IF NOT =	FEAT184N	12
	0100005444		RJ	GETCH	GET NEXT CHARACTER.	FEAT184N	13
15343	43600		MX6	0	SETUP FOR EVALUATION OF CONSTANT.	FEAT184N	14
	5160006275		SA6	ELVAL	ZERO OUT RETURN CELL.	FEAT184N	15
15344	7120006275		SX2	ELVAL	VALUE WILL BE RETURNED TO THIS ADDRESS.	FEAT184N	16
	76310		SX3	B1	WORD COUNT.	FEAT184N	17
	10433		BX4	X3	ADDRESS FIELD FLAG.	FEAT184N	18
15345	7150000074		SX5	60	FIELD WIDTH FOR CHARACTER DATA.	FEAT184N	19
	0100006565		RJ	SCD	EVALUATE DECIMAL CONSTANT.	FEAT184N	20
15346	5120003561		SA2	P1TEMP	GET THE POINTER TO THE HEADER WORD.	FEAT184N	21
	5130003422		SA3	0.TLDS	GET ORGIN OF LDSET TABLE.	FEAT184N	22
15347	5140006275		SA4	ELVAL	GET THE VALUE.	FEAT184N	23
	36223		IX2	X2+X3	ADDRESS+1 OF HEADER WORD.	FEAT184N	24
15350	5222777776		SA2	X2-1	FETCH HEADER WORD FROM LDSET TABLE.	FEAT184N	25
	12624		BX6	X2+X4	INSERT VALUE INTO HEADER WORD.	FEAT184N	26
	54620		SA6	A2	RESTORE HEADER WORD INTO LDSET TABLE.	FEAT184N	27

15351	5110003145		SA1	CHAR	GET CURRENT CHARACTER.	FEAT184N	28
	63410		SB4	X1		FEAT184N	29
15352	6130000055		SB3	1R		FEAT184N	30
	0434015163		EQ	B3,B4,LDS1	IF CURRENT CHARACTER IS A BLANK.	FEAT184N	31
15353	6130000056		SB3	1R,		FEAT184N	32
	0434015163		EQ	B3,B4,LDS1	ELSE IF CURRENT CHARACTER IS A COMMA.	FEAT184N	33
15354	0400015361		EQ	LDE2	ELSE ERROR IF NOT BLANK OR COMMA.	FEAT184N	34
						FEAT184N	35
						FEAT184N	36
		**			ERROR PROCESSING FOR LDSET.	CP147	338
		*			SEARCH FOR SPACE OR COMMA.	CP147	339
						CP147	340
		*			LDE1 - UPDATE WORD COUNT IN HEADER WORD.	CP147	341
						CP147	342
						CP147	343
15355	5150003561	LDE1	SA5	P1TEMP	FETCH POINTER TO HEADER WORD	CP147	344
	5120003461		SA2	L.TLDS		CP147	345
15356	5130003422		SA3	O.TLDS		CP147	346
	37225		IX2	X2-X5	WORD COUNT	CP147	347
	36535		IX5	X3+X5	FETCH HEADER WORD	CP147	348
15357	5215777776		SA1	X5-1		CP147	349
	20244		LX2	36		CP147	350
	12612		BX6	X1+X2	INSERT WORD COUNT INTO HEADER WORD	CP147	351
15360	54610		SA6	A1	RESTORE HEADER WORD	CP147	352
	0400015362		EQ	LDE3		CP147	353
						CP147	354
		*			LDE2 - DISCARD CURRENT CHARACTER.	CP147	355
15361	0100005444	LDE2	RJ	GETCH	GET NEXT CHARACTER	CP147	356
						CP147	357
						CP147	358
		*			LDE3 - SEARCH FOR SPACE OR COMMA.	CP147	359
						CP147	360
15362	5110003145	LDE3	SA1	CHAR		CP147	361
	6271777722		SB7	X1-1R		CP147	362
15363	0470015364		ZR	B7,LDE4	IF SPACE	CP147	363
	0571015361		NE	B7,B1,LDE2	IF NOT COMMA	CP147	364
						CP147	365
		*			LDE4 - ONLY NOTE ERROR.	CP147	366
						CP147	367
15364	76710	LDE4	SX7	B1	NOTE ERROR	CP147	368
	5170003322		SA7	AERR		CP147	369
15365	5170003345		SA7	EFLG		CP147	370
	0400015163		EQ	LDS1		CP147	371
						CP147	372
						CP147	373
		*			LDSA - LDSET KEYWORD TABLE.	CP147	374
		*			VFD 42/0LKEYWORD, 6/, 3/FLAG, 3/PROC, 6/CODE	CP147	375
		*				CP147	376
		*			FLAG = PARAMETER TO PROCESSOR.	CP147	377
		*			PROC = PROCESSOR INDEX INTO LDSB.	CP147	378
		*			CODE = SUBTABLE TYPE CODE.	CP147	379
						CP147	380
15366		LDSA	BSS	0		CP147	381
15366	141102000000000000210		CON	0LLIB+0210B		CP147	382
15367	150120000000000000511		CON	0LMAP+0511B		CP147	383
15370	20220523052400000312		CON	0LPRESET+0312B		CP147	384
15371	20220523052401001312		CON	0LPRESETA+1312B		CP147	385

15372	052222000000000000413	CON	0LERR+0413B	CP147	386
15373	220527111604000000114	CON	0LREWIND+0114B	CP147	387
15374	16172205271116001114	CON	0LNOREWIN+1114B	CP147	388
15375	252305200000000000215	CON	0LUSEP+0215B	CP147	389
15376	252305000000000000216	CON	0LUSE+0216B	CP147	390
15377	232502232400000000617	CON	0LSUBST+0617B	CP147	391
15400	171511240000000000220	CON	0LOMIT+0220B	CP147	392
15401	052024000000000000225	CON	0LEPT+0225B	CP161CP	4
15402	161705202400000000226	CON	0LNOEPT+0226B	CP161CP	5
15403	031715151716000000232	CON	0LCOMMON+0232B	FEAT184N	37
15404	200400000000000000733	CON	0LPD+0733B	FEAT184N	38
15405	202300000000000000734	CON	0LPS+0734B	FEAT184N	39
15406	00000000000000000000	DATA	0 LIST TERMINATOR	CP147	393
				CP147	394
				CP147	395
	*	LDSB - PROCESSOR ADDRESS.		CP147	396
				CP147	397
15407		LDSB	BSS 0	CP147	398
15407	000000000000000015205	CON	LDS10 REWIND,NOREWIN	CP147	399
15410	000000000000000015206	CON	LDS20 LIB, OMIT, USE, USEP, EPT, NOEPT, COMMON	FEAT184N	40
15411	000000000000000015224	CON	LDS30 PRESET,PRESETA	CP147	401
15412	000000000000000015260	CON	LDS40 ERR	CP147	402
15413	000000000000000015272	CON	LDS50 MAP	CP147	403
15414	000000000000000015323	CON	LDS60 SUBST	CP147	404
15415	000000000000000015342	CON	LDS70 PD, PS	FEAT184N	41
				CP147	405
				CP147	406
	*	LDSC - PRESET/PRESETA KEYWORD TABLE.		CP147	407
	*	VFD	42/0LKEYWORD, 12/, 6/INDEX	FEAT184N	42
	*		INDEX = INDEX INTO LDSD TABLE	FEAT184N	43
				CP147	412
15416		LDSC	BSS 0	CP147	413
15416	320522170000000000000	CON	0LZERO	FEAT184N	44
15417	171605230000000000001	CON	0LONES+1B	FEAT184N	45
15420	111604050600000000002	CON	0LINDEF+2B	FEAT184N	46
15421	160711160405060000003	CON	0LNGINDEF+3B	FEAT184N	47
15422	111606000000000000004	CON	0LINF+4B	FEAT184N	48
15423	160711160600000000005	CON	0LNGINF+5B	FEAT184N	49
15424	011424320522170000006	CON	0LALTZERO+6B	FEAT184N	50
15425	011424171605230000007	CON	0LALTONES+7B	FEAT184N	51
15426	040502250700000000010	CON	0LDEBUG+10B	FEAT184N	52
				CP147	422
				CP147	423
	*	LDSD - PRESET/PRESETA KEYWORD VALUES.		FEAT184N	53
				CP147	425
15427	000000000000000000000	LDSD	DATA 0 LIST TERMINATOR OF LDSC	CP147	426
15430	777777777777777777777	CON	77777777777777777777B	FEAT184N	54
15431	177700000000000000000	CON	17770000000000000000B	FEAT184N	55
15432	600000000000000000000	CON	60000000000000000000B	FEAT184N	56
15433	377700000000000000000	CON	37770000000000000000B	FEAT184N	57
15434	400000000000000000000	CON	40000000000000000000B	FEAT184N	58
15435	252525252525252525252	CON	25252525252525252525B	FEAT184N	59
15436	525252525252525252522	CON	52525252525252525252B	FEAT184N	60
15437	600000000004004000000	CON	60000000000400400000B	FEAT184N	61
				CP147	430
				CP147	431
	*	LDSE - ERR KEYWORD TABLE.		CP147	432

	*	VFD	42/0LKEYWORD, 18/VALUE	CP147	433
				CP147	434
15440	LDSE	BSS	0	CP147	435
15440	01141400000000000000	CON	0LALL+0	CP147	436
15441	06012401140000000001	CON	0LFATAL+1	CP147	437
15442	16171605000000000002	CON	0LNONE+2	CP147	438
15443	00000000000000000000	DATA	0 LIST TERMINATOR	CP147	439
				CP147	440
				CP147	441
15444	LDSF	BSS	0 MASK FOR MAP TYPE LETTERS	CP147	442
		ECHO	2,L=(N,S,B,E,X)	CP147	443
		POS	1R_L+1	CP147	444
		VFD	1/1	CP147	445
	00	POS	0	CP147	446
				CP147	447
15445	LDSG	BSS	0 VALUES FOR MAP TYPE LETTERS	CP147	448
		ECHO	2,L=(N,S,B,E,X),M=(0,1,2,4,10B),N=(1,0,0,0,0)	CP147	449
		POS	64-2*1R_L	CP147	451
		VFD	4/M,1/N	CP147	452
	00	POS	0	CP147	453
				CP147	455
				CP147	456
	**	LDSET - LOADER OBJECT DIRECTIVES.		CP147	457
				CP147	458
		QUAL	PASS2	CP147	459
12126	LDSET	EQU	ZLIST	CP147	460
	***	LIST - EXTENT OF LISTING.		COMPASS	9211
	*			COMPASS	9212
	*			COMPASS	9213
	*	LIST	P1,P2,...,PN	CMP30	3055
	*	LIST	*	CMP30	3056
	*	CONTROLS LIST OUTPUT WHEN THE LIST PARAMETER (L) ON THE		COMPASS	9215
	*	COMPASS CONTROL CARD IS OTHER THAN *0*. ONE OR MORE OPTIONS		COMPASS	9216
	*	ARE SPECIFIED IN THE VARIABLE FIELD. A MINUS PREFIX TO AN		COMPASS	9217
	*	OPTION CAUSES THE OPTION TO BE DISCONTINUED.		COMPASS	9218
	*	AN ASTERISK CAUSES RETURN TO THE PREVIOUS SETTINGS.		CMP30	3057
	*			COMPASS	9219
	*	OPTION	DESCRIPTION OF OUTPUT	COMPASS	9220
	*			COMPASS	9221
	*	A	LIST SUBSTITUTED LINES. WHEN SELECTED,	COMPASS	9222
	*		THE LINE IS LISTED BEFORE AND AFTER	COMPASS	9223
	*		MICRO AND CONCATENATION SUBSTITUTION	COMPASS	9224
	*		AND REMOVAL.	COMPASS	9225
	*			COMPASS	9226
	*	C	CONTROL CARD LIST. CONTROLS THE LISTING	COMPASS	9227
	*		OF EJECT, SPACE, AND TITLE.	COMPASS	9228
	*			COMPASS	9229
	*	D	DETAIL. SUBSEQUENT LINES FOR DATA, DIS	COMPASS	9230

1412THE

*		RMT, VFD AND LIST OF LITERALS AND	COMPASS	9231
*		DEFERRED SYMBOLS.	COMPASS	9232
*			COMPASS	9233
*	E	ECHOED LINES. INCLUDES ALL ITERATIONS	COMPASS	9234
*		OF DUPLICATED CODE.	COMPASS	9235
*			COMPASS	9236
*	F	IF-SKIPPED LINES.	COMPASS	9237
*			COMPASS	9238
*	G	CODE GENERATIVE LINES. THIS INCUDES	COMPASS	9239
*		BSS, BSSZ, CON, DATA, DIS, R=, AND VFD.	COMPASS	9240
*			COMPASS	9241
*	L	NORMALLY SELECTED, WHEN CANCELED, ONLY	COMPASS	9242
*		REFERENCE TABLE, ERROR FLAGGED LINES AND	COMPASS	9243
*		LIST INSTRUCTIONS ARE LISTED ON THE	COMPASS	9244
*		LONG OUTPUT FILE.	COMPASS	9245
*			COMPASS	9246
*	M	MACRO. LINES GENERATED BY MACRO	COMPASS	9247
*		EXPANSION.	COMPASS	9248
*			CMP19	180
*	N	NORMALLY SELECTED. WHEN CANCELED,	CMP19	181
*		ASSEMBLER DOES NOT PRINT NON-SST SYMBOLS	CMP19	182
*		THAT HAVE NO REFERENCE TABLE ENTRIES.	CMP19	183
*			COMPASS	9249
*	R	NORMALLY SELECTED. WHEN CANCELED,	COMPASS	9250
*		ASSEMBLER DOES NOT ACCUMULATE REFERENCE	COMPASS	9251
*		TABLE INFORMATION.	COMPASS	9252
*			COMPASS	9253
*	S	SYSTEMS MACROS. LINES GENERATED BY	COMPASS	9254
*		SYSTEMS MACRO EXPANSION.	COMPASS	9255
*			CMP19	184
*	T	SST AND XTEXT SYMBOLS THAT HAVE NO	CMP26	27
*		REFERENCE TABLE ENTRIES.	CMP26	28
*			COMPASS	9256
*	X	XTEXT LINES AND LINES BRACKETED BY	COMPASS	9257
*		CTEXT AND ENDX.	COMPASS	9258
*			CMP30	3058
*	\$	ALL OF THE ABOVE.	CMP30	3059
			COMPASS	9259
			COMPASS	9260

15446	5130000116	LIST	QUAL	PASS1		COMPASS	9261
	0303010614		SA3	CP.LISTF		CMP30	3060
15447	0100006101		ZR	X3,CTL70	IF NO EXTERNAL LIST	COMPASS	9263
15450	0400010614		RJ	SLO	SET LIST OPTIONS	COMPASS	9264
			EQ	CTL70		COMPASS	9265

**		LIST - EXTENT OF LISTINGS.				COMPASS	9267
						COMPASS	9268
						COMPASS	9269
15451	5130000116	LIST	QUAL	PASS2		COMPASS	9270
	0303012126		SA3	CP.LISTF		CMP30	3061
15452	0100006101		ZR	X3,ZLIST	IF NO EXTERNAL LIST	COMPASS	9272
15453	0100007516		RJ	SLO	SET LIST OPTIONS	COMPASS	9273
15454	0100007437		RJ	LDL	LIST DEFERRED LINE	COMPASS	9274
			RJ	CPL	CREATE PRINT LINE	COMPASS	9275

15455 0100007732
15456 0400011134RJ LISTL
EQ Z100COMPASS 9276
COMPASS 9277

*** LIT - LITERAL VALUES.

COMPASS 9279

*

COMPASS 9280

*

COMPASS 9281

*SYM LIT ITEM1,ITEM2,,,ITEMN

COMPASS 9282

* (SYM) IS ASSIGNED THE VALUE OF THE LOCATION OF ITEM1 IN THE

COMPASS 9283

* LITERAL BLOCK. UP TO 100 WORDS OF DATA ITEMS, SEPARATED

COMPASS 9284

* BY COMMAS, MAY BE INCLUDED IN ONE (LIT) INSTRUCTION.

COMPASS 9285

COMPASS 9286

COMPASS 9287

15457 43600

LIT

QUAL PASS1
MX6 0

COMPASS 9288

COMPASS 9289

5160003561

SA6

P1TEMP

COUNT OF ITEMS IN LIT

COMPASS 9290

15460 5120003561

LIT1

SA2

P1TEMP

TEST ITEM COUNT

COMPASS 9291

6272777633

SB7

X2-NLITS

COMPASS 9292

15461 0670015500

PL

B7,LIT3

COMPASS 9293

7222030053

SX2

VALUES+X2

COMPASS 9294

15462 77307

SX3

-B7

COMPASS 9295

43400

MX4

0

COMPASS 9296

5150003123

SA5

LWORD

COMPASS 9297

15463 0100006565

RJ

SCD

SCAN DATA ITEM (NEXT LITERAL)

COMPASS 9298

15464 5120003561

SA2

P1TEMP

CUMULATE COUNT

COMPASS 9299

6271777722

SB7

X1-1R

COMPASS 9300

15465 36623

IX6

X2+X3

COMPASS 9301

54620

SA6

A2

COMPASS 9302

0470015470

ZR

B7,LIT2

JUMP IF END OF FIELD

COMPASS 9303

15466 0100005444

RJ

GETCH

COMPASS 9304

15467 0400015460

EQ

LIT1

GO BACK FOR MORE

COMPASS 9305

15470 7120030053

LIT2

SX2

VALUES

LOOK UP VALUES IN LITERAL TABLE

COMPASS 9306

10366

BX3

X6

COMPASS 9307

15471 0306010661

ZR

X6,ERA

IF NO DATA

COMPASS 9308

0100023430

RJ

YTLULIT

COMPASS 9309

15472 73630

SX6

X3

COMPASS 9310

5160003304

SA6

FLAG

STORE LITERAL INDEX

COMPASS 9311

15473 5120003102

SA2

LOCSYM

DEFINE SYMBOL

COMPASS 9312

5130003154

SA3

UI+1

COMPASS 9313

15474 7233000002

SX3

X3+2

COMPASS 9314

0302010614

ZR

X2,CTL70

IGNORE IF NO LOCATION SYMBOL

COMPASS 9315

15475 10266

BX2

X6

COMPASS 9316

7140000000

SX4

0

COMPASS 9317

43500

MX5

0

COMPASS 9318

15476 0100023063

RJ

YDEFLOC

COMPASS 9319

15477 0400010653

EQ

CTL300

RETURN

COMPASS 9320

15500 76610

LIT3

SX6

B1

COMPASS 9321

5160003345

SA6

EFLG

COMPASS 9322

15501 5160003326

+

SA6

FERR

COMPASS 9323

0400010614

EQ

CTL70

COMPASS 9324

** LIT - LITERAL VALUES.

COMPASS 9326

* ENTRY (FLAG) = INDEX INTO LITAB.

COMPASS 9327

COMPASS 9328

COMPASS 9329

COMPASS 9330

CMP7 1

CMP7 2

CMP7 3

CMP7 4

CMP7 5

CMP7 6

CMP7 7

CMP7 8

CMP7 9

CMP7 10

COMPASS 9332

COMPASS 9333

COMPASS 9335

CMP30 3062

CMP30 3063

CMP30 3064

CMP30 3065

CMP30 3066

CMP30 3067

CMP30 3068

CMP7 15

CMP7 16

CMP7 17

COMPASS 9339

COMPASS 9340

CMP7 18

COMPASS 9342

*** LOC - LOCATION COUNTER.

COMPASS 9344

*

COMPASS 9345

*

COMPASS 9346

*

LOC REXP

COMPASS 9347

*

SET LOCATION COUNTER TO (REXP).

COMPASS 9348

COMPASS 9349

COMPASS 9350

LOC

QUAL

PASS1

RJ

YFOUP

FORCE UPPER

COMPASS 9351

SX6

B1+B1

EVALUTE NEW VALUE OF \$

COMPASS 9352

SX1

21

COMPASS 9353

RJ

SCADCON

COMPASS 9354

SA2

AERR

COMPASS 9355

SA3

UERR

COMPASS 9356

SA4

EXVAL

COMPASS 9357

SA5

EXREL

COMPASS 9358

BX2

X3+X2

COMPASS 9359

LX6

X4

COMPASS 9360

SX7

X5

COMPASS 9361

NZ

X2,CTL70

COMPASS 9362

SA6

LOCCTR

COMPASS 9363

SA7

A6+B1

COMPASS 9364

COMPASS 9365

1412THE

0400010614

EQ CTL70

COMPASS 9366

** LOC - LOCATION COUNTER.

COMPASS 9368

COMPASS 9369

COMPASS 9370

COMPASS 9371

15527 0100025141

LOC

QUAL

PASS2

RJ

ZFOUP

FORCE UPPER

COMPASS 9372

15530 76611

SX6

B1+B1

COMPASS 9373

7110000025

SX1

21

COMPASS 9374

15531 0100006440

RJ

SCADCON

COMPASS 9375

15532 0311012126

NZ

X1,ZLIST

EXIT IF ERRORS

COMPASS 9376

5110003254

SA1

EXVAL

COMPASS 9377

15533 54311

SA3

A1+B1

EXREL

COMPASS 9378

10611

BX6

X1

COMPASS 9379

5160003106

SA6

LOCCTR

RESET LOCCTR

COMPASS 9380

15534 10733

BX7

X3

COMPASS 9381

54761

SA7

A6+B1

RESET LOCCTR RELOCATION

COMPASS 9382

0400012125

EQ

ZLLA

EXIT

COMPASS 9383

*** MACHINE - DECLARE OBJECT PROCESSOR TYPE.

CMP30 3070

*

CMP30 3071

*

CMP30 3072

*

MACHINE TYPE,H1,H2,...,HN

CMP30 3073

*

SETS *TARGET*, *VALID*, AND *HARDWARE* FIELDS IN PREFIX TABLE

CMP30 3074

*

IN BINARY OUTPUT, UNDEFINES MACHINE INSTRUCTIONS FOR MACHINES

CMP30 3075

*

OTHER THAN (TYPE), AND SETS A FLAG THAT CAN BE TESTED BY THE

CMP30 3076

*

PSEUDO INSTRUCTIONS IFCP6, IFCP7, IFPP6, AND IFPP7.

CMP30 3077

*

(TYPE) = OBJECT PROCESSOR TYPE, INTERPRETED AS FOLLOWS -

CMP30 3078

*

TYPE

TARGET

VALID

CMP30 3079

*

(CP)

(PP)

(CP)

(PP)

CMP30 3080

*

6

--

--

6X

6P

CMP30 3081

*

6N

6N

--

6X

6P

CMP30 3082

*

7

--

--

7X

7P

CMP30 3083

*

7N

7N

--

7X

7P

CMP30 3084

*

OTHER

--

--

--

YP

CMP30 3085

*

WHERE N IS A NUMERIC CHARACTER, -- REPRESENTS BLANKS,

CMP30 3086

*

AND Y IS 6 IF *PERIPH* SPECIFIED OR 7 IF *PPU* SPEC.

CMP30 3087

*

(HI) = HARDWARE INSTRUCTION DEPENDENCIES. ONLY THE FIRST

CMP30 3088

*

CHARACTER OF EACH IS USED.

CMP30 3089

CMP30 3090

CMP30 3091

CMP30 3092

15535 5110003145

MCH

QUAL

PASS1

SA1

CHAR

GET FIRST CHARACTER

CMP30 3093

RM

IFEQ

CP#RM,0

CPSA227 7

CPSA227 8

CPSA227 9

10611

BX6

X1

F4830CP 45

15536 6271777734

SB7

X1-1R8

F4830CP 46

0570015540

NZ

B7,MCHA

IF NOT 8 GO CHECK FOR 6 OR 7

F4830CP 47

15537 6170000003

SB7

3

ELSE SET MTYPE TO 4 (SEE MCHB)

F4830CP 48

0400015542

EQ

MCHB

F4830CP 49

				RM	ENDIF			F4830CP	50
								CPSA227	10
								CPSA227	11
1	15540	6271777736		MCHA	SB7	X1-1R6		F4830CP	51
2		10611			BX6	X1		CMP30	3095
3	15541	0770015554			MI	B7,MCH1	IF NOT 6 OR 7	CMP30	3096
4		0717015554			GT	B7,B1,MCH1		CMP30	3097
5	15542	20606		MCHB	LX6	6	POSITION *TYPE* FOR ENTRY INTO *VALID*	F4830CP	52
6		76771			SX7	B7+B1		CMP30	3099
7		5160003252			SA6	VALID	SET VALID AND MTYPE	CMP30	3100
8	15543	5170003115			SA7	MTYPE		CMP30	3101
9		5120003270			SA2	PSIM		CPS026	35
10	15544	7160006000			SX6	6000B		CPS026	36
11		0471015546			EQ	B7,B1,MCH0	IF TYPE = 7	CPS026	37
12	15545	12726			BX7	X2+X6	INCLUDE 60B,61B CODES IN MASK	CPS026	38
13		54720			SA7	A2		CPS026	39
14		0400015547			EQ	MCH0A		CPS026	40
15	15546	15726		MCH0	BX7	-X6*X2	EXCLUDE 60B,61B CODES FROM MASK	CPS026	41
16		54720			SA7	A2		CPS026	42
17	15547	0100005444		MCH0A	RJ	GETCH	GET NEXT CHARACTER	CPS026	43
18	15550	6261777744			SB6	X1-1R0		CMP30	3103
19		6271777732			SB7	X1-1R9-1		CMP30	3104
20	15551	0760015554			MI	B6,MCH1	IF NOT NUMERIC (0-9)	CMP30	3105
21		0670015554			PL	B7,MCH1		CMP30	3106
22	15552	5110003252			SA1	VALID		CMP30	3107
23		12616			BX6	X1+X6		CMP30	3108
24	15553	5160003251			SA6	TARGET	SET TARGET	CMP30	3109
25	15554	5150012204		MCH1	SA5	=9R		CMP30	3110
26		6120000060			SB2	48		CMP30	3111
27	15555	0100006036		MCH2	RJ	SCLIST	SKIP FIELD	CMP30	3112
28	15556	5110003145			SA1	CHAR		CMP30	3113
29		6271777722			SB7	X1-1R		CMP30	3114
30	15557	0470015562			ZR	B7,MCH3	IF BLANK (END OF STATEMENT)	CMP30	3115
31		0471015555			EQ	B7,B1,MCH2	IF COMMA (IGNORE EMPTY SUBFIELD)	CMP30	3116
32	15560	76170			SX1	B7		CMP30	3117
33		22221			LX2	X1,B2	POSITION FIRST CHARACTER OF SUBFIELD	CMP30	3118
34		6122777771			SB2	B2-6		CMP30	3119
35	15561	36552			IX5	X5+X2	ADD TO HARDWARE DEPENDENCY STRING	CMP30	3120
36		0620015555			PL	B2,MCH2	LOOP	CMP30	3121
37	15562	10655		MCH3	BX6	X5		CMP30	3122
38		5160003253			SA6	HTYPE	STORE STRING	CMP30	3123
39								CPSA227	12
40				RM	IFEQ	CP#RM,0		CPSA227	13
41								CPSA227	14
42	15563	5110003115			SA1	MTYPE		F4830CP	53
43		7211777773			SX1	X1-4		F4830CP	54
44	15564	0311015565			NZ	X1,MCH4	IF MTYPE.NE.4 GO RETURN	F4830CP	55
45		0100022045			RJ	RIV	ELSE GO REDEFINE INSTRUCTIONS FOR V	F4830CP	56
46								CPSA227	15
47				RM	ENDIF			CPSA227	16
48								CPSA227	17
49	15565			MCH4	BSS	0		F4830CP	57
50	15565	0400010653			EQ	CTL300	RETURN	CMP30	3124
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									

** MACHINE - DECLARE OBJECT PROCESSOR TYPE.

CMP30 3126
CMP30 3127
CMP30 3128
CMP30 3129
CMP30 3130

12126

MCH

QUAL PASS2
EQU ZLIST

*** MACRO - MACRO DEFINITION.

COMPASS 9385
COMPASS 9386
COMPASS 9387

*NAME MACRO P1,P2,P3,,,PN
* ARGUMENTS (PI) MUST START WITH A LETTER, UP TO 63 MAY BE
* LISTED, SEPARATED BY SPECIAL CHARACTERS ,.+-*/()\$=.
* SUBSEQUENT INSTRUCTIONS UNTIL (ENDM) ARE SAVED AS A MACRO
* DEFINITION.

COMPASS 9388
COMPASS 9389
COMPASS 9390
COMPASS 9391
COMPASS 9392
COMPASS 9393

* MACRO NAME,PL,P1,P2,,,PN
* THE FIRST SUBFIELD IS THE MACRO NAME. THE SECOND SUBFIELD
* (PL) IS AN ARGUMENT FROM THE LOCATION FIELD. SUBSEQUENT
* FIELDS ARE THE REMAINING MACRO PARAMETERS.

COMPASS 9394
COMPASS 9395
COMPASS 9396
COMPASS 9397
COMPASS 9398
COMPASS 9399

15566 43000
0100021340
15567 0400010615

MACRO

QUAL PASS1
MX0 0
RJ PMACRO
EQ CTL100

COMPASS 9400
COMPASS 9401
COMPASS 9402
COMPASS 9403
COMPASS 9404

** MACRO - MACRO DEFINITION.

COMPASS 9406
COMPASS 9407
COMPASS 9408
COMPASS 9409
COMPASS 9410

12126

MACRO

QUAL PASS2
EQU ZLIST

*** MACROE - EQUIVALENCED MACRO DEFINITION.

COMPASS 9412
COMPASS 9413
COMPASS 9414

*NAME MACROE P1,P2,...,PN
* ARGUMENTS PI MUST START WITH A LETTER, UP TO 63 MAY BE
* LISTED, SEPARATED BY SPECIAL CHARACTERS ,.+-()\$=.
* SUBSEQUENT INSTRUCTIONS UNTIL (ENDM) ARE SAVED AS A MACRO
* DEFINITION.

COMPASS 9415
COMPASS 9416
COMPASS 9417
COMPASS 9418
COMPASS 9419
COMPASS 9420

* MACROE NAME,PL,P1,P2,...,PN
* THE FIRST SUBFIELD IS THE MACRO NAME. THE SECOND SUBFIELD
* (PL) IS AN ARGUMENT FROM THE LOCATION FIELD. SUBSEQUENT
* FIELDS ARE THE REMAINING MACRO PARAMETERS.

COMPASS 9421
COMPASS 9422
COMPASS 9423
COMPASS 9424
COMPASS 9425
COMPASS 9426

						COMPASS	9427
						COMPASS	9428
15570	7100020000	MACROE	QUAL SX0	PASS1 20000B		COMPASS	9429
	0100021340		RJ	PMACRO		COMPASS	9430
15571	0400010615		EQ	CTL100		COMPASS	9431
		**	MACROE - EQUIVALENCED MACRO DEFINITION.			COMPASS	9433
						COMPASS	9434
						COMPASS	9435
	12126	MACROE	QUAL EQU	PASS2 ZLIST		COMPASS	9436
						COMPASS	9437
		***	MAX - CALCULATE MAXIMUM EXPRESSION.			COMPASS	9439
		*				COMPASS	9440
		*				COMPASS	9441
		*SYM	MAX	EXP1,EXP2,...,EXPN		COMPASS	9442
		*	(SYM) IS REDEFINED TO THE VALUE OF THE LARGEST ADDRESS			COMPASS	9443
		*	EXPRESSION (EXPI).			COMPASS	9444
						COMPASS	9445
						COMPASS	9446
			QUAL	PASS1		COMPASS	9447
15572	5110015625	MAX	SA1	MAXB		COMPASS	9448
15573	43700	MAX1	MX7	0		COMPASS	9449
	10611		BX6	X1		COMPASS	9450
	5170003565		SA7	P1TEMPD		COMPASS	9451
15574	5160015614		SA6	MAXA		COMPASS	9452
	5120003102		SA2	LOCSYM		COMPASS	9453
15575	0312015600		NZ	X2,MAX2	IF LOCATION FIELD PRESENT	COMPASS	9454
	76710		SX7	B1		COMPASS	9455
15576	5170003345		SA7	EFLG		COMPASS	9456
	5170003340		SA7	W6ERR		COMPASS	9457
15577	0400010614		EQ	CTL70	RETURN	COMPASS	9458
15600	76610	MAX2	SX6	B1	SCAN FIRST EXPRESSION	COMPASS	9459
	7110000025		SX1	21		COMPASS	9460
15601	0100006440		RJ	SCADCON		COMPASS	9461
15602	5110003254	MAX3	SA1	EXVAL	SAVE SYMBOL PROPERTIES	COMPASS	9462
	54211		SA2	A1+B1		COMPASS	9463
	54321		SA3	A2+B1		COMPASS	9464
15603	10611		BX6	X1		COMPASS	9465
	22702		LX7	X2		COMPASS	9466
	54431		SA4	A3+B1		COMPASS	9467
15604	5160003561		SA6	P1TEMP		COMPASS	9468
	54761		SA7	A6+B1		COMPASS	9469
	10633		BX6	X3		COMPASS	9470
15605	22704		LX7	X4		COMPASS	9471
	54671		SA6	A7+B1		COMPASS	9472
	54761		SA7	A6+B1		COMPASS	9473
	54371		SA3	A7+B1	SET FLAG	COMPASS	9474
15606	10633		BX6	X3		COMPASS	9475
	5160003304		SA6	FLAG		COMPASS	9476
15607	5120006304	MAX4	SA2	EXSTOP		COMPASS	9477

1

								F4820	652
								F4820	653
				QUAL	PASS1			F4820	654
1	15632	716077775	MCU	SX6	-2	SET FLAG FOR MCU ASSEMBLY		F4820	655
2		5160003116		SA6	PPTYPE			F4820	656
3	15633	5110003145		SA1	CHAR	CHECK FOR 8080 ADDRESSING		F4820A	58
4		43600		MX6	0			F4820A	59
5	15634	6231777734		SB3	X1-1R8			F4820A	60
6	15635	0530015636	+	NZ	B3,*+1	IF NORMAL ADDRESSING MODE		F4820A	61
7		76610		SX6	B1			F4820A	62
8	15636	5160003117		SA6	RMODE			F4820A	63
9		76610		SX6	B1			F4820	657
10	15637	5160003127		SA6	NCHARS	SET NUMBER OF CHARACTERS TO 1		F4820	658
11		7170000010		SX7	8			F4820	659
12	15640	0200012337		JP	BCU.1	PROCESS AS BCU		F4820	660
13									
14									
15									
16									
17			**		MCU - MICROPROCESSOR CONTROL UNIT ASSEMBLY.			F4820	662
18								F4820	663
19								F4820	664
20				QUAL	PASS2			F4820	665
21		12354	MCU	EQU	BCU			CPSA305	19
22									
23									
24									
25									
26			***		MD - MOVE DESCRIPTOR WORD (FOR CMU INSTRUCTION *IM*).			CMP30	3132
27			*					CMP30	3133
28			*					CMP30	3134
29			*	MD	L,KS,CS,KD,CD			CMP30	3135
30			*		(L) = DATA FIELD LENGTH IN CHARACTERS (@8191).			CMP30	3136
31			*		(KS) = SOURCE FIELD FIRST WORD ADDRESS.			CMP30	3137
32			*		(CS) = SOURCE FIELD FIRST CHARACTER POSITION (0-9).			CMP30	3138
33			*		(KD) = DESTINATION FIELD FIRST WORD ADDRESS.			CMP30	3139
34			*		(CD) = DESTINATION FIELD FIRST CHARACTER POSITION (0-9).			CMP30	3140
35								CMP30	3141
36								CMP30	3142
37				QUAL	PASS1			CMP30	3143
38		12477	MD	EQU	CC			CMP30	3144
39									
40									
41									
42									
43			**		MD - MOVE DESCRIPTOR WORD (FOR CMU INSTRUCTION *IM*).			CMP30	3146
44								CMP30	3147
45								CMP30	3148
46				QUAL	PASS2			CMP30	3149
47	15641	76600	MD	SX6	B0			CMP30	3150
48		0400012511		EQ	CC1			CMP30	3151
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									

*** MEMSEL - SELECT PP MEMORY SIZE.

*

* MEMSEL VAL

* SETS TARGET MEMORY SIZE FOR PP ASSEMBLY. IGNORED FOR CPU
* ASSEMBLIES.

* (VAL) = MEMORY SIZE, INTERPRETED AS FOLLOWS...

*	VAL	MEMORY SIZE
*	4	4K - 12 BIT ADDRESS FIELDS
*	8	8K - 13 BIT ADDRESS FIELDS
*	16	16K - 14 BIT ADDRESS FIELDS
*	32	32K - 15 BIT ADDRESS FIELDS
*	64	64K - 16 BIT ADDRESS FIELDS

CPSA281	245
CPSA281	246
CPSA281	247
CPSA281	248
CPSA281	249
CPSA281	250
CPSA281	251
CPSA281	252
CPSA281	253
CPSA281	254
CPSA281	255
CPSA281	256
CPSA281	257
CPSA281	258
CPSA281	259
CPSA281	260
CPSA281	261
CPSA281	262
CPSA281	263
CPSA281	264
CPSA297	50
CPSA281	266
CPSA281	267
CPSA281	268
CPSA281	269
CPSA281	270
CPSA281	271
CPSA281	272
CPSA297	51
CPSA281	274
CPSA281	275
CPSA297	52
CPSA281	277
CPSA281	278
CPSA281	279
CPSA281	280
CPSA281	281
CPSA281	282
CPSA281	283
CPSA281	284
CPSA281	285
CPSA281	286
CPSA281	287
CPSA281	288
CPSA281	289
CPSA281	290
CPSA297	53
CPSA297	54
CPSA297	55
CPSA297	56
CPSA281	292

			QUAL	PASS1	
15642	7170000014	MEMSEL	SX7	12	SET FOR 4K
	5110003145		SA1	CHAR	GET FIRST CHARACTER
15643	7221777722		SX2	X1-1R	CHECK FOR END OF STATEMENT
	0302015662		ZR	X2, MEMSEL2	IF NO ADDRESS FIELD
15644	7110000007		SX1	7	
	7160000003		SX6	3	
15645	0100006440		RJ	SCADCON	GET EXPRESSION VALUE
15646	0311010653		NZ	X1, CTL300	IF ERRORS
	7170000014		SX7	12	SET FOR 4K
15647	5110003254		SA1	EXVAL	EXPRESSION VALUE
	7231777773		SX3	X1-4	
15650	0303015662		ZR	X3, MEMSEL2	IF VALUE = 4
	7170000015		SX7	13	SET FOR 8K
15651	7231777767		SX3	X1-8	
	0303015662		ZR	X3, MEMSEL2	IF VALUE = 8
15652	7170000016		SX7	14	SET FOR 16K
	7231777757		SX3	X1-16	
15653	0303015661		ZR	X3, MEMSEL1	IF VALUE = 16
	7170000017		SX7	15	SET FOR 32K
15654	7231777737		SX3	X1-32	
	0303015661		ZR	X3, MEMSEL1	IF VALUE = 32
15655	7170000020		SX7	16	SET FOR 64K
	7231777677		SX3	X1-64	
15656	0303015661		ZR	X3, MEMSEL1	IF VALUE = 64
	76610		SX6	B1	SET A-ERROR
15657	5160003345		SA6	EFLG	
	5160003322		SA6	AERR	
15660	0400010653		EQ	CTL300	RETURN
15661	5110003272	MEMSEL1	SA1	PSIM2+1	SET TO CHECK FOR PREFETCH ERRORS ON STORES
	10611		BX6	X1	
	55611		SA6	A1-B1	
15662	5170003126	MEMSEL2	SA7	PPMEMSZ	SET MEMORY SIZE
	0400010653		EQ	CTL300	RETURN

** MEMSEL - SELECT PP MEMORY SIZE.

CPSA281 294
CPSA281 295
CPSA281 296
CPSA281 297

QUAL PASS2
EQU ZLIST

12126

MEMSEL

*** MICCNT - MICRO CHARACTER COUNT.

COMPASS 9523
COMPASS 9524
COMPASS 9525
COMPASS 9526
COMPASS 9527
COMPASS 9528
COMPASS 9529

*
*
*SYM MICCNT MNAME

REDEFINES (SYM) TO HAVE A VALUE EQUAL TO THE NUMBER OF
CHARACTERS IN THE MICRO (MNAME).

QUAL PASS1
RJ SCLIST

MICCNT

15663 0100006036

15664 0306015675

10766

15665 0100022621

15666 77241

0440015675

63320

15667 0302015672

36322

20203

15670 54123

43066

36223

15610

15671 7222777765

36226

15672 10622

5160003304

76300

15673 43400

76510

0100023063

15674 0400010614

15675 76610

5160003334

15676 5160003345

76600

15677 5160003322

0400010614

ZR X6,MCT5

BX7 X6

RJ TLUMIC

SX2 B4-B1

ZR B4,MCT5

SB3 X2

ZR X2,MCT4

IX3 X2+X2

LX2 3

SA1 A2+B3

MX0 -6

BX6 -X0*X1

SX2 X2-10

IX2 X2+X6

BX6 X2

SA6 FLAG

SX3 B0

MX4 0

SX5 B1

RJ YDEFLOC

EQ CTL70

SX6 B1

SA6 W2ERR

SA6 EFLG

SX6 B0

SA6 AERR

EQ CTL70

IF MICRO NAME IS NULL

LOOK UP MICRO NAME

N = NUMBER OF VALUE WORDS

IF MICRO NOT FOUND

IF N = 0

LAST VALUE WORD

10 * N

10 * (N - 1) + NUMBER OF CHARACTERS
IN LAST VALUE WORD

SET MICRO COUNT AND DEFINE LOCATION

SET ERROR FLAG

IF ERRORS IN PASS 1

** MICCNT - MICRO CHARACTER COUNT.

COMPASS 9573
COMPASS 9574
COMPASS 9575
COMPASS 9576
COMPASS 9577
COMPASS 9578
COMPASS 9579

QUAL PASS2
SA2 FLAG

MICCNT

15700 5120003304

5130003345

15701 0313012126

SA3 EFLG

NZ X3,ZLIST

DEFINE LOCATION SYMBOL

1
2

1

*SYM MIN EXP1,EXP2,...,EXPN
* (SYM) IS REDEFINED TO THE VALUE OF THE SMALLEST ADDRESS
* EXPRESSION.

COMPASS 9666
COMPASS 9667
COMPASS 9668
COMPASS 9669
COMPASS 9670
COMPASS 9671
COMPASS 9672
COMPASS 9673
COMPASS 9674
COMPASS 9675
COMPASS 9676

15751 5110015752 MIN QUAL PASS1
0400015573 SA1 **1
EQ MAX1
15752 37621 + IX6 X2-X1
0336015602 NG X6,MAX3 IF NEW < OLD

** MIN - CALCULATE MINIMUM EXPRESSION.

COMPASS 9678
COMPASS 9679
COMPASS 9680
COMPASS 9681
COMPASS 9682

15626 MIN QUAL PASS2
EQU MAX

*** NDOP - DEFINE NAD OPERATION CODE.

F4820B 399
F4820B 400
F4820B 401
F4820B 402
F4820B 403
F4820B 404
F4820B 405
F4820B 406
F4820B 407
F4820B 408
F4820B 409
F4820B 410
F4820B 411
F4820B 412
F4820B 413
F4820B 414
F4820B 415
F4820B 416
F4820B 417
F4820B 418
F4820B 419
F4820B 420
F4820B 421
F4820B 422
F4820B 423
F4820B 424
F4820B 425
F4820B 426
F4820B 427
F4820B 428
F4820B 429
F4820B 430
F4820B 431

*NAME NDOP CTL,VAL
* (NAME) = MNEMONIC NAME.
* (CTL) = 0 - 4-BIT ADDRESS. (SAB)
* 1 - (16 - 4-BIT) ADDRESS. (SLC)
* 2 - (15 - 4-BIT) ADDRESS. (TAB)
* 3 - 8-BIT ADDRESS. (ADN)
* 4 - 9-BIT RELATIVE ADDRESS. (UJR)
* 5 - 4-BIT CHANNEL AND NO ADDRESS. (IAN)
* 6 - 8-BIT ADDRESS AND OPTIONAL
* INDEXING. (LDD)
* 7 - 4-BIT CHANNEL AND 4-BIT ADDRESS. (INT)
* 8 - 16 BIT INSTRUCTION,NO ADDRESS (JFA)
* 9 - 8 BIT ADDRESS BACKWARD ONLY (RTB)
* 10 - 12-BIT ADDRESS. (FNA)
* 11 - 2 16-BIT ADDRESS I/O. (IAM)
* WITH 2 INSTRUCTION PARAMETERS.
* 12 - 2 16-BIT ADDRESS. (TST)
* WITH 3 INSTRUCTION PARAMETERS.
* 13 - 7 BIT ADDRESS (BIT 8 SET = BACKWARD) (L1R)
* (BIT 8 ZERO = FORWARD)
* 14 - 16 BIT INSTRUCTION WITH 16 BIT
* ADDRESS. (LJM)
* 15 - 16 BIT INSTRUCTION WITH 3 16 BIT
* ADDRESSES (QGT)
* 16 - 4 BIT ADDRESS AND 15-4 BIT FLAG. (SCM)
* 17 - 16 BIT INSTRUCTION AND 16 BIT RELATIVE FORWARD
* ADDRESS. (CCU)
* (VAL) = 16-BIT OPERATION CODE VALUE.
*

76	1
77	

COMPASS 9690
COMPASS 9691
COMPASS 9692
COMPASS 9693

10653 NIL QUAL PASS1
EQU CTL300

** NIL - DO NOTHING.

COMPASS 9695
COMPASS 9696
COMPASS 9697
COMPASS 9698
COMPASS 9699

12126 NIL QUAL PASS2
EQU ZLIST

*** NOLABEL - DELETE BINARY IDENT TABLE.

COMPASS 9701
COMPASS 9702
COMPASS 9703
COMPASS 9704
COMPASS 9705
COMPASS 9706
COMPASS 9707

*
*
* NOLABEL CHAR
* IF (CHAR) IS BLANK, DELETE THE 7700 IDENT TABLE AND THE 5000
* OVERLAY WORD OR THE PP HEADER WORD.
* IF (CHAR) IS (I), DELETE ONLY THE IDENT TABLE.

COMPASS 9708
COMPASS 9709
COMPASS 9710

15774 5110003130 NOLABEL QUAL PASS1
0301010647 SA1 ABSFG
15775 5110003145 ZR X1,CTL80 ERROR IF NOT ABSOLUTE CODE
76610 SA1 CHAR CHECK TYPE
76711 SX6 B1 ALL LABELS
15776 6271777722 SX7 B1+B1 IDENT LABEL ONLY
6261777766 SB7 X1-1R
15777 5160003132 SB6 X1-1RI
0470010653 SA6 NOLFG
16000 54760 ZR B7,CTL300 IF ALL LABELS
0460010653 SA7 A6 IDENT LABEL ONLY
16001 5160003322 ZR B6,CTL300
5160003345 SA6 AERR SET AERR = A
16002 0400010614 SA6 EFLG
EQ CTL70

COMPASS 9711
COMPASS 9712
COMPASS 9713
COMPASS 9714
COMPASS 9715
COMPASS 9716
COMPASS 9717
COMPASS 9718
COMPASS 9719
COMPASS 9720
COMPASS 9721
COMPASS 9722
COMPASS 9723
COMPASS 9724

** NOLABEL - DELETE BINARY IDENT TABLE.

COMPASS 9726
COMPASS 9727
COMPASS 9728
COMPASS 9729
COMPASS 9730

12126 NOLABEL QUAL PASS2
EQU ZLIST

*** NOREF - NO REFERENCE.

COMPASS 9732
COMPASS 9733
COMPASS 9734

*	NOREF	P1,P2,...,PN	CMP19	193			
*	SUPPRESSES THE LISTING OF NAMED SYMBOLS IN THE CROSS		CMP19	194			
*	REFERENCE TABLE. THE PARAMETERS CAN BE OF THE FOLLOWING		CMP19	195			
*	FORM -		CMP19	196			
*	SYM	SUPPRESS LISTING OF SYMBOL (SYM).	CMP19	197			
*	/QUAL/SYM	SUPPRESS LISTING OF SYMBOL (/QUAL/SYM).	CMP19	198			
*	/QUAL/	SUPPRESS LISTING OF ALL SYMBOLS WITH	CMP19	199			
*		QUALIFIER (QUAL).	CMP19	200			
*	IF LOCATION FIELD IS PRESENT, IT IS USED AS QUALIFIER FOR		CP096A	412			
*	ALL SYMBOLS IN VARIABLE FIELD THAT DO NOT HAVE EXPLICIT		CP096A	413			
*	QUALIFIERS.		CP096A	414			
			COMPASS	9738			
			COMPASS	9739			
			COMPASS	9740			
16003	5110003112	NOREF	SA1	QVAL	SAVE CURRENT QUALIFIER	CMP19	201
	5120003145		SA2	CHAR		CMP19	202
16004	10611		BX6	X1		CMP19	203
	6272777727		SB7	X2-1R/	LOOK AT NEXT CHARACTER	CMP19	204
	54611		SA6	A1+B1		CMP19	205
16005	0570016030		NZ	B7,NOR3	IF NOT SLASH	CMP19	206
	0100005444		RJ	GETCH		CMP19	207
16006	5120003145		SA2	CHAR		CMP19	208
	7262777727		SX6	X2-1R/		CMP19	209
16007	0306016011		ZR	X6,NOR1	IF BLANK QUALIFIER	CMP19	210
	0100006025		RJ	SCITEM	SCAN QUALIFIER NAME	CMP19	211
16010	6271777727		SB7	X1-1R/		CMP19	212
	0570010661		NZ	B7,ERA	IF NO TRAILING SLASH	CMP19	213
16011	10166	NOR1	BX1	X6		CMP19	214
	0100006151		RJ	SQV	SET QUALIFIER VALUE	CMP19	215
16012	0100005444		RJ	GETCH	SKIP TRAILING SLASH	CMP19	216
16013	0100006025		RJ	SCITEM	SCAN SYMBOL	CMP19	217
16014	0316016037		NZ	X6,NOR4		CMP19	218
						CMP19	219
		*	PROCESS /QUALNAME/ WITH NO SYMBOL.			CMP19	220
						CMP19	221
	5110003112		SA1	QVAL		CMP19	222
16015	5120003412		SA2	0.QVTAB		CMP19	223
	66211		SB2	B1+B1		CMP19	224
	20114		LX1	12		CMP19	225
16016	6272777776		SB7	X2-1		CMP19	226
	0301016045		ZR	X1,NOR7	IF BLANK QUALIFIER	CMP19	227
16017	53317		SA3	X1+B7	SET NOREF BIT	CMP19	228
	43601		MX6	1		CMP19	229
	0333016045		NG	X3,NOR7	IF ALREADY SET IN QVTAB ENTRY	CMP19	230
16020	12663		BX6	X6+X3		CMP19	231
	76410		SX4	B1		CMP19	232
	20160		LX1	-12		CMP19	233
	54630		SA6	A3		CMP19	234
16021	5120003410		SA2	0.SYMTAB	SET NOREF IN SYMBOL TABLE	CMP19	235
	5130003447		SA3	L.SYMTAB		CMP19	236
16022	43014		MX0	12		CMP19	237
	53520		RX5	X2		CP096A	415
	63730		SB7	X3		CMP19	239
	20443		LX4	35		CMP19	240
16023	73222	NOR2	SX2	X2+B2		CP096A	416
	11605		BX6	X0*X5		CP096A	417
	67772		SB7	B7-B2		CMP19	242

	16024	13661	53520	RX5	X2		CP096A	418
				BX6	X6-X1		CP096A	419
		0770016045		NG	B7,NOR7	IF END OF TABLE	CMP19	245
	16025	0316016023		NZ	X6,NOR2	IF NOT SAME QUALIFIER	CP096A	420
		7272777776		SX7	X2-1		CP096A	421
	16026	53370		RX3	X7		CP096A	422
		12634		BX6	X3+X4		CMP19	248
		53670		WX6	X7		CP096A	423
	16027	0400016023		EQ	NOR2		CMP19	250
							CMP19	251
			*		PROCESS SYMBOL WITHOUT QUALIFIER.		CMP19	252
							CMP19	253
	16030	5110003102	NOR3	SA1	LOCSYM		CP096A	424
		0311016035		NZ	X1,NOR3A	IF QUALIFIER IN LOCATION FIELD	CP096A	425
	16031	0100006025		RJ	SCITEM		CP096A	426
	16032	0306016045		ZR	X6,NOR7	IF NO SYMBOL	CMP19	255
		10166		BX1	X6		CMP19	256
	16033	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL	CMP19	257
	16034	0313016042		NZ	X3,NOR5	IF FOUND	CMP19	258
		0400016044		EQ	NOR6		CMP19	259
							CP096A	427
	16035	0100006151	NOR3A	RJ	SQV	SET QUALIFIER VALUE	CP096A	428
	16036	0100006025		RJ	SCITEM		CP096A	429
							CMP19	260
			*		PROCESS /QUALNAME/SYMBOL.		CMP19	261
							CMP19	262
	16037	10166	NOR4	BX1	X6		CP096A	430
		0100006200		RJ	TLUSYMT		CMP19	265
	16040	0303016044		ZR	X3,NOR6	IF NOT IN SYMBOL TABLE	CMP19	268
		7203777776		SX0	X3-1		CP096A	431
	16041	53400		RX4	X0		CP096A	432
		13545		BX5	X4-X5		CMP19	270
		0315016044		NZ	X5,NOR6	IF NOT SAME QUALIFIER	CMP19	271
							CMP19	272
			*		SET NOREF BIT FOR SYMBOL.		CMP19	273
							CMP19	274
	16042	76410	NOR5	SX4	B1		CMP19	275
		20443		LX4	35		CMP19	276
		12624		BX6	X2+X4	SET NOREF BIT	CMP19	277
		53630		WX6	X3		CP096A	433
	16043	0400016045		EQ	NOR7		CMP19	279
	16044	76210	NOR6	SX2	B1	MAKE SYMBOL TABLE ENTRY	CMP19	280
		20243		LX2	35	WITH NOREF BIT SET	CMP19	281
		0100005407		RJ	ENTSYMT		CMP19	282
	16045	5110003113	NOR7	SA1	QVAL+1	RESTORE CURRENT QUALIFIER	CMP19	283
		10611		BX6	X1		CMP19	284
	16046	5120003145		SA2	CHAR		CMP19	285
		6272777722		SB7	X2-1R	LOOK AT NEXT CHARACTER	CMP19	286
	16047	55611		SA6	A1-B1		CMP19	287
		0470010653		ZR	B7,CTL300	IF BLANK	CMP19	288
	16050	0571010661		NE	B7,B1,ERA	IF NOT COMMA	CMP19	289
		0100005444		RJ	GETCH	SKIP COMMA	CMP19	290
	16051	0400016003		EQ	NOREF	LOOP	CMP19	291

1412THE

** NOREF - NO REFERENCE.

COMPASS 9743
COMPASS 9744
COMPASS 9745
COMPASS 9746
CMP19 292

12126

NOREF

QUAL PASS2
EQU ZLIST

*** OCTMIC - OCTAL CONVERSION.

COMPASS 9764
COMPASS 9765
COMPASS 9766

*MNAME

OCTMIC AEXP1,AEXP2
USING AN OCTAL CONVERSION, (AEXP1) IS CONVERTED INTO A
CHARACTER STRING. THE OPTIONAL PARAMETER (AEXP2) DEFINES
THE LENGTH OF THE RESULTING MICRO. IF THE FIELD IS LARGER
THAN REQUIRED, THE CHARACTERS ARE RIGHT JUSTIFIED WITH
LEADING ZERO FILL. IF (AEXP2) IS BLANK, THE CHARACTER
STRING HAS LEADING ZERO SUPPRESSION. A ZERO STRING
WILL PRODUCE ONE ZERO. MAXIMUM LENGTH IS 10 CHARACTERS.
(MNAME) IS THE MICRO NAME.

COMPASS 9767
COMPASS 9768
COMPASS 9769
COMPASS 9770
COMPASS 9771
COMPASS 9772
COMPASS 9773
COMPASS 9774
COMPASS 9775

COMPASS 9776
COMPASS 9777
COMPASS 9778

16052 7160000003

7110000074

OCTMIC

QUAL PASS1

SX6 3

SX1 60

16053 0100006440

RJ SCADCON

16054 5110003254

SA1 EXVAL

0100005260

RJ COCT

16055 0400013213

EQ DMC1

COMPASS 9779
COMPASS 9780
CPS052 3
COMPASS 9782
COMPASS 9783
COMPASS 9784

** OCTMIC - OCTAL CONVERSION.

COMPASS 9786
COMPASS 9787
COMPASS 9788
COMPASS 9789
CPS010 61

13242

OCTMIC

QUAL PASS2
EQU DECMIC

*** OPDEF - SPECIAL MACRO FORM.

COMPASS 9792
COMPASS 9793
COMPASS 9794
COMPASS 9795
COMPASS 9796
COMPASS 9797
COMPASS 9798
COMPASS 9799

*

*

*SYTX

OPDEF P1,P2,P3
(SYTX) IS ABBREVIATED DESCRIPTION OF CP INSTRUCTION TO BE
RECOGNIZED AS AN OPDEF CALL. VARIABLE SUBFIELDS ARE FORMAL
ARGUMENTS LISTED AS FOR (MACRO). PROVIDES DESCRIPTION
OF MACROS IN CP MACHINE INSTRUCTION FORMAT.

COMPASS 9800
COMPASS 9801
COMPASS 9802
COMPASS 9803
COMPASS 9804
COMPASS 9805

16056 43073

0100021340

OPDEF

QUAL PASS1

MX0 59

RJ PMACRO

16057 0400010615

EQ CTL100

** OPDEF - SPECIAL MACRO FORM.

COMPASS 9807
COMPASS 9808
COMPASS 9809
COMPASS 9810
COMPASS 9811

12126

OPDEF

QUAL
EQU

PASS2
ZLIST

*** OPSYN

COMPASS 9813
COMPASS 9814
COMPASS 9815

*NAME

OPSYN NAME

THIS MAKES THE OPERATION CODE IN THE LOCATION FIELD
SYNONYMOUS WITH THE PP INSTRUCTION, PSEUDO OPERATION,
OR MACRO NAME IN THE ADDRESS FIELD.

COMPASS 9816
COMPASS 9817
COMPASS 9818
COMPASS 9819

COMPASS 9820
COMPASS 9821

16060 5110003303

OPSYN

QUAL
SA1

PASS1
OPTYPE

SAVE OPTYPE

COMPASS 9822
COMPASS 9823

10611

BX6

X1

COMPASS 9824

16061 5160003561

SA6

P1TEMP

COMPASS 9825

5110003264

SA1

BADLOC

CHECK LOCATION FIELD

COMPASS 9826

16062 5120003102

SA2

LOCSYM

COMPASS 9827

6170003320

SB7

LERR

COMPASS 9828

16063 0311016075

NZ

X1,OPS1

IF BAD LOCATION

COMPASS 9829

0302016075

ZR

X2,OPS1

IF NO LOCATION SYMBOL

COMPASS 9830

16064 0100006036

RJ

SCLIST

CPS126 5

16065 6170003322

SB7

AERR

COMPASS 9832

0306016075

ZR

X6,OPS1

IF ADDRESS FIELD EMPTY

COMPASS 9833

16066 10166

BX1

X6

COMPASS 9834

0100006166

RJ

TLUOP

FIND EQUIVALANCE

COMPASS 9835

16067 6170003322

SB7

AERR

COMPASS 9836

0306016075

ZR

X6,OPS1

IF ADDRESS FIELD NOT DEFINED

COMPASS 9837

16070 10266

BX2

X6

CMP64G 137

76010

SX0

B1

SET PROGRAM-DEFINED FLAG

CMP64G 138

21271

AX2

57

CMP64G 139

12320

BX3

X2+X0

CMP64G 140

16071 20057

+

LX0

47

CMP64G 141

0313016072

NZ

X3,*+1

IF NOT A MACRO

CMP64G 142

20012

LX0

57-47

CMP64G 143

16072 12260

+

BX2

X6+X0

CMP64G 144

5110003102

SA1

LOCSYM

COMPASS 9841

16073 0100005374

RJ

ENTOP

COMPASS 9842

16074 0400010655

EQ

CTL400

RETURN

COMPASS 9843

16075 76610

OPSP

SX6

B1

SET ERROR FLAG

COMPASS 9844

56670

SA6

B7

COMPASS 9845

5160003345

SA6

EFLG

COMPASS 9846

16076 0400010655

EQ

CTL400

RETURN

COMPASS 9847

** OPSYN - OPERATION SYNONYMOUS.

COMPASS 9849

COMPASS 9850

COMPASS 9851

QUAL

PASS2

COMPASS 9852

COMPASS 9853

1

76	1
77	

1
2

76	1
77	

COMPASS 9976
COMPASS 9977

COMPASS	9979
COMPASS	9980
COMPASS	9981
COMPASS	9982
COMPASS	9983
COMPASS	9984
COMPASS	9985
COMPASS	9986
COMPASS	9987
COMPASS	9988
COMPASS	9989
COMPASS	9990
COMPASS	9991
COMPASS	9992
COMPASS	9993
COMPASS	9994
COMPASS	9995
COMPASS	9996
COMPASS	9997
COMPASS	9998
COMPASS	9999
COMPASS	10000
COMPASS	10001
COMPASS	10002
COMPASS	10003
COMPASS	10004
COMPASS	10005
COMPASS	10006
COMPASS	10007
COMPASS	10008
COMPASS	10009
COMPASS	10010
COMPASS	10011
COMPASS	10012
COMPASS	10013
COMPASS	10014
COMPASS	10015
COMPASS	10016
COMPASS	10017
COMPASS	10018
COMPASS	10019
COMPASS	10020

*
*NAME PPOP CTL,VAL,TYP
* (NAME) = MNEMONIC NAME.
* (CTL) = 1 - 24-BIT WITH 12-BIT ADDRESS AND NO INDEXING.
* 2 - 12-BIT WITH SIGNED RELATIVE ADDRESS
* OR ABSOLUTE ADDRESS (UJN).
* 3 - 24-BIT WITH 18-BIT ADDRESS (LDC).
* 4 - 12-BIT WITH 6-BIT ADDRESS (LDN).
* 5 - 24-BIT WITH 12-BIT ADDRESS AND OPTIONAL
* INDEXING (LDM).
* 6 - 12-BIT WITH SIGNED RELATIVE ADDRESS (SHN).
* 7 - 24-BIT WITH 12-BIT ADDRESS AND REQUIRED
* SECOND FIELD (FNC).
* (VAL) = 12-BIT OPERATION CODE VALUE.
* (TYP) = 6 OR 7 TO RESTRICT INSTRUCTION TO 6000 OR 7000.

COMPASS 10024
CMP30 3235
COMPASS 10026
COMPASS 10027
COMPASS 10028
COMPASS 10029
COMPASS 10030
COMPASS 10031
COMPASS 10032
COMPASS 10033
COMPASS 10034
COMPASS 10035
COMPASS 10036
COMPASS 10037
CMP30 3236
COMPASS 10038
COMPASS 10039
COMPASS 10040

16221	7170100040	PPOP	SX7	100040B	SET PP AND OPSYN	F4820	667
16222	7160000003	PPOP1	SX6	3	READ CTL	F4820	668
	20752		LX7	42		F4820	669
	73160		SX1	X6		F4820	670
16223	5170003561		SA7	P1TEMP		F4820	671
	0100006440		RJ	SCADCON		F4820	672
16224	5110003254		SA1	EXVAL		F4820	673
	5120003561		SA2	P1TEMP		F4820	674
16225	10711		BX7	X1		F4820	675
	7110000014		SX1	12	READ VAL	F4820	676
	20203		LX2	3		F4820	677
16226	5170003562		SA7	P1TEMPA		F4820	678
16227	0322016230	+	PL	X2,*+1	IF PPOP	F4820	679
	7110000020		SX1	16		F4820	680
16230	7160000003		SX6	3		F4820	681
	0100006440		RJ	SCADCON		COMPASS 10049	
16231	5110003254		SA1	EXVAL		CMP30 3237	
	7160000003		SX6	3	READ TYP	CMP30 3238	
16232	10711		BX7	X1		CMP30 3239	
	7110000003		SX1	3		CMP30 3240	
16233	5170003563		SA7	P1TEMPB		CMP30 3241	
	0100006440		RJ	SCADCON		CMP30 3242	
16234	5120003561		SA2	P1TEMP		F4820 682	
	20203		LX2	3		F4820 683	
	76400		SX4	B0		F4820 684	
16235	0332016240		NG	X2,PPOP2	IF BCU	F4820 685	
	5110003254		SA1	EXVAL	GET TYP	CMP30 3243	
16236	6271777771		SB7	X1-6		CMP30 3245	
	0770016240		MI	B7,PPOP2	IF NOT 6 OR 7, ASSUME 0	CMP30 3246	
16237	0717016240		GT	B7,B1,PPOP2		CMP30 3247	
	76471		SX4	B7+B1		CMP30 3248	
	20403		LX4	3		CMP30 3249	
16240	5110003264	PPOP2	SA1	BADLOC		CMP30 3250	
	76610		SX6	B1		COMPASS 10051	
16241	0301016243		ZR	X1,PPOP3	IF NO LOCATION ERROR	F4820 686	
	5160003320		SA6	LERR		COMPASS 10053	
16242	5160003345		SA6	EFLG		COMPASS 10054	
16243	5110003562	PPOP3	SA1	P1TEMPA		F4820 687	
	54211		SA2	A1+B1		CMP30 3251	

16244	5130003345		SA3	EFLG		COMPASS 10057
	43071		MX0	-3		COMPASS 10059
	15110		BX1	-X0*X1		COMPASS 10060
16245	5150003561		SA5	P1TEMP		F4820 688
	20503		LX5	3		F4820 689
16246	0335016247	+	NG	X5,*+1	IF BCOP	F4820 690
	0301010661		ZR	X1,ERA	IF CTL = 0	CMP27 17
16247	12141		BX1	X4+X1		CMP30 3252
	55411		SA4	A1-B1		F4820 691
	20133		LX1	27		COMPASS 10061
	36614		IX6	X1+X4		F4820 692
16250	20403		LX4	3		F4820 693
16251	43060	+	MX0	-12		F4820 694
	0324016252		PL	X4,*+1	IF PPOP	F4820 695
	43054		MX0	-16		F4820 696
16252	15220		BX2	-X0*X2		F4820 697
	36262		IX2	X6+X2		F4820 698
	5110003102		SA1	LOCSYM		COMPASS 10067
16253	0313010614		NZ	X3,CTL70	IF ERROR	COMPASS 10068
	0100005374		RJ	ENTOP		COMPASS 10069
16254	0400010653		EQ	CTL300	RETURN	COMPASS 10070

** PPOP - DEFINE PP OPERATION CODE.

COMPASS 10072

COMPASS 10073

COMPASS 10074

COMPASS 10075

COMPASS 10076

12126

PPOP

QUAL

PASS2

EQU

ZLIST

*** PURGDEF - PURGE CPU OPCODE.

CMP6 2

*

CMP6 3

*

CMP6 4

*

PURGDEF SYNTAX

CMP6 5

*

(SYNTAX) IS THE SYNTAX OF A CPU OPCODE.

CMP6 6

*

THE SPECIFIED OPCODE IS PURGED FROM THE OP-CODE TABLE

CMP6 7

*

FOR THE REMAINDER OF THE CURRENT ASSEMBLY.

CMP6 8

CMP6 9

CMP6 10

CMP6 11

CMP6 12

16255 5120003144

PURGDEF

QUAL

PASS1

COLUMN

ASSEMBLE SYNTAX

5212026436

SA1

X2+CARD-1

CMP6 13

16256 0100022501

RJ

SOS

CMP6 14

16257 0306010655

ZR

X6,CTL400

IF SYNTAX ERROR

CMP6 15

5110003561

SA1

P1TEMP

PURGE OPCODE

CMP6 16

16260 0100021711

RJ

PG0

CMP6 17

16261 0400010655

EQ

CTL400

CMP6 18

** PURGDEF - PURGE CPU OPCODE.

CMP6 20

CMP6 21

		QUAL	PASS2			CMP6	22
12126	PURGDEF	EQU	ZLIST			CMP6	23
						CMP6	24
	***	PURGMAC - PURGE MACRO.				COMPASS	10078
	*					COMPASS	10079
	*					COMPASS	10080
	*	PURGMAC NAME1,NAME2,...,NAMEN				COMPASS	10081
	*	PURGMAC NAME				COMPASS	10082
	*	(NAMEI) IS THE MACRO, PSEUDO, OR PP INSTRUCTION NAME.				COMPASS	10083
	*	THE SPECIFIED OPERATION IS PURGED FROM THE OP-CODE				COMPASS	10084
	*	TABLE FOR THE REMAINDER OF THE CURRENT ASSEMBLY.				COMPASS	10085
						COMPASS	10086
						COMPASS	10087
		QUAL	PASS1			COMPASS	10088
	PURGMAC	RJ	SCLIST	SCAN ITEM		CPS202	5
		SA6	P1TEMP			COMPASS	10090
		BX1	X6	PURGE OPCODE		CMP6	25
		RJ	PG0			CMP6	26
		SA1	CHAR			CMP6	27
77722		SB7	X1-1R			CPS202	6
		ZR	B7,CTL400	IF END OF LIST		CPS202	7
016262		EQ	PURGMAC			CMP6	33
	**	PURGMAC - PURGE MACRO.				COMPASS	10136
						COMPASS	10137
						COMPASS	10138
		QUAL	PASS2			COMPASS	10139
12126	PURGMAC	EQU	ZLIST			COMPASS	10140
	***	QUAL - SET SYMBOL QUALIFIER.				COMPASS	10142
	*					COMPASS	10143
	*					COMPASS	10144
	*MNAME	QUAL	NAME			CMP30	3253
	*MNAME	QUAL	*			CMP30	3254
	*	(NAME) IS THE SYMBOL QUALIFIER NAME. ALL SYMBOLS DEFINED				COMPASS	10146
	*	AFTER THE OCCURRENCE OF A (QUAL) MUST BE REFERENCED FROM				COMPASS	10147
	*	OUTSIDE THE QUAL BLOCK AS (/NAME/SYMBOL). IF (NAME) IS				COMPASS	10148
	*	BLANK, THE FOLLOWING SYMBOLS ARE GLOBAL. QUALIFIED SYMBOL				COMPASS	10149
	*	NAMES MAY BE THE SAME AS OTHER QUALIFIED OR GLOBAL SYMBOLS.				COMPASS	10150
	*	WHEN A SYMBOL IS REFERENCED, A CHECK IS MADE FIRST FOR THE				COMPASS	10151
	*	QUALIFIED SYMBOL, THEN THE GLOBAL SYMBOL.				COMPASS	10152
	*	AN ASTERISK CAUSES RETURN TO THE PREVIOUS QUALIFIER.				CMP30	3255
	*	IF (MNAME) IS PRESENT, SAVE THE CURRENT QUALIFIER NAME IN				CMP30	3256
	*	THE MICRO MNAME.				CMP30	3257
						COMPASS	10153
						COMPASS	10154
		QUAL	PASS1			COMPASS	10155

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16316	0100006151 5120003113		RJ	SQV		COMPASS 10184
	5110003525		SA2	QVAL+1		CMP30 3297
16317	20214		SA1	QUALSTK	PUSH DOWN QUAL STACK	CMP30 3298
	10622		LX2	12		CMP30 3299
	0100005627		BX6	X2		CMP30 3300
16320	0400016323		RJ	PUSH		CMP30 3301
			EQ	QAL2		COMPASS 10185
		*		PROCESS QUAL *		COMPASS 10186
						COMPASS 10187
16321	5110003525	QAL1	SA1	QUALSTK	PUSH UP QUAL STACK	COMPASS 10188
	0100005610		RJ	PULL		CMP30 3302
16322	20660		LX6	-12		CMP30 3303
	5160003112		SA6	QVAL		CMP30 3304
16323	5120003412	QAL2	SA2	0.QVTAB		COMPASS 10191
	5110003112		SA1	QVAL		COMPASS 10192
16324	0301016326		ZR	X1,QAL3	IF BLANK QUAL	COMPASS 10193
	20114		LX1	12		COMPASS 10194
	36221		IX2	X2+X1		COMPASS 10195
16325	5212777776		SA1	X2-1		COMPASS 10196
	43614		MX6	-48		COMPASS 10197
	15116		BX1	-X6*X1		CMP19 293
16326	0100006262	QAL3	RJ	LJUST		CMP19 294
16327	5160003621		SA6	QNAME	STORE IN SUBTITLE LINE	COMPASS 10198
	0400012126		EQ	ZLIST	RETURN	CPS028 353
						COMPASS 10200
		***		REP - DATA GENERATION.		COMPASS 10202
		*				COMPASS 10203
		*				COMPASS 10204
		*	REP	P1/EXP,P2/EXP,,,P5/EXP		COMPASS 10205
		*		GENERATE REPLICATION TABLES FOR THE RELOCATABLE LOADER.		COMPASS 10206
		*		EACH SUB-FIELD CONTAINS A LETTER, A / AND AN EXPRESSION.		COMPASS 10207
		*		(S/REXP) SOURCE ADDRESS.		COMPASS 10208
		*		(D/REXP) DESTINATION ADDRESS.		COMPASS 10209
		*		(C/AEXP) REPLICATION COUNT.		COMPASS 10210
		*		(B/AEXP) CODE BLOCK SIZE.		COMPASS 10211
		*		(I/AEXP) INCREMENT.		COMPASS 10212
						COMPASS 10213
						COMPASS 10214
			SEG	PSEUDO-OP PROCESSING (R-Z).		CMP30 3305
			QUAL	PASS1		COMPASS 10215
16330	5110003130	REP	SA1	ABSFG		CMP30 3306
	0311010647		NZ	X1,CTL80	COMPLAIN IF NOT RELOCATABLE	CMP30 3307
16331	0400010614		EQ	CTL70	PERFORM MOST PROCESSING IN PASS 2	CMP30 3308
		**		REP - DATA GENERATION.		COMPASS 10218
						COMPASS 10219
						COMPASS 10220
			QUAL	PASS2		COMPASS 10221
16332	43700	REP	MX7	0		COMPASS 10222
16333	5170004066	ZREP	SA7	P2TEMP	SET REP TYPE	COMPASS 10223

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16366	7160000002	ZREPD	SX6	2		COMPASS 10282
	0100006440		RJ	SCADCON		COMPASS 10283
16367	6170000002		SB7	2		COMPASS 10284
	0400016355		EQ	ZREPXX		COMPASS 10285
		*		PROCESS INCREMENT.		COMPASS 10286
						COMPASS 10287
16370	7160000003	ZREPI	SX6	3		COMPASS 10288
	0100006530		RJ	SMC		COMPASS 10289
16371	6170000003		SB7	3		COMPASS 10290
	0400016355		EQ	ZREPXX		COMPASS 10291
		*		PROCESS SOURCE.		COMPASS 10292
						COMPASS 10293
16372	7160000002	ZREPS	SX6	2		COMPASS 10294
	0100006440		RJ	SCADCON		COMPASS 10295
16373	6170000004		SB7	4		COMPASS 10296
	0400016355		EQ	ZREPXX		COMPASS 10297
16374	5110004066	ZREP10	SA1	P2TEMP		COMPASS 10298
	0301016405		ZR	X1,ZREP13	IF DEFERRED (REP)	COMPASS 10299
16375	0321016404		PL	X1,ZREP12	IF INSTANT UNCONDITIONAL (REPI)	COMPASS 10300
	5120003275		SA2	OPADS+2		COMPASS 10301
16376	0312016377	+	NZ	X2,*+1	IF DESTINATION ADDRESS NON-ZERO	COMPASS 10302
	5120003277		SA2	OPADS+4		CMP30 3316
16377	76610		SX6	B1		CMP30 3317
	21230		AX2	24	GET DESTINATION RELOCATION	CMP30 3318
	37426		IX4	X2-X6		CMP30 3319
	23314		AX3	X4,B1		CMP30 3320
16400	0303016403		ZR	X3,ZREP11	IF NOT A COMMON BLOCK, CHANGE TO REPI	CMP30 3321
	5130003166		SA3	LLB		CMP30 3322
16401	20430		LX4	24		CMP30 3323
	13543		BX5	X4-X3		CMP30 3324
	20214		LX2	12		CMP30 3325
16402	0305016403		ZR	X5,ZREP11	IF LCM LOCAL BLOCK	CMP30 3326
	12662		BX6	X6+X2		CMP30 3327
16403	54610	ZREP11	SA6	A1		CMP30 3328
16404	0100025401	ZREP12	RJ	DBSSZ	DUMP BSSZ CODING IF REPC OR REPI	CMP30 3329
16405	5110003275	ZREP13	SA1	OPADS+2	CHECK SOURCE AND DESTINATION ADDRESS RANGES	CMP30 3330
	5120003277		SA2	OPADS+4		CMP30 3331
16406	43065		MX0	17-24		CMP30 3332
	12512		BX5	X1+X2		CMP30 3333
	5130004066		SA3	P2TEMP	HEADER WORD	CMP30 3334
16407	21521		AX5	17		CMP30 3335
	15750		BX7	-X0*X5		CMP30 3336
	7140000002		SX4	2		CMP30 3337
16410	7150004300		SX5	4300B	REPL TABLE IDENTIFIER	CMP30 3338
	20444		LX4	36		CMP30 3339
	12343		BX3	X4+X3		CMP30 3340
16411	0307016416		ZR	X7,ZREP14	IF BOTH ADDRESSES LESS THAN 2**17	CMP30 3341
						CMP30 3342
	7150004700		SX5	4700B	XREPL TABLE IDENTIFIER	CMP30 3343
16412	20560		LX5	48		CMP30 3344
	12653		BX6	X5+X3		CMP30 3345
	54630		SA6	A3	STORE HEADER WORD	CMP30 3346
	55411		SA4	A1-B1	COUNT	CMP30 3347
						CMP30 3348
						CMP30 3349
						CMP30 3350
						CMP30 3351

16413	54311		SA3	A1+B1	INCREMENT	CMP30	3352
	55541		SA5	A4-B1	BLOCK SIZE	CMP30	3353
	20414		LX4	12		CMP30	3354
		20341	LX3	33		CMP30	3355
16414	12745		BX7	X4+X5		CMP30	3356
	36632		IX6	X3+X2	FIRST WORD - INCREMENT AND SOURCE	CMP30	3357
		20741	LX7	33		CMP30	3358
		12771	BX7	X7+X1	SECOND WORD - COUNT, BLOCK SIZE, DEST	CMP30	3359
16415	0400016423		EQ	ZREP15		CMP30	3360
						CMP30	3361
16416	20560		LX5	48	REPL TABLE	CMP30	3362
	12653		BX6	X5+X3		CMP30	3363
		54630	SA6	A3	STORE HEADER WORD	CMP30	3364
		55411	SA4	A1-B1	COUNT	CMP30	3365
16417	54311		SA3	A1+B1	INCREMENT	CMP30	3366
	55541		SA5	A4-B1	BLOCK SIZE	CMP30	3367
		73710	SX7	X1		CPS028	354
		73620	SX6	X2		CPS028	355
16420	21130		AX1	24		CMP30	3370
	21230		AX2	24		CMP30	3371
		20417	LX4	15		CMP30	3372
		20311	LX3	9		CMP30	3373
16421	12332		BX3	X3+X2		CMP30	3374
	36445		IX4	X4+X5		CMP30	3375
		20322	LX3	18		CMP30	3376
		12636	BX6	X3+X6	FIRST WORD - INCREMENT AND SOURCE	CMP30	3377
16422	20411		LX4	9		CMP30	3378
	12541		BX5	X4+X1		CMP30	3379
	20522		LX5	18		CMP30	3380
	12757		BX7	X5+X7	SECOND WORD - COUNT, BLOCK SIZE, DEST	CMP30	3381
						CMP30	3382
16423	54661		SA6	A6+B1		CMP30	3383
	54761		SA7	A6+B1		COMPASS	10326
						CMP30	3384
		RM	IFEQ	CP#RM,0		CMP30	3385
	65661		WRITEW	B,A6-B1,3	WRITE REPL TABLE	CMP30	3386
		RM	ELSE			CMP30	3387
			SA2	B		CMP30	3388
			ZR	X2,ZLIST	IF NO BINARY FILE	CMP30	3389
			SA1	B-1		CMP30	3390
			NZ	X1,ZREP20	IF NOT *W* RECORDS	CMP30	3391
			PUT	B,P2TEMP,30		CMP30	3392
			EQ	ZLIST		CMP30	3393
		ZREP20	PUTP	B,P2TEMP,30		CMP30	3394
		RM	ENDIF			CMP30	3395
16426	0400012126		EQ	ZLIST		CMP30	3396
						COMPASS	10328
		***			REPC - DATA GENERATION.	CMP30	3398
		*				CMP30	3399
		*				CMP30	3400
		*			REPC P1/EXP,P2/EXP,,,P5/EXP	CMP30	3401
		*			GENERATE CONDITIONAL REPLICATION TABLES FOR THE RELOCATING	CMP30	3402
		*			LOADER. EACH SUB-FIELD CONTAINS A LETTER, A / AND AN	CMP30	3403

* EXPRESSION.
* (S/REXP) SOURCE ADDRESS.
* (D/REXP) DESTINATION ADDRESS.
* (C/AEXP) REPLICATION COUNT.
* (B/AEXP) CODE BLOCK SIZE.
* (I/AEXP) INCREMENT.

CMP30 3404
CMP30 3405
CMP30 3406
CMP30 3407
CMP30 3408
CMP30 3409
CMP30 3410
CMP30 3411
CMP30 3412
CMP30 3413

QUAL PASS1
EQU REP

16330

REPC

** REPC - DATA GENERATION.

CMP30 3415
CMP30 3416
CMP30 3417
CMP30 3418
CMP30 3419
CMP30 3420

QUAL PASS2

REPC

16427 77701

0400016333

SX7 -B1
EQ ZREP

*** REPI - DATA GENERATION.

*
*
* REPI P1/EXP,P2/EXP,,,P5/EXP
* GENERATE INSTANT REPLICATION TABLES FOR THE RELOCATABLE
* LOADER EACH SUB-FIELD CONTAINS A LETTER, A / AND AN
* EXPRESSION.
* (S/REXP) SOURCE ADDRESS.
* (D/REXP) DESTINATION ADDRESS.
* (C/AEXP) REPLICATION COUNT.
* (B/AEXP) CODE BLOCK SIZE.
* (I/AEXP) INCREMENT.

COMPASS 10330
COMPASS 10331
COMPASS 10332
COMPASS 10333
COMPASS 10334
COMPASS 10335
COMPASS 10336
COMPASS 10337
COMPASS 10338
COMPASS 10339
COMPASS 10340
COMPASS 10341
COMPASS 10342
COMPASS 10343
COMPASS 10344
CMP30 3421

QUAL PASS1
EQU REP

16330

REPI

** REPI - DATA GENERATION.

COMPASS 10349
COMPASS 10350
COMPASS 10351
COMPASS 10352
COMPASS 10353
COMPASS 10354

QUAL PASS2

REPI

16430 76710

0400016333

SX7 B1
EQ ZREP

*** RMT - SAVE CODE.

COMPASS 10356
COMPASS 10357
COMPASS 10358

*NAME RMT
* INSTRUCTIONS UP TO THE NEXT (RMT) PSEUDO INSTRUCTION
* ARE SAVED FOR LATER ASSEMBLY.
* (NAME) = NAME OF LABELED REMOTE GROUP.

COMPASS 10359
COMPASS 10360
COMPASS 10361
COMPASS 10362
COMPASS 10363
COMPASS 10364
COMPASS 10365
COMPASS 10366
COMPASS 10367
COMPASS 10368
COMPASS 10369
COMPASS 10370
COMPASS 10371
COMPASS 10372
COMPASS 10373
COMPASS 10374
COMPASS 10375
COMPASS 10376
COMPASS 10377
COMPASS 10378
COMPASS 10379
COMPASS 10380
COMPASS 10381
COMPASS 10382
COMPASS 10383
COMPASS 10384
COMPASS 10385
COMPASS 10386
COMPASS 10387
COMPASS 10388
COMPASS 10389
COMPASS 10390
COMPASS 10391
COMPASS 10392
COMPASS 10393
COMPASS 10394
COMPASS 10395
COMPASS 10396
COMPASS 10397
COMPASS 10398
COMPASS 10399
COMPASS 10400
COMPASS 10401
COMPASS 10402
COMPASS 10403
COMPASS 10404
COMPASS 10405
COMPASS 10406
COMPASS 10407
COMPASS 10408
COMPASS 10409

16431	76610	RMT	QUAL	PASS1	
	43700		SX6	B1	SET TEXT DEFINITION FLAG
			MX7	0	CLEAR PUSHUP FLAG
	5160003310		SA6	TXTFLG	
16432	5170022000		SA7	PUSHUP	
	5110003264		SA1	BADLOC	
16433	76610		SX6	B1	
	7170000022		SX7	RMTAB	
16434	0301016436		ZR	X1,RMT1	IF NO LOCATION ERROR
	5160003320		SA6	LERR	
16435	5160003345		SA6	EFLG	
16436	5110003102	RMT1	SA1	LOCSYM	
	5170003561		SA7	P1TEMP	
16437	0301016441		ZR	X1,RMT2	IF UNLABELED RMT
	7170000023		SX7	LRMTAB	
16440	54770		SA7	A7	
	53070		ADDWORD	X7	
16441	0100020112	RMT2	RJ	CWI	WRITE RMT CARD
16442	0100020517		RJ	INPUT1	READ DEFINITION CARD
16443	0311016456		NZ	X1,RMT4	IF PUSHUP OCCURRED
	0100006066		RJ	SETUP	
16444	5110026436		SA1	STYPE	CHECK CARD TYPE
	5120003103		SA2	IOP	
16445	6271777730		SB7	X1-1R*	
	0470016441		ZR	B7,RMT2	IF COMMENT CARD
16446	7130221524		SX3	3RRMT	
	7140051604		SX4	3REND	
16447	37623		IX6	X2-X3	
	13724		BX7	X2-X4	
	0307013546		ZR	X7,END	JUMP IF END CARD
16450	0306016453		ZR	X6,RMT3	IF TERMINATING RMT CARD
	5110003561		SA1	P1TEMP	PACK CARD INTO RMT TABLE
16451	0100021122		PCARD	X1	
16452	0400016441		EQ	RMT2	LOOP
16453	0100020112	RMT3	RJ	CWI	WRITE TERMINATING RMT CARD
16454	43600		MX6	0	
	5160003310		SA6	TXTFLG	CLEAR TEXT FLAG
16455	0400010615		EQ	CTL100	
		*			ENTRY OF ILLEGAL NESTING OF RMT.
16456	76610	RMT4	SX6	B1	SET *E* ERROR
	5160003345		SA6	EFLG	
16457	5160003324		SA6	EERR	
	0400016453		EQ	RMT3	

** RMT - SAVE CODE.

COMPASS 10411
COMPASS 10412

COMPASS 10413
COMPASS 10414
COMPASS 1041512126 RMT QUAL
EQU PASS2
ZLIST

*** R= - CONDITIONAL SET INSTRUCTION.

COMPASS 10417

*

COMPASS 10418

*

COMPASS 10419

*SYM

R= REG,EXP

COMPASS 10420

*

(SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER.

COMPASS 10421

*

IF (REG) AND (EXP) ARE IDENTICAL, NO CODE IS GENERATED.

COMPASS 10422

*

IF (EXP) HAS A VALUE OF ZERO, A SET (REG) TO B0 IS GENERATED.

COMPASS 10423

*

IF (B1=1) OR (B7=1) PSEUDO HAS BEEN CALLED, A 15-BIT SET

COMPASS 10424

*

(REG) INSTRUCTION WILL BE GENERATED IF (EXP) = -1, 0, 1,

COMPASS 10425

*

OR 2. OTHERWISE, A SET (REG) TO (EXP) IS GENERATED.

COMPASS 10426

*

THIS PSEUDO IS USED INSIDE A MACRO DEFINITION TO SPEED UP

COMPASS 10427

*

THE GENERATION OF MORE OPTIMUM CODE.

COMPASS 10428

COMPASS 10429

COMPASS 10430

16460 5110003144

R=

QUAL

PASS1

COMPASS 10431

SA1

COLUMN

COMPASS 10432

5211026436

SA1

X1+CARD-1

COMPASS 10433

16461 7160000055

SX6

1R

COMPASS 10434

20114

LX1

12

COMPASS 10435

54211

SA2

A1+B1

COMPASS 10436

16462 20206

LX2

6

COMPASS 10437

12116

BX1

X1+X6

COMPASS 10438

54321

SA3

A2+B1

COMPASS 10439

54431

SA4

A3+B1

COMPASS 10440

16463 12112

BX1

X1+X2

COMPASS 10441

20414

LX4

12

COMPASS 10442

54541

SA5

A4+B1

COMPASS 10443

54251

SA2

A5+B1

COMPASS 10444

16464 20506

LX5

6

COMPASS 10445

12445

BX4

X4+X5

COMPASS 10446

7233777721

SX3

X3-1R,

COMPASS 10447

16465 12442

BX4

X4+X2

COMPASS 10448

0313016540

NZ

X3,REQ4

IF NOT *,* SEPARATOR

COMPASS 10449

13641

BX6

X4-X1

COMPASS 10450

16466 0306016475

ZR

X6,REQ.2

IF FIELDS EQUAL

CMP111 1

5130003174

SA3

REQC

CMP111 2

16467 7160023455

SX6

3RB1

CMP111 3

0303016500

ZR

X3,REQ.1

IF B1=1 NOT DEFINED

CMP111 4

16470 7273761236

SX7

X3-REQA+1

CMP111 5

0307016472

ZR

X7,REQ.3

IF B1=1 DEFINED

CMP111 6

16471 7160024255

SX6

3RB7

B7=1 DEFINED

CMP111 7

16472 13316

REQ.3

BX3

X1-X6

CMP111 8

0313016500

NZ

X3,REQ.1

IF B1 OR B7 NOT FIRST SUBFIELD

CMP111 9

16473 7170003455

SX7

2R1

CMP111 10

21406

AX4

6

CMP111 11

37374

IX3

X7-X4

CMP111 12

16474 0313016500

NZ

X3,REQ.1

IF 1 NOT SECOND SUBFIELD

CMP111 13

16475 5110003102

REQ.2

SA1

LOCSYM

CMP111 14

0301010653

ZR

X1,CTL300

IF NO LOCATION SYMBOL

COMPASS 10453

16476 5110003123

SA1

LWORD

COMPASS 10454

		0100023377	RJ	YPRLOC		COMPASS 10455
	16477	0400010614	EQ	CTL70		COMPASS 10456
	16500	76610	SX6	B1	WRITE AS A MICRO	COMPASS 10457
		5160003311	SA6	MICFLG		COMPASS 10458
	16501	0100020112	RJ	CWI		COMPASS 10459
	16502	76600	SX6	B0		COMPASS 10460
		5160003311	SA6	MICFLG		COMPASS 10461
	16503	5160003263	SA6	SQLGN		COMPASS 10462
		5130003142	SA3	COL	CHANGE PSEUDO TO SET INSTRUCTION	COMPASS 10463
	16504	7170000023	SX7	1RS		COMPASS 10464
		5273026437	SA7	X3+CARD		COMPASS 10465
	16505	5110003145	SA1	CHAR		COMPASS 10466
		10711	BX7	X1		COMPASS 10467
		54771	SA7	A7+B1		COMPASS 10468
	16506	0100005444	RJ	GETCH		COMPASS 10469
	16507	10711	BX7	X1		COMPASS 10470
		54771	SA7	A7+B1		COMPASS 10471
		0100005444	RJ	GETCH		COMPASS 10472
	16510	7170000055	SX7	1R		COMPASS 10473
		0100005444	RJ	GETCH		COMPASS 10474
	16511	5110003144	SA1	COLUMN		COMPASS 10475
		10611	BX6	X1		COMPASS 10476
	16512	5160003561	SA6	P1TEMP		COMPASS 10477
		5271026435	SA7	X1+CARD-2		COMPASS 10478
	16513	5110003142	SA1	COL		CMP064 1
		7231026442	SX3	X1+CARD+3		CMP064 2
	16514	55771	SA7	A7-B1	STORE BLANKS TO OP CODE FIELD	CMP064 3
		74270	SX2	A7		CMP064 4
		37623	IX6	X2-X3		CMP064 5
	16515	0316016514	NZ	X6,REQ.4		CMP064 6
		7110000022	SX1	18	CHECK SECOND SUBFIELD	COMPASS 10481
	16516	7160000003	SX6	3		COMPASS 10482
		0100006440	RJ	SCADCON		COMPASS 10483
	16517	76600	SX6	B0		COMPASS 10484
		5160003322	SA6	AERR		COMPASS 10485
	16520	5160003327	SA6	UERR		COMPASS 10486
		0311010624	NZ	X1,CTL110	IF NOT CONSTANT	COMPASS 10487
	16521	5120003254	SA2	EXVAL		COMPASS 10488
		5110003561	SA1	P1TEMP		COMPASS 10489
	16522	7170000055	SX7	1R		COMPASS 10490
		5271026435	SA7	X1+CARD-2		COMPASS 10491
	16523	5140003174	SA4	REQC	CHECK ADDRESS FIELD	COMPASS 10492
	16524	5130016544	SA3	REQB-1		COMPASS 10493
		43052	MX0	42		COMPASS 10494
	16525	0304016526	ZR	X4,REQ1	IF B1=1 NOT DEFINED	COMPASS 10495
		53340	SA3	X4		COMPASS 10496
	16526	54331	SA3	A3+B1		COMPASS 10497
		13623	BX6	X2-X3		COMPASS 10498
		0303010624	ZR	X3,CTL110	IF NOT SPECIAL TYPE	COMPASS 10499
	16527	15660	BX6	-X0*X6		COMPASS 10500
		0316016526	NZ	X6,REQ1	LOOP FOR SPECIAL FORMAT	COMPASS 10501
		43066	MX0	54		COMPASS 10502
	16530	20306	LX3	6		COMPASS 10503
		15730	BX7	-X0*X3		COMPASS 10504
		0307016532	ZR	X7,REQ3	IF END OF SPECIAL TYPE	COMPASS 10505
	16531	54771	SA7	A7+B1		COMPASS 10506
		0400016530	EQ	REQ2	LOOP	COMPASS 10507

		**	R= - CONDITIONAL SET INSTRUCTION.			COMPASS 10534
						COMPASS 10535
						COMPASS 10536
			QUAL	PASS2		COMPASS 10537
16554	5120003102	R=	SA2	LOCSYM		COMPASS 10538
	5110003123		SA1	LWORD		COMPASS 10539
16555	0302012126		ZR	X2,ZLIST	IF NO LOCATION SYMBOL	COMPASS 10540
	0100025177		RJ	ZPRLOC		COMPASS 10541
16556	0400012126		EQ	ZLIST		COMPASS 10542

***	SEG - OUTPUT BINARY SEGMENT.	COMPASS	10544
*		COMPASS	10545
*		COMPASS	10546
*	SEG	COMPASS	10547
*	SEG IS USED IN ABSOLUTE CP CODE TO OUTPUT A PARTIAL BINARY	COMPASS	10548
*	OF A PROGRAM. THIS ALLOWS A PROGRAM TO ASSEMBLE IN LESS	COMPASS	10549
*	CORE THAN IF THE ENTIRE BINARY IS OUTPUT AT THE END OF	COMPASS	10550
*	THE ASSEMBLY.	COMPASS	10551
		COMPASS	10552

			QUAL	PASS1		COMPASS	
16557	5110003130	SEG	SA1	ABSFG	CHECK FOR ABSOLUTE CP CODE	10553	
	5120003114		SA2	MACHINE		10554	
16560	15612		BX6	-X2*X1		10555	
	0316016563		NZ	X6,SEG1	IF ABSOLUTE CP CODE	10556	
	76610		SX6	B1		10557	
16561	5160003321		SA6	OERR		10558	
	5160003345		SA6	EFLG		10559	
16562	0400010614	SEG1	EQ	CTL70		10560	
16563	0100023365		RJ	YFUALL	FORCE ALL BLOCKS UPPER	10561	
16564	0100022323		RJ	RSL	RECORD SEGMENT LENGTH	10562	
16565	0100022346		RJ	RSS	RECORD SEGMENT START	10563	
16566	0400010614		EQ	CTL70		10564	
** SEG - OUTPUT BINARY SEGMENT.						10565	
						10566	
						10567	
						10568	
16567	5110003130	SEG	SA1	ABSFG	CHECK FOR ABSOLUTE CP CODE	10569	
	5120003114		SA2	MACHINE		10570	
16570	15612		BX6	-X2*X1		10571	
	0306012126		ZR	X6,ZLIST	IF NOT ABSOLUTE CP	10572	
16571	0100025166		RJ	ZFUALL	FORCE ALL BLOCKS UPPER	10573	
16572	0100025401		RJ	DBSSZ	DUMP BSSZ CODE	10574	
16573	0100025534		RJ	DDUMP		10575	
16574	5110003104		SA1	ORGCTR		10576	
	10611		BX6	X1		10577	
16575	5160003572		SA6	ORGBASE		10578	
	0100024606		RJ	SBL	SET BINARY LENGTH	10579	
16576	0100026166		RJ	DLT	DUMP LITERAL TABLE	10580	
16577	0200012126		JP	ZLIST	RETURN	10581	
*** SEGMENT - OUTPUT BINARY SEGMENT.						10582	
						10583	
						10584	
						10585	
* NAME						10586	
* SEGMENT ORIGIN,ENTRY,L1,L2						10587	
* SEGMENT TERMINATES ONE SEGMENT OF CODE. THE ACCUMULATED						10588	
* BINARY IS WRITTEN OUT AND A NEW BINARY IS STARTED.						10589	
* (NAME) IS THE NAME OF THE OVERLAY GENERATED.						10590	
* (ORIGIN) IS USED TO SPECIFY THE ORIGIN OF THE ROUTINE.						10591	
* FOR A CENTRAL PROCESSOR ABSOLUTE PROGRAM, (ENTRY) SPECIFIES						10592	
* THE ENTRY POINT, AND (L1) AND (L2) ARE THE OVERLAY LEVEL						10593	
* NUMBERS - IF OMITTED, LEVEL (1,0) IS ASSUMED.						10594	
16600	0100023365	SEGMENT	RJ	YFUALL	FORCE ALL BLOCKS UPPER	10595	
16601	5110003130		SA1	ABSFG		10596	
	0301010614		ZR	X1,CTL70	IF RELOCATABLE CP CODE	10597	
16602	0100022323		RJ	RSL	RECORD SEGMENT LENGTH	10598	

1

9

16666 0100024740
16667 0400012126

RJ ZDEFSYM
EQ ZLIST

COMPASS 10739
COMPASS 10740

1							1
2							2
3							3
4		***	SKIP - UNCONDITIONALLY SKIP CODE.			COMPASS 10742	4
5		*				COMPASS 10743	5
6		*				COMPASS 10744	6
7		*NAME	SKIP	LNCT		COMPASS 10745	7
8		*	OPTIONAL (LNCT) IS NUMBER OF LINES TO SKIP. (NAME) IS			COMPASS 10746	8
9		*	INSTRUCTION BRACKET NAME.			COMPASS 10747	9
10						COMPASS 10748	10
11						COMPASS 10749	11
12			QUAL	PASS1		COMPASS 10750	12
13	15052	SKIP	EQU	IFXXNO		COMPASS 10751	13
14							14
15							15
16							16
17							17
18		**	SKIP - UNCONDITIONALLY SKIP CODE.			COMPASS 10753	18
19						COMPASS 10754	19
20						COMPASS 10755	20
21			QUAL	PASS2		COMPASS 10756	21
22	12126	SKIP	EQU	ZLIST		COMPASS 10757	22
23							23
24							24
25							25
26							26
27		***	SPACE - SKIP LINE.			COMPASS 10759	27
28		*				COMPASS 10760	28
29		*				COMPASS 10761	29
30		*NAME	SPACE	AEXP1,AEXP2		COMPASS 10762	30
31		*	SKIP NUMBER OF LINES INDICATED BY (AEXP1). GUARANTEE			COMPASS 10763	31
32		*	(AEXP1 + AEXP2) LINES ON THIS PAGE. (NAME) IS THE			COMPASS 10764	32
33		*	NEW SUB-SUBTITLE, PRINTED AT THE BEGINNING OF THE NEXT PAGE.			COMPASS 10765	33
34						COMPASS 10766	34
35						COMPASS 10767	35
36			QUAL	PASS1		COMPASS 10768	36
37	10653	SPACE	EQU	CTL300		COMPASS 10769	37
38							38
39							39
40							40
41							41
42		**	SPACE - SKIP LINE.			COMPASS 10771	42
43						COMPASS 10772	43
44						COMPASS 10773	44
45			QUAL	PASS2		COMPASS 10774	45
46	16670	0100025234	SPACE	RJ	ZTLIST	CHECK FOR LISTINGS	46
47	16671	7110000022		SX1	18		47
48		7160000003		SX6	3		48
49	16672	0100006530		RJ	SMC		49
50	16673	5120003254		SA2	EXVAL		50
51		10622		BX6	X2		51
52	16674	5160004066		SA6	P2TEMP		52
53		7110000022		SX1	18		53
54	16675	7160000003		SX6	3		54
55							55
56							56
57							57
58							58
59							59
60							60

76

16724	5120003405	SST3	SA2	0.SSYMS		CMP25	43
	36112		IX1	X1+X2		CMP25	44
	53110		SA1	X1	NEXT SYSTEM SYMBOL	CMP25	45
16725	5120003561		SA2	P1TEMP		CMP25	46
	54621		SA6	A2+B1		CMP25	47
16726	0302016731	SST4	ZR	X2,SST5	IF END OF IGNORE TABLE	COMPASS	10833
	5242030216		SA4	X2+RELVEC-1		CMP25	48
16727	7222777776		SX2	X2-1		COMPASS	10834
	13614		BX6	X1-X4		CMP25	49
16730	0316016726		NZ	X6,SST4	IF NOT IGNORED	COMPASS	10837
	0400016736		EQ	SST6		COMPASS	10838
16731	54211	SST5	SA2	A1+B1		COMPASS	10839
	43300		MX3	0		COMPASS	10840
	13444		BX4	X4-X4		COMPASS	10841
	43501		MX5	1	SET SST BIT	COMPASS	10842
16732	10622		BX6	X2		CMP30	3434
	21641		AX6	36-3	POSITION SYSTEXT ORDINAL	CMP30	3435
	12556		BX5	X5+X6		CMP30	3436
16733	0100023067		RJ	YDEFSYM		COMPASS	10843
16734	0316016736		NZ	X6,SST6	IF BAD SYMBOL	CMP25	50
	5110003175		SA1	SSTCNT		CMP25	51
16735	73611		SX6	X1+B1	BUMP DEFINED SYSTEM SYMBOL COUNT	CMP25	52
	54610		SA6	A1		CMP25	53
	0400016743		EQ	SST7		CMP25	54
16736	5110003405	SST6	SA1	0.SSYMS	CLOSE UP SYSTEM SYMBOL TABLE SO	CMP25	55
	5120003562		SA2	P1TEMPA	IT CONTAINS ONLY IGNORED ENTRIES	CMP25	56
16737	54321		SA3	A2+B1		CMP25	57
	6271777775		SB7	X1-2		CMP041	26
	53127		SA1	X2+B7		CMP25	59
16740	54211		SA2	A1+B1		CMP25	60
	7243000002		SX4	X3+2		CMP041	27
	46000		NO			CMP041	28
16741	10611		BX6	X1		CMP25	61
	22702		LX7	X2		CMP25	62
	53647		SA6	X4+B7		CMP041	29
	54761		SA7	A6+B1		CMP25	64
16742	10644		BX6	X4		CMP041	30
	54630		SA6	A3		CMP25	66
16743	5110003562	SST7	SA1	P1TEMPA		CMP25	67
	5120003444		SA2	L.SSYMS		CMP25	68
16744	7261000002		SX6	X1+2		CMP25	69
	37212		IX2	X1-X2		CMP25	70
16745	0312016724		NZ	X2,SST3	LOOP TO END OF SYSTEM SYMBOL TABLE	CMP25	71
	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042	263
16746	5110003563		SA1	P1TEMPB		CMP25	72
	5120003047		SA2	LCMSYM		CMP30	3437
16747	5130003113		SA3	QVAL+1	STORE NEW L.SSYMS AND	CMP25	73
	10611		BX6	X1	RESTORE QUALIFIER	CMP25	74
	22703		LX7	X3		CMP25	75
16750	5160003444		SA6	L.SSYMS		CMP042	264
	55731		SA7	A3-B1		CMP25	77
16751	0302010653		ZR	X2,CTL300	IF SYSTEM SYMBOLS NOT IN LCM	CMP30	3438
	43600		MX6	0		CMP30	3439
	54660		SA6	A6	CLEAR SCM TABLE	CMP30	3440
16752	5160003175		SA6	SSTCNT		CMP30	3441
	0400010653		EQ	CTL300	RETURN	COMPASS	10846

** SST -SYSTEM SYMBOL TABLE.

COMPASS 10848
COMPASS 10849
COMPASS 10850
COMPASS 10851
COMPASS 10852

1				QUAL	PASS2				
2	12126	SST	EQU	ZLIST					
3									
4									
5									
6									
7		***		STEXT - GENERATE A SYSTEXT RECORD.				COMPASS 10854	
8		*						COMPASS 10855	
9		*						COMPASS 10856	
10		*RNAME		STEXT				COMPASS 10857	
11		*		GENERATE A SYSTEMS TEXT RECORD FOR THIS PROGRAM. ALL SYMBOLS				COMPASS 10858	
12		*		AND ALL PROGRAM MACROS ARE WRITTEN IN AN OVERLAY FORMAT AT				COMPASS 10859	
13		*		THE END OF PASS1. THIS RECORD CAN BE LOADED BY COMPASS.				COMPASS 10860	
14		*		IF (RNAME) IS NON-BLANK, THE SYSTEXT RECORD IS WRITTEN				COMPASS 10861	
15		*		WITH NAME (RNAME) AND THE NORMAL BINARY FROM THE PROGRAM				COMPASS 10862	
16		*		IS GENERATED.				COMPASS 10863	
17								COMPASS 10864	
18								COMPASS 10865	
19				QUAL	PASS1			COMPASS 10866	
20	16753	5110003102	STEXT	SA1	LOCSYM			COMPASS 10867	
21		5120003264		SA2	BADLOC			COMPASS 10868	
22	16754	0302016756		ZR	X2,STX1	IF LOCATION NOT BAD		COMPASS 10869	
23		76610		SX6	B1			COMPASS 10870	
24	16755	5160003320		SA6	LERR			COMPASS 10871	
25		5160003345		SA6	EFLG			COMPASS 10872	
26	16756	0311016757	STX1	NZ	X1,STX2	IF ALTERNATE RECORD OUTPUT		COMPASS 10873	
27		5110003120		SA1	IDNAM			COMPASS 10874	
28	16757	0100006262	STX2	RJ	LJUST			COMPASS 10875	
29	16760	5170003121		SA7	SYNAME			COMPASS 10876	
30		0400010614		EQ	CTL70			COMPASS 10877	
31									
32									
33									
34									
35		**		STEXT - GENERATE A SYSTEXT RECORD.				COMPASS 10879	
36								COMPASS 10880	
37								COMPASS 10881	
38				QUAL	PASS2			COMPASS 10882	
39	16761	5110003102	STEXT	SA1	LOCSYM			COMPASS 10883	
40		0301012126		ZR	X1,ZLIST	IF NO ALTERNATE NAME		COMPASS 10884	
41	16762	43600		MX6	0			COMPASS 10885	
42		5160003121		SA6	SYNAME			COMPASS 10886	
43	16763	0400012126		EQ	ZLIST	RETURN		COMPASS 10887	
44									
45									
46									
47									
48		***		STOPDUP - STOP DUPLICATION.				COMPASS 10889	
49		*						COMPASS 10890	
50		*						COMPASS 10891	
51		*		STOPDUP				COMPASS 10892	
52		*		STOPS DUPLICATION AT END OF CURRENT ITERATION.				COMPASS 10893	
53								COMPASS 10894	
54								COMPASS 10895	
55									
56									
57									
58									
59									
60									

1

** TITLE - TITLING.

COMPASS 10942
COMPASS 10943
COMPASS 10944

1	17001	5130003140	TITLE	QUAL	PASS2		COMPASS 10945
2				SA3	TITFG		COMPASS 10946
3		5140003317		SA4	LIBFLG		CMP036 23
4	17002	12634		BX6	X3+X4		CMP036 24
5		76710		SX7	B1		CMP036 25
6		0316017005		NZ	X6,TIT1	IF NOT MAIN TITLE	CMP036 26
7	17003	54730		SA7	A3		CMP036 27
8		5170003567		SA7	CTYPE		CMP036 28
9	17004	0400012126		EQ	ZLIST		CMP036 29
10	17005	5110003610	TIT1	SA1	SUBTIT	SET NEW SUBTITLE	CMP036 30
11		0100006137		RJ	SNT		CMP036 31
12	17006	0316011134		NZ	X6,Z100	IF IN XTEXT AND LIST X IS OFF	CMP036 32
13		0100024705		RJ	TLIST	TEST FOR LISTING	COMPASS 10954
14	17007	5110003602		SA1	LPCNT	CAUSE PAGE EJECT	COMPASS 10955
15		5120003072		SA2	NEJF	*N* CONTROLLED PAGE SIZE	CPSA181 22
16	17010	36712		IX7	X1+X2		COMPASS 10957
17		54710		SA7	A1		COMPASS 10958
18		0312012126		NZ	X2,ZLIST	IF EJECT	COMPASS 10959
19	17011	7100000004		SX0	4	LIST 4 LINES	COMPASS 10960
20		0100007505		RJ	LBL		COMPASS 10961
21	17012	0400012126		EQ	ZLIST	RETURN	COMPASS 10962

*** TTL - MAIN TITLE.

COMPASS 10967
COMPASS 10968
COMPASS 10969
COMPASS 10970
COMPASS 10971
COMPASS 10972
COMPASS 10973
COMPASS 10974

*
*
*NAME TTL STRING
* RESETS MAIN TITLE TO (STRING). SUBTITLE IS CLEARED.
* (NAME) IS THE NEW SUB-SUBTITLE.

10614 TTL QUAL PASS1
EQU CTL70

COMPASS 10975
COMPASS 10976

** TTL - MAIN TITLE.

COMPASS 10978
COMPASS 10979
COMPASS 10980

17013	5110003201	TTL	QUAL	PASS2		COMPASS 10981
			SA1	TITBUF		COMPASS 10982
	0100006137		RJ	SNT	SET NEW TITLE	COMPASS 10983
17014	0316011134		NZ	X6,Z100	IF IN XTEXT AND LIST X IS OFF	CMP036 33
	76610		SX6	B1	SET MASTER TITLE FLAG	COMPASS 10984
17015	5160003140		SA6	TITFG		COMPASS 10985
	5110012171		SA1	=1H	CLEAR SUB-TITLE BUFFER	COMPASS 10986
17016	7120003610		SX2	SUBTIT		COMPASS 10987
	7130003617		SX3	SUBTIT+SUBTITL+1		COMPASS 10988
17017	0100005600		RJ	PRESET		COMPASS 10989
17020	0100024705		RJ	TLIST	TEST LISTING	COMPASS 10990
17021	0400012126		EQ	ZLIST		COMPASS 10991

1412THE

*** USE - BLOCK ASSIGNMENT.

COMPASS 10993

*

COMPASS 10994

*

COMPASS 10995

*

USE NAME

COMPASS 10996

*

ASSEMBLE FOLLOWING INSTRUCTIONS IN BLOCK (NAME).

COMPASS 10997

*

COMPASS 10998

*

BLOCKNAME

TYPE

COMPASS 10999

*

COMPASS 11000

*

0

NORMAL SUBPROGRAM

COMPASS 11001

*

BLANK

NORMAL SUBPROGRAM

COMPASS 11002

*

*

BLOCK PRIOR TO LATEST USE/USELCM/ORG/ORG

CMP30 3442

*

//

BLANK COMMON

COMPASS 11003

*

/NAME/

LABELED COMMON

COMPASS 11005

*

NAME

NAMED LOCAL

COMPASS 11006

COMPASS 11007

COMPASS 11008

COMPASS 11009

17022 43600

USE

QUAL

PASS1

MX6

0

CMP30 3443

5160003561

SA6

P1TEMP

CLEAR LCM FLAG

CMP30 3444

17023 66200

USEL

SB2

B0

COMMONALITY INDICATOR

CMP30 3445

66300

SB3

B0

BLOCK NUMBER COUNTER

COMPASS 11011

5110003145

SA1

CHAR

COMPASS 11012

17024 6271777727

SB7

X1-1R/

CHECK FOR COMMON DECLARATION

COMPASS 11013

0570017026

NZ

B7,*+2

COMPASS 11014

17025 66210

SB2

B1

SET COMMON FLAG

COMPASS 11015

0100005444

RJ

GETCH

AND THROW AWAY THE SLASH

COMPASS 11016

17026 0100006036

RJ

SCLIST

SCAN OFF NAME

COMPASS 11017

17027 6276777744

SB7

X6-1R0

COMPASS 11020

0306017031

ZR

X6,USE8

CHANGE EMPTY OR 0 NAME TO BLANK

CMP30 3446

17030 0570017033

NZ

B7,USE9

CMP30 3447

17031 5110003561

USE8

SA1

P1TEMP

ERROR IF USELCM 0 OR BLANK

CMP30 3448

7160000055

SX6

1R

COMPASS 11022

17032 0331017035

MI

X1,USEA

CMP30 3449

17033 0420017040

USE9

ZR

B2,USE6

IF NOT COMMON

CMP30 3450

43066

MX0

-6

COMPASS 11024

15160

BX1

-X0*X6

COMPASS 11025

17034 7211777727

SX1

X1-1R/

COMPASS 11026

0301017037

ZR

X1,USE7

IF TRAILING SLASH

CMP30 3451

17035 76710

USEA

SX7

B1

CMP30 3452

5170003345

SA7

EFLG

COMPASS 11029

17036 5170003322

SA7

AERR

COMPASS 11030

0400017040

EQ

USE6

COMPASS 11031

17037 21606

USE7

AX6

6

COMPASS 11032

17040 6276777730

USE6

SB7

X6-1R*

CHECK FOR USE *

COMPASS 11033

0470017101

ZR

B7,USEPR

COMPASS 11034

17041 5110003561

SA1

P1TEMP

CMP30 3453

13661

BX6

X6-X1

COMPLEMENT NAME IF LCM

CMP30 3454

76720

SX7

B2

COMPASS 11036

17042 54610

SA6

A1

SAVE BLOCK NAME

CMP30 3455

54761

SA7

A6+B1

AND COMMONALITY

COMPASS 11037

5120003411

SA2

O.USETAB

SEARCH FOR BLOCK NAME

CMP30 3456

17043 5130003450

SA3

L.USETAB

COMPASS 11039

5110003153

SA1

UI

COMPASS 11040

17044 36221

IX2

X2+X1

COMPASS 11041

37331

IX3

X3-X1

COMPASS 11042

6160777773

SB6

-4

CMP30 3457

17045 53220

SA2

X2

COMPASS 11044

17046	13426	63736	USE3	SB7	X3+B6		COMPASS	11045
		55226		BX4	X2-X6	TEST BLOCK	COMPASS	11046
				SA2	A2-B6		COMPASS	11047
		66776		SB7	B7+B6		COMPASS	11048
		66331		SB3	B3+B1		COMPASS	11049
17047	0314017050			NZ	X4,USE4		CMP30	3458
		0324017065		PL	X4,USE5	IF NAME FOUND IN TABLE	CMP30	3459
17050	0670017046		USE4	PL	B7,USE3	KEEP LOOKING	COMPASS	11051
		66411		SB4	B1+B1		CPS176	5
		23741		AX7	B4,X1	NUMBER OF BLOCKS PRIOR TO PRESENT GROUP.	CPS176	6
17051	5110003154			SA1	UI+1	PRESENT BLOCK NUMBER.	CPS176	7
		73613		SX6	X1+B3	NEW BLOCK NUMBER.	CPS176	8
17052	5160003563			SA6	P1TEMPB	SAVE NEW BLOCK NUMBER.	CPS176	9
		6246777377		SB4	X6-256		RSM4159	19
17053	0640017156			PL	B4,USEF	IF 256TH BLOCK IN PRESENT BLOCK GROUP.	CPS176	12
		54611		SA6	A1+B1		CPS176	14
							CPS176	15
		77106		MANAGE	USETAB,-B6	AUGMENT USETAB FOR NEW BLOCK	COMPASS	11058
17055	6273777773			SB7	X3-4		CMP30	3461
		5130003561		SA3	P1TEMP	RECLAIM BLOCK NAME	COMPASS	11060
17056	54431			SA4	A3+B1	AND COMMONALITY	COMPASS	11061
		10633		BX6	X3		COMPASS	11062
		22704		LX7	X4		COMPASS	11063
		53627		SA6	X2+B7		COMPASS	11064
17057	5130003123			SA3	LWORD		COMPASS	11065
		10633		BX6	X3		COMPASS	11066
		20630		LX6	24		COMPASS	11067
17060	54661			SA6	A6+B1		COMPASS	11068
		54761		SA7	A6+B1	BLOCK COUNTER AND COMMONALITY	COMPASS	11069
		43600		MX6	0		COMPASS	11070
		54671		SA6	A7+B1		COMPASS	11071
17061	76110			MANAGE	RVTAB,1*1	AUGMENT RVTAB FOR NEW BLOCK	CPS2672	32
17063	6273777776			SB7	X3-1*1	PRESET NEW ENTRY TO ZERO	CPS2672	33
		43600		MX6	0		CPS2672	34
		53627		SA6	X2+B7		CPS2672	35
17064	0400017076			EQ	USE1		COMPASS	11072
17065	5032777775		USE5	SA3	A2-2	FETCH COMMONALITY OF USETAB ENTRY	CMP30	3462
		5110003562		SA1	P1TEMP+1	FETCH COMMON FLAG	COMPASS	11074
17066	13431			BX4	X3-X1	CHECK IF COMMON FLAG SET	COMPASS	11075
		20473		LX4	59		COMPASS	11076
		0324017070		PL	X4,USEOLD	USE OLD BLOCK	COMPASS	11077
17067	0400017050			EQ	USE4		COMPASS	11078
							COMPASS	11079
			*			ENTRY ON USE FOR OLD BLOCK NAME.	COMPASS	11080
							COMPASS	11081
17070	67431		USEOLD	SB4	B3-B1		COMPASS	11082
		0541017073		NE	B4,B1,USEOLD1	IF NOT 0 BLOCK	COMPASS	11083
17071	5140003130			SA4	ABSFG		COMPASS	11084
		0304017073		ZR	X4,USEOLD1		COMPASS	11085
17072	55226			SA2	A2-B6		COMPASS	11086
		67331		SB3	B3-B1		COMPASS	11087
17073	5022777775		USEOLD1	SA2	A2-2	FETCH COMMONALITY	CMP30	3463
		5110003154		SA1	UI+1		COMPASS	11089
17074	67331			SB3	B3-B1		COMPASS	11090
		73613		SX6	X1+B3		COMPASS	11091
		76720		SX7	B2		COMPASS	11092
		12772		BX7	X7+X2		COMPASS	11093

17075 5160003563
55761SA6 P1TEMPB
SA7 A6-B1COMPASS 11094
COMPASS 11095
COMPASS 11096

* ALL USE-S EXCEPT USE *.

COMPASS 11097
COMPASS 11098

17076 0100017120

USE1

RJ

USES

CREATE USTACK ENTRY

COMPASS 11099

* USE * REJOINS HERE.

COMPASS 11100
COMPASS 11101

17077 0100017125

USE2

RJ

USER

SWITCH TO NEW BLOCK

COMPASS 11103

17100 0400010614

EQ

CTL70

COMPASS 11104

COMPASS 11105

* ENTRY ON USE *.

COMPASS 11106

17101 5110003537

USEPR

SA1

USESTK

PUSH UP USE STACK

CMP30 3464

0100005610

RJ

PULL

CMP30 3465

17102 0316017104

NZ

X6,USEPR1

IF STACK WAS NOT EMPTY

CMP30 3466

5140003130

SA4

ABSFG

SUPPLY BLOCK 2-ABSFG

COMPASS 11114

17103 5150003154

SA5

UI+1

COMPASS 11115

73551

SX5

X5+B1

COMPASS 11116

37654

IX6

X5-X4

COMPASS 11117

17104 5160003563

USEPR1

SA6

P1TEMPB

STORE NEW BLOCK NUMBER

COMPASS 11119

20602

LX6

2

CMP30 3467

17105 5120003411

SA2

0.USETAB

COMPASS 11125

5140003153

SA4

UI

RSM4159 20

17106 36224

IX2

X2+X4

BASE ADDRESS OF BLOCK GROUP

RSM4159 21

6276777775

SB7

X6-2

COMMONALITY

CMP30 3468

53427

SA4

X2+B7

COMPASS 11127

17107 76620

SX6

B2

COMPASS 11128

12764

BX7

X6+X4

COMPASS 11129

55761

SA7

A6-B1

COMPASS 11130

17110 0400017077

EQ

USE2

COMPASS 11131

*** USELCM - BLOCK ASSIGNMENT.

COMPASS 11133

*

COMPASS 11134

*

COMPASS 11135

*

USELCM NAME

COMPASS 11136

*

ASSEMBLE FOLLOWING INSTRUCTIONS INTO LCM BLOCK (NAME).

COMPASS 11137

*

CMP30 3469

*

BLOCKNAME

TYPE

CMP30 3470

*

CMP30 3471

*

0

ERROR

CMP30 3472

*

BLANK

ERROR

CMP30 3473

*

*

BLOCK PRIOR TO LATEST USE/USELCM/ORG/ORG

CMP30 3474

*

//

LCM BLANK COMMON

CMP30 3475

*

/NAME/

LCM LABELED COMMON

CMP30 3476

*

NAME

LCM NAMED LOCAL

CMP30 3477

COMPASS 11138

COMPASS 11139

17111 5110003114

USELCM

QUAL

PASS1

SA1 MACHINE

COMPASS 11140

0311010647

NZ

X1,CTL80

0 ERROR IF PP

COMPASS 11142

17112 43674

MX6

60

CMP30 3478

5160003561

SA6

P1TEMP

SET LCM FLAG

CMP30 3479

17113 0400017023

EQ USEL

COMPASS 11151

** USE - BLOCK ASSIGNMENT.

COMPASS 11153

COMPASS 11154

COMPASS 11155

COMPASS 11156

17114 0100017164

USE

QUAL PASS2

RJ USER

COMPASS 11157

17115 0400012126

EQ ZLIST

COMPASS 11158

** USELCM - BLOCK ASSIGNMENT.

COMPASS 11160

COMPASS 11161

COMPASS 11162

17116 5110003322

USELCM

QUAL PASS2

SA1 AERR

COMPASS 11163

0311012126

NZ X1,ZLIST IF ERROR IN PASS 1

COMPASS 11164

17117 0400017114

EQ USE

COMPASS 11166

** USES - CREATE PUSHDOWN STACK ENTRY FOR USE AND ORG PSEUDOS.

CMP30 3480

COMPASS 11171

COMPASS 11172

COMPASS 11173

17120 0000000000

USES

QUAL PASS1

PS

RETURN EXIT

COMPASS 11174

17121 5120003105

SA2 ORGCTR+1

CMP30 3481

5110003537

SA1 USESTK

CMP30 3482

17122 0312017123

+

NZ X2,*+1

IF NOT ABSOLUTE

CMP30 3483

5120003154

SA2 UI+1

CMP30 3484

17123 10622

+

BX6 X2

CMP30 3485

0100005627

RJ PUSH

PUSH DOWN USE STACK

CMP30 3486

17124 0400017120

EQ USES

COMPASS 11188

** USER - SWITCH TO NEW BLOCK FOR USE/ORG.

COMPASS 11190

* ENTRY OLD BLOCK INFORMATION IN ACTIVE CELLS NOTED BELOW.

COMPASS 11191

* (P1TEMPB) = NEW BLOCK NUMBER.

COMPASS 11192

* (P1TEMPA) = NEW BLOCKS COMMONALITY.

COMPASS 11193

* CELLS WHICH ARE RECORDED AND RE-SET ARE...

COMPASS 11194

* ORGCTR ORGCTR+1

COMPASS 11195

* LOCCTR LOCCTR+1 (NOT RECORDED, JUST SET)

COMPASS 11196

* NFOUP POSCTR

COMPASS 11197

* ALSO CREATES FLAG FOR COMMUNICATION WITH ZUSER IN PASS 2.

COMPASS 11198

* FLAG (59) = CONDITIONAL LOAD FLAG.

CMP30 3487

* FLAG (58-24) = OLD BLOCK NUMBER.

CMP30 3488

* FLAG (23-00) = NEW BLOCK NUMBER.

COMPASS 11200

COMPASS 11201

COMPASS 11202

QUAL PASS1

COMPASS 11203

17125	0000000000		USER	PS		RETURN EXIT	COMPASS 11204
17126	5110003105			SA1	ORGCTR+1	OLD BLOCK NUMBER	COMPASS 11205
	5120003411			SA2	0.USETAB		COMPASS 11206
17127	0311017130			NZ	X1,*+1	CHANGE ABSOLUTE ORIGIN TO 1	COMPASS 11207
	5110003154			SA1	UI+1		COMPASS 11208
17130	5130003563		+	SA3	P1TEMPB	NEW BLOCK NUMBER	COMPASS 11209
	5140003153			SA4	UI		RSM4159 22
17131	36224			IX2	X2+X4	BASE ADDRESS OF BLOCK GROUP	RSM4159 23
	20130			LX1	24		COMPASS 11210
	12613			BX6	X1+X3		COMPASS 11211
17132	5160003304			SA6	FLAG		COMPASS 11214
	21126			AX1	24-2		CMP30 3489
	63610			SB6	X1	INDEX+4 OF OLD USETAB ENTRY	CMP30 3490
17133	7222777774			SX2	X2-3		CMP30 3491
	20302			LX3	2		CMP30 3492
	63530			SB5	X3	INDEX+4 OF NEW USETAB ENTRY	CMP30 3493
17134	5140003136			SA4	NFOUP		COMPASS 11222
	5150003110			SA5	POSCTR		COMPASS 11223
17135	5110003104			SA1	ORGCTR	ORIGIN COUNTER VALUE	COMPASS 11224
	20427			LX4	3+20		COMPASS 11225
	12641			BX6	X4+X1		COMPASS 11226
17136	5140003111			SA4	CLF	CONDITIONAL LOAD FLAG	CMP30 3494
	10055			BX0	X5		COMPASS 11227
	20530			LX5	24		COMPASS 11228
17137	12664			BX6	X6+X4		CMP30 3495
	36756			IX7	X5+X6		COMPASS 11229
	53726			SA7	X2+B6	STORE OLD COUNTERS	COMPASS 11230
17140	5057000002			SA5	A7+2	FETCH OLD MAXIMUM BLOCK SIZE	COMPASS 11231
	5140003123			SA4	LWORD		COMPASS 11232
17141	21302			AX3	2		CMP30 3496
	37604			IX6	X0-X4		COMPASS 11233
17142	76410		+	SX4	B1		COMPASS 11234
	0306017143			ZR	X6,*+1	IF POSITION COUNTER = LWGRD	COMPASS 11235
	36114			IX1	X1+X4	INCREMENT ORGCTR	COMPASS 11236
17143	37751			IX7	X5-X1		COMPASS 11237
	10611			BX6	X1		COMPASS 11238
17144	76110		+	SX1	B1		COMPASS 11239
	0327017145			PL	X7,*+1		COMPASS 11240
	54650			SA6	A5	STORE NEW MAXIMUM BLOCK SIZE	COMPASS 11241
17145	53225		+	SA2	X2+B5	PICK UP NEW COUNTERS	COMPASS 11242
	5150003154			SA5	UI+1		COMPASS 11243
17146	37735		+	IX7	X3-X5		COMPASS 11244
	0317017147			NZ	X7,*+1		COMPASS 11245
	76300			SX3	B0	CHANGE BLOCK 1 TO ABSOLUTE ORIGIN	COMPASS 11246
17147	5140003304			SA4	FLAG		CMP30 3497
	43001			MX0	1		CMP30 3498
	11702			BX7	X0*X2		CMP30 3499
17150	36674			IX6	X7+X4		CMP30 3500
	5170003111			SA7	CLF	NEW CONDITIONAL LOAD FLAG	CMP30 3501
	54640			SA6	A4		CMP30 3502
17151	10733			BX7	X3		COMPASS 11247
	43047			MX0	39		COMPASS 11248
	15620			BX6	-X0*X2		COMPASS 11249
	54711			SA7	A1+B1	NEW ORGCTR RELOCATION	COMPASS 11250
17152	54610			SA6	A1	NEW ORGCTR VALUE	COMPASS 11251
	21227			AX2	23		COMPASS 11252
	5170003107			SA7	LOCCTR+1		COMPASS 11253

Line	Label	Address	Symbol	Value	Comment	Source	Destination
1	17153	55671		SA6	A7-B1	COMPASS	11254
2		23312		AX3	X2,B1	CMP30	3503
3		11721		BX7	X2*X1	COMPASS	11255
4		73630		SX6	X3	CMP30	3504
5	17154	5170003136		SA7	NFOUP	COMPASS	11257
6		5160003110		SA6	POSCTR	COMPASS	11258
7	17155	0400017125		EQ	USER	COMPASS	11259
8						COMPASS	11260
9			*		ENTRY ON USETAB OVERFLOW.	COMPASS	11261
10	17156	76610	USEF	SX6	B1	COMPASS	11262
11		5160003345		SA6	EFLG	COMPASS	11263
12	17157	5160003326		SA6	FERR	COMPASS	11264
13		5110003104		SA1	ORGCTR	COMPASS	11265
14	17160	10611		BX6	X1	COMPASS	11266
15		54211		SA2	A1+B1	COMPASS	11267
16		22702		LX7	X2	COMPASS	11268
17	17161	5160003106		SA6	LOCCTR	COMPASS	11269
18		54761		SA7	A6+B1	COMPASS	11270
19		20230		LX2	24	COMPASS	11271
20	17162	12627		BX6	X2+X7	COMPASS	11272
21		5160003304		SA6	FLAG	COMPASS	11273
22	17163	0400010614		EQ	CTL70	COMPASS	11274
23						COMPASS	11275
24							
25			**		USER - SWITCH TO NEW BLOCK FOR USE/ORG/END.	COMPASS	11277
26			*		ENTRY INFORMATION ASSUMED IN FLAG.	COMPASS	11278
27			*		USER SWAPS THE FOLLOWING INFORMATION FOR THE TWO BLOCKS.	COMPASS	11279
28			*			COMPASS	11280
29			*			COMPASS	11281
30			*	ORGCTR	ORGCTR+1	COMPASS	11282
31			*	LOCCTR	LOCCTR+1 (NOT SAVED)	COMPASS	11283
32			*	POSCTR	NFOUP	COMPASS	11284
33			*	BINWORD	BINREL	COMPASS	11285
34			*	MINORG	CLF MAXORG (SET, NOT SAVED)	CMP30	3505
35			*		ALSO FORCES MAXORG = 0 IF GOING TO COMMON BLOCK (NAME = 0).	COMPASS	11286
36			*		IN RELOCATABLE ASSEMBLY TO CATCH BLANK COMMON	COMPASS	11287
37			*		RESETS BINARY ORIGIN (RESORG).	COMPASS	11288
38						COMPASS	11289
39						COMPASS	11290
40				QUAL	PASS2	COMPASS	11291
41	17164	0000000000	USER	PS	RETURN EXIT	COMPASS	11292
42	17165	5110003304		SA1	FLAG	COMPASS	11293
43		5120003411		SA2	0.USETAB	CMP30	3506
44	17166	5130003153		SA3	UI	RSM4159	24
45		36223		IX2	X2+X3	RSM4159	25
46		20146		LX1	-24+2	CMP30	3507
47	17167	6271777774		SB7	X1-3	CMP30	3508
48		43047		MX0	-21	CMP30	3509
49	17170	5130003575		SA3	BINREL	CMP30	3510
50		5140003110		SA4	POSCTR	CMP30	3511
51	17171	5150003136		SA5	NFOUP	CMP30	3512
52		20322		LX3	18	CMP30	3513
53		12734		BX7	X3+X4	CMP30	3514
54	17172	5140003104		SA4	ORGCTR	CMP30	3515
55		20701		LX7	1	CMP30	3516

17173	15740	12675	BX6	X7+X5		CMP30	3517
			BX7	-X0*X4		CMP30	3518
	20627		LX6	23		CMP30	3519
		5140003574	SA4	BINWORD	FOURTH WORD OF USETAB ENTRY - BINWORD	CMP30	3520
17174	12667		BX6	X6+X7		CMP30	3521
	5150003130		SA5	ABSFG		CMP30	3522
		10744	BX7	X4		CMP30	3523
17175	53627		SA6	X2+B7		CMP30	3524
	5076000002		SA7	A6+2		CMP30	3525
		20126	LX1	24-2		CMP30	3526
17176	0315017204		NZ	X5,USER1	IF ABSOLUTE ASSEMBLY	CMP30	3527
	54331		SA3	A3+B1		CMP30	3528
		54431	SA4	A3+B1		CMP30	3529
17177	5150003430		SA5	0.RELTAB	SAVE PARTIAL BINARY RELOCATION	CMP30	3530
	77771		SX7	B7-B1	IN RELTAB ENTRY	CMP30	3531
		21701	AX7	1		CMP30	3532
17200	63770		SB7	X7		CMP30	3533
	10633		BX6	X3		CMP30	3534
		22704	LX7	X4		CMP30	3535
		53657	SA6	X5+B7		CMP30	3536
17201	54761		SA7	A6+B1		CMP30	3537
	6271777776		SB7	X1-1	GET NEW PARTIAL BINARY RELOCATION	CMP30	3538
		66777	SB7	B7+B7		CMP30	3539
17202	53557		SA5	X5+B7		CMP30	3540
	54451		SA4	A5+B1		CMP30	3541
	10655		BX6	X5		CMP30	3542
		22704	LX7	X4		CMP30	3543
17203	54630		SA6	A3		CMP30	3544
	54731		SA7	A3+B1		CMP30	3545
17204	7231777776	USER1	SX3	X1-1	GET NEW BLOCK INFORMATION FROM USETAB	CMP30	3546
		20302	LX3	2		CMP30	3547
		63731	SB7	X3+B1		CMP30	3548
17205	53127		SA1	X2+B7	SECOND WORD OF USETAB ENTRY -	CMP30	3549
	15610		BX6	-X0*X1	BINREL, POSCTR, NFOUP, ORGCTR	CMP30	3550
	21127		AX1	23		CMP30	3551
17206	5160003104		SA6	ORGCTR		CMP30	3552
	43473		MX4	-1		CMP30	3553
17207	5160003106		SA6	LOCCTR		CMP30	3554
	15714		BX7	-X4*X1		CMP30	3555
		21101	AX1	1		CMP30	3556
17210	5170003136		SA7	NFOUP		CMP30	3557
	73610		SX6	X1		CMP30	3558
		21122	AX1	18		CMP30	3559
17211	73710		SX7	X1		CMP30	3560
	5160003110		SA6	POSCTR		CMP30	3561
17212	5170003575		SA7	BINREL		CMP30	3562
	54111		SA1	A1+B1	THIRD WORD OF USETAB ENTRY	CMP30	3563
	54211		SA2	A1+B1	FOURTH WORD OF USETAB ENTRY - BINWORD	CMP30	3564
17213	43464		MX4	-8		CMP30	3565
	15610		BX6	-X0*X1		CMP30	3566
	22702		LX7	X2		CMP30	3567
17214	5160003571		SA6	MINORG		CMP30	3568
	5170003574		SA7	BINWORD		CMP30	3569
17215	21130		AX1	24		CMP30	3570
	15614		BX6	-X4*X1		CMP30	3571
	21111		AX1	9		CMP30	3572
	10711		BX7	X1		CMP30	3573

14121HE

	17241	5160003125 5120003102	VFD.0	SA6 SA2	WWORD LOCSYM		CPSA288 109 CPSA288 110
		5130003136		SA3	NFOUP	COMMON CODE FOR *VFD* AND *VFDL*	COMPASS 11390
1	17242	12232		BX2	X3+X2		COMPASS 11391
2		0302017244		ZR	X2,VFD1		COMPASS 11392
3		43100		MX1	0		COMPASS 11393
4	17243	0100023377		RJ	YPRLOC		COMPASS 11394
5	17244	76600	VFD1	SX6	B0		COMPASS 11395
6		76710		SX7	B1		COMPASS 11396
7		5160003304		SA6	FLAG	CUMULANT FIELD COUNT	COMPASS 11397
8	17245	5170003561		SA7	P1TEMP	ERROR FLAG	COMPASS 11398
9	17246	5110003145	VFD2	SA1	CHAR		COMPASS 11399
10		6271777722		SB7	X1-1R		COMPASS 11400
11	17247	0470017310		ZR	B7,VFD3	QUIT ON BLANK	COMPASS 11401
12		43600		MX6	0		COMPASS 11402
13	17250	5160006302		SA6	EXERR		COMPASS 11403
14		5110003134		SA1	MBASE	SET NUMBER BASE	COMPASS 11404
15	17251	10611		BX6	X1		COMPASS 11405
16		5110003133		SA1	NBASE	SAVE NUMBER BASE	COMPASS 11406
17		54610		SA6	A1		COMPASS 11407
18	17252	10611		BX6	X1		COMPASS 11408
19		5160017313		SA6	VFDA		COMPASS 11409
20	17253	7110000017		SX1	15		COMPASS 11410
21		0100023145		RJ	YEVITEM	EVALUATE BIT COUNT	COMPASS 11411
22	17254	5120017313		SA2	VFDA	RESTORE NUMBER BASE	COMPASS 11412
23		10622		BX6	X2		COMPASS 11413
24	17255	5160003133		SA6	NBASE		COMPASS 11414
25		5120006276		SA2	ELREL		COMPASS 11415
26	17256	54321		SA3	A2+B1	ELEXT GUARANTEE ABSOLUTE RESULT	COMPASS 11416
27		36223		IX2	X2+X3		COMPASS 11417
28		54431		SA4	A3+B1	ELREG	COMPASS 11418
29		12224		BX2	X2+X4		COMPASS 11419
30	17257	76610		SX6	B1		COMPASS 11420
31	17260	0302017261	+	ZR	X2,*+1		COMPASS 11421
32		5160006302		SA6	EXERR	COMPLAIN IF NOT ABSOLUTE	COMPASS 11422
33	17261	5120006275		SA2	ELVAL		COMPASS 11423
34		7130000075		SX3	61		COMPASS 11424
35	17262	6261777727		SB6	X1-1R/	CHECK FOR SLASH	COMPASS 11425
36		37423		IX4	X2-X3	CHECK FOR EXCESSIVELY LONG	COMPASS 11426
37	17263	0302017264	+	ZR	X2,*+1	OR NEGATIVE	CMP041 31
38		0332017265		MI	X2,*+2		CMP041 32
39	17264	0324017265	+	PL	X4,*+1	VFD BIT COUNT	COMPASS 11427
40		0460017266		ZR	B6,*+2		COMPASS 11428
41	17265	5160006302		SA6	EXERR		COMPASS 11429
42	17266	5150003561	+	SA5	P1TEMP		COMPASS 11430
43		5130006302		SA3	EXERR		COMPASS 11431
44	17267	22605		LX6	X5	ERROR FLAG	COMPASS 11432
45	17270	0303017271	+	ZR	X3,*+1		COMPASS 11433
46		76600		SX6	B0	SET ERROR FLAG	COMPASS 11434
47		54650		SA6	A5		COMPASS 11435
48	17271	5150003304		SA5	FLAG		COMPASS 11436
49		36756		IX7	X5+X6	UP FIELD COUNT	COMPASS 11437
50		54750		SA7	A5		COMPASS 11438
51	17272	20673		LX6	59		COMPASS 11439
52		21673		AX6	59		COMPASS 11440
53		11162		BX1	X6*X2		COMPASS 11441
54		43073		MX0	59		CPSA288 111
55							
56							
57							
58							
59							
60							


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**          VFD - FIELD DEFINITION.

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17321	5110003136	VFD.0	SA1	NFOUP	CHECK IF LOCATION TERM NEEDS PROCESSING	CPSA288	147
	5120003102		SA2	LOCSYM		COMPASS	11461
17322	5130003110		SA3	POSCTR		COMPASS	11462
	5140003123		SA4	LWORD		COMPASS	11463
17323	12121		BX1	X2+X1		COMPASS	11464
	37343		IX3	X4-X3		COMPASS	11465
	43600		MX6	0		COMPASS	11466
	76710		SX7	B1		COMPASS	11467
17324	5160004066		SA6	P2TEMP	FIELD COUNT	COMPASS	11468
	54761		SA7	A6+B1	LISTING FLAG	COMPASS	11469
17325	0303017326	+	ZR	X3,*+1		COMPASS	11470
	0301017327		ZR	X1,*+1+1		COMPASS	11471
17326	43100		MX1	0		COMPASS	11472
	0100025177		RJ	ZPRLOC		COMPASS	11473
17327	43600	ZVFD1	MX6	0	NEW EXPRESSION	COMPASS	11474
	5120003110		SA2	POSCTR		COMPASS	11475
	10722		BX7	X2		COMPASS	11476
17330	5160004047		SA6	OPVAL	CLEAR WORD VALUE	COMPASS	11477
	5170004070		SA7	P2TEMPB	SAVE STARTING BIT NUMBER	COMPASS	11478
17331	5110003145	ZVFD2	SA1	CHAR	CHECK FOR END OF VFD	COMPASS	11479
	6271777722		SB7	X1-1R		COMPASS	11480
17332	0470017471		ZR	B7,ZVFD7		COMPASS	11481
	5110003134		SA1	MBASE	SET NUMBER BASE	COMPASS	11482
17333	10611		BX6	X1		COMPASS	11483
	5110003133		SA1	NBASE	SAVE NUMBER BASE	COMPASS	11484
	54610		SA6	A1		COMPASS	11485
17334	10611		BX6	X1		COMPASS	11486
	5160017532		SA6	ZVFDA		COMPASS	11487
17335	7110000017		SX1	15		COMPASS	11488
	0100024761		RJ	ZEVITEM	EVALUATE BIT COUNT	COMPASS	11489
17336	5120017532		SA2	ZVFDA	RESTORE NUMBER BASE	COMPASS	11490
	10622		BX6	X2		COMPASS	11491
17337	5160003133		SA6	NBASE		COMPASS	11492
	5120004066		SA2	P2TEMP	INCREMENT FIELD COUNT	COMPASS	11493
17340	73621		SX6	X2+B1		COMPASS	11494
	76710		SX7	B1		COMPASS	11495
	54620		SA6	A2		COMPASS	11496
	54721		SA7	A2+B1	SET LIST FLAG	COMPASS	11497
17341	5130003304		SA3	FLAG	CHECK IF STILL VALID FIELD	COMPASS	11498
	37436		IX4	X3-X6		COMPASS	11499
	43700		MX7	0		COMPASS	11500
17342	0324017343	+	PL	X4,*+1		COMPASS	11501
	5170006275		SA7	ELVAL	CLEAR OUT FIELD WIDTH	COMPASS	11502
17343	0100005444		RJ	GETCH	THROW AWAY SLASH	COMPASS	11503
17344	5110006275		SA1	ELVAL		COMPASS	11504
	10611		BX6	X1	SAVE FIELD WIDTH	COMPASS	11505
17345	5160004071		SA6	P2TEMPC		COMPASS	11506
	0100006305		RJ	SCAD	SCAN ADDRESS FIELD	COMPASS	11507
17346	5150003257		SA5	EXREG	CHECK FOR A REGISTER	COMPASS	11508
	76610		SX6	B1		COMPASS	11509
17347	0305017351		ZR	X5,ZVFD3A		COMPASS	11510
	5160003322		SA6	AERR	*** REGISTER IN VFD FIELD	COMPASS	11511
17350	5160003345		SA6	EFLG		COMPASS	11512
17351	5130004071	ZVFD3A	SA3	P2TEMPC	MASK OUT EXPRESSION	COMPASS	11513
	5140003254		SA4	EXVAL		COMPASS	11514
17352	6160000073		SB6	59		COMPASS	11515
	63730		SB7	X3		COMPASS	11517

17353	0767017355		GT	B7,B6,ZVFD3	IF 60-BIT FIELD	CMP30	3587
	43001		MX0	1		COMPASS	11518
	67667		SB6	B6-B7		COMPASS	11519
17354	23060		AX0	X0,B6		COMPASS	11520
	15640		BX6	-X0*X4		COMPASS	11521
	54640		SA6	A4	ADDRESS FIELD VALUE	COMPASS	11522
17355	5120003110	ZVFD3	SA2	POSCTR		COMPASS	11523
	37723		IX7	X2-X3		COMPASS	11525
17356	0327017414		PL	X7,ZVFD4	IF FIELD WILL FIT INTO THIS WORD	COMPASS	11526
	14777		BX7	-X7	PROCESS HIGH-ORDER BITS	COMPASS	11527
	54441		SA4	A4+B1	EXREL	CMP30	3588
17357	54541		SA5	A4+B1	EXEXT	CMP30	3589
	12645		BX6	X4+X5		CMP30	3590
	0306017362		ZR	X6,ZVFD3B	IF ABSOLUTE FIELD	CMP30	3591
17360	76610		SX6	B1		CMP30	3592
	5160003322		SA6	AERR	REL/EXT FIELD MAY NOT CROSS WORD BOUNDARY	CMP30	3593
17361	5160003345		SA6	EFLG		CMP30	3594
17362	63770	ZVFD3B	SB7	X7		CMP30	3595
	54730		SA7	A3	STORE REDUCED FIELD WIDTH	COMPASS	11529
	5140003254		SA4	EXVAL		COMPASS	11530
17363	5150004047		SA5	OPVAL		COMPASS	11531
	23174		AX1	X4,B7		COMPASS	11532
	43001		MX0	1	CLEAR POSSIBLE OVERFLOW	COMPASS	11533
17364	67671		SB6	B7-B1		COMPASS	11534
	23060		AX0	X0,B6		COMPASS	11535
	15110		BX1	-X0*X1		COMPASS	11536
	12651		BX6	X5+X1		COMPASS	11537
17365	54650		SA6	A5		COMPASS	11539
	43700		MX7	0		COMPASS	11540
	10166		BX1	X6		COMPASS	11541
	54720		SA7	A2		COMPASS	11542
17366	7120000044		SX2	36		COMPASS	11543
	5130003116		SA3	PPTYPE		F4820	699
17367	76511	+	SX5	B1+B1		F4820	700
	0323017372		PL	X3,ZVFD3C	IF NOT HEX LISTING	F4820	701
17370	7263000002		SX6	X3+2		CPSA197	31
	0336017372		MI	X6,ZVFD3C	IF NOT HEX LISTING.	CPSA197	32
17371	73551		SX5	X5+B1		F4820	702
	73331		SX3	X3+B1		F4820	703
	20301		LX3	1		F4820	704
	36223		IX2	X2+X3		F4820	705
17372	5130004070	ZVFD3C	SA3	P2TEMPB		F4820	706
	63530		SB5	X3		CPSA288	148
	73451		SX4	X5+B1		F4820	707
17373	36335		IX3	X3+X5	ROUND UP	COMPASS	11547
	27303		IX3	X3/X4		COMPASS	11548
17375	5140003114		SA4	MACHINE		COMPASS	11549
	0304017402		ZR	X4,ZVFD3D	IF CPU	CPSA288	149
17376	7222777764		SX2	X2-11	ADJUST COLUMN FOR PP LISTINGS	CPSA288	150
	5140003123		SA4	LWORD		CPSA288	151
17377	5150003125		SA5	WWORD		CPSA288	152
	37545		IX5	X4-X5		CPSA288	153
17400	0305017402		ZR	X5,ZVFD3D	IF NOT USING ONLY LOWER 12 BITS IN WORD	CPSA288	154
	6155777763		SB5	B5-12		CPSA288	155
17401	0550017402		NZ	B5,ZVFD3D	IF LINE NOT BEGUN AT TOP OF WORD	CPSA288	156
	7233000002		SX3	X3+2	SET TO SHOW TWO LEADING ZEROS	CPSA288	157
17402	0100007773	ZVFD3D	RJ	PACK0	CALL PACK0 (OPVAL, 36-11*MACH, NBIT/3)	CPSA288	158

17403	5110004047		SA1	OPVAL		COMPASS	11553
	5120004070		SA2	P2TEMPB		COMPASS	11554
17404	76300		SX3	B0		COMPASS	11555
	10433		BX4	X3		COMPASS	11556
	0100025344		RJ	BINOUT		COMPASS	11557
17405	76600		SX6	B0	CLEAR DETAIL FLAG	COMPASS	11558
	5160003605		SA6	DETFLG		COMPASS	11559
17406	0100007720		RJ	LISTERG	LIST THE LINE	COMPASS	11560
17407	43600		MX6	0		COMPASS	11561
	5160003102		SA6	LOCSYM		COMPASS	11562
17410	5160004047		SA6	OPVAL		COMPASS	11563
	10166		BX1	X6		COMPASS	11564
17411	0100025177		RJ	ZPRLOC		COMPASS	11565
17412	5110003110		SA1	POSCTR		COMPASS	11566
	10611		BX6	X1		COMPASS	11567
17413	5160004070		SA6	P2TEMPB	RESET POSITION ORIGIN	COMPASS	11568
	0400017351		EQ	ZVFD3A	RETURN FOR LOW ORDER PART	COMPASS	11569
						COMPASS	11570
17414	54720	ZVFD4	SA7	A2	ROOM LEFT IN WORD FOR THIS SUBFIELD	COMPASS	11571
	63770		SB7	X7	SHIFT LEFT INTO POSITION	COMPASS	11572
	5120003254		SA2	EXVAL		COMPASS	11573
17415	5130004047		SA3	OPVAL		COMPASS	11574
	22472		LX4	X2,B7		COMPASS	11575
	12643		BX6	X4+X3	OR INTO VALUE	COMPASS	11576
17416	54630		SA6	A3		COMPASS	11577
	5120003255		SA2	EXREL	CHECK FOR RELOCATABLE FIELDS	COMPASS	11578
	54321		SA3	A2+B1		COMPASS	11579
17417	12423		BX4	X2+X3		COMPASS	11580
	0314017421		NZ	X4,ZVFD6	IF NOT ABSOLUTE FIELD	CMP30	3596
17420	5120003110		SA2	POSCTR	CHECK FOR BOTTOM OF WORD	CMP30	3597
	0312017331		NZ	X2,ZVFD2		COMPASS	11595
17421	5110003110	ZVFD6	SA1	POSCTR	OUTPUT VALUES AT BOTTOM OF WORD OR	COMPASS	11596
	43072		MX0	58	AT RELOCATABLE FIELD	COMPASS	11597
	63210		SB2	X1		COMPASS	11598
17422	27101		IX2	X1/X0		COMPASS	11599
17424	5130003114		SA3	MACHINE		COMPASS	11600
	5140003116		SA4	PPTYPE		F4820	709
17425	0303017426	+	ZR	X3,*+1		COMPASS	11601
	7222777764		SX2	X2-11		COMPASS	11602
17426	5130004070		SA3	P2TEMPB		COMPASS	11603
	63530		SB5	X3		CPSA288	159
17427	5150004047		SA5	OPVAL		COMPASS	11604
	54110		SA1	A1		COMPASS	11605
	37331		IX3	X3-X1		COMPASS	11606
17430	7222000044		SX2	X2+36		COMPASS	11607
17431	76111	+	SX1	B1+B1		F4820	710
	0324017434		PL	X4,ZVFD6B	IF NOT HEX LISTING	F4820	711
17432	7264000002		SX6	X4+2		CPSA197	33
	0336017434		MI	X6,ZVFD6B	IF NOT HEX LISTING.	CPSA197	34
17433	73111		SX1	X1+B1		F4820	712
	73441		SX4	X4+B1		F4820	713
	20401		LX4	1		F4820	714
	36224		IX2	X2+X4		F4820	715
17434	36331	ZVFD6B	IX3	X3+X1	ROUND UP	F4820	716
	73411		SX4	X1+B1	NUMBER OF BITS PER DIGIT	CPS0329	6
	7100000003		SX0	3	PREPARE VALUE FOR LISTING.	CPSA094	5
17435	76120		SX1	B2	NUMBER OF BITS LEFT AFTER THIS EXPRESSION.	CPSA094	6

17437	27101 7100000003		IX1 SX0	X1/X0 3	NUMBER OF EMPTY COLUMNS LEFT. DETERMINE NO. OF BITS TO SHIFT RIGHT.	CPSA094 CPSA094	7 8
	42110		IX1	X1*X0	NUMBER OF BITS TO SHIFT RIGHT TO PREPARE	CPSA094	9
	63710		SB7	X1	FOR ENTRY OF VALUE INTO *OCTAL* AREA.	CPSA094	10
17440	23175		AX1	X5,B7	SHIFT INTO POSITION FOR LISTING.	CPSA094	11
	27303		IX3	X3/X4	SET NUMBER OF DIGITS	CPS0329	7
17442	5140003123		SA4	LWORD		CPSA288	160
	5150003125		SA5	WWORD		CPSA288	161
17443	37545		IX5	X4-X5		CPSA288	162
	0305017446		ZR	X5,ZVFD6C	IF NOT USING ONLY LOWER 12 BITS IN WORD	CPSA288	163
17444	6155777763		SB5	B5-12		CPSA288	164
	0550017446		NZ	B5,ZVFD6C	IF LINE NOT BEGUN AT TOP OF WORD	CPSA288	165
17445	7233000002		SX3	X3+2	SET TO SHOW TWO LEADING ZEROS	CPSA288	166
17446	0100023574	ZVFD6C	RJ	PACKOR	PACK OCTAL DIGITS AND RELOCATION INDICATOR	CPSA288	167
17447	5110003110		SA1	POSCTR	OUTPUT BINARY VALUES	COMPASS	11613
	5120004070		SA2	P2TEMPB		COMPASS	11614
17450	5130003255		SA3	EXREL		COMPASS	11615
	54431		SA4	A3+B1		COMPASS	11616
	63710		SB7	X1		CMP30	3598
17451	5150004047		SA5	OPVAL		COMPASS	11617
	12734		BX7	X3+X4		CMP30	3599
	37221		IX2	X2-X1		COMPASS	11619
17452	0307017462		ZR	X7,ZVFD6A	IF ABSOLUTE FIELD	CMP30	3600
	54121		SA1	A2+B1		CMP30	3601
	37621		IX6	X2-X1		CMP30	3602
17453	0306017462		ZR	X6,ZVFD6A	IF NO PRECEDING ABSOLUTE FIELD	CMP30	3603
	5140003110		SA4	POSCTR		CMP30	3604
17454	23575		AX5	B7		CMP30	3605
	10266		BX2	X6		CMP30	3606
	63710		SB7	X1		CMP30	3607
	36641		IX6	X4+X1		CMP30	3608
17455	76300		SX3	B0		CMP30	3609
	13444		BX4	X4-X4		CMP30	3610
	23175		AX1	X5,B7		CMP30	3611
	54640		SA6	A4		CMP30	3612
17456	0100025344		RJ	BINOUT	OUTPUT ABSOLUTE FIELD	CMP30	3613
17457	5110003110		SA1	POSCTR		CMP30	3614
	5120004071		SA2	P2TEMPC		CMP30	3615
17460	5130003255		SA3	EXREL		CMP30	3616
	54431		SA4	A3+B1		CMP30	3617
	37712		IX7	X1-X2		CMP30	3618
17461	5150004047		SA5	OPVAL		CMP30	3619
	63770		SB7	X7		CMP30	3620
	54710		SA7	A1		CMP30	3621
17462	13666	ZVFD6A	BX6	X6-X6		CMP30	3622
	23175		AX1	X5,B7		COMPASS	11621
	5160004067		SA6	P2TEMPA		COMPASS	11622
17463	0100025344		RJ	BINOUT		COMPASS	11623
17464	76600		SX6	B0	CLEAR DETAIL FLAG	COMPASS	11624
	5160003605		SA6	DETFLG		COMPASS	11625
17465	0100007720		RJ	LISTERG		COMPASS	11626
17466	5110003110		SA1	POSCTR		COMPASS	11627
	0311017327		NZ	X1,ZVFD1		COMPASS	11628
17467	0100025177		RJ	ZPRLOC	PROCESS LOCATION AT TOP OF WORD	COMPASS	11629
17470	0400017327		EQ	ZVFD1		COMPASS	11630
						COMPASS	11631
17471	5120004067	ZVFD7	SA2	P2TEMPA	FINISH OFF VFD PROCESSING	COMPASS	11632

17472	7110000055	0312017500	NZ	X2,ZVFD8	IF NOT END OF STATEMENT	COMPASS	11633
			SX1	1R	CLEAR OCTAL ADDRESS	COMPASS	11634
		7120003633	SX2	OCTAL+8		COMPASS	11635
17473	7130003641		SX3	OCTAL+14		COMPASS	11636
		0100005600	RJ	PRESET		COMPASS	11637
17474	5130003124		SA3	VWORD		CPSA288	168
		0303011134	ZR	X3,Z100	IF NOT CIPPU ,S	CPSA288	169
17475	5140003125		SA4	WWORD	RESTORE *LWORD* TO ACTUAL WORD SIZE	CPSA288	170
		10744	BX7	X4		CPSA288	171
17476	5170003123		SA7	LWORD		CPSA288	172
		5170003110	SA7	POSCTR	RESET POSITION COUNTER TO UPPER	CPSA288	173
17477	0400011134		EQ	Z100		COMPASS	11638
17500	5110003110		SA1	POSCTR		COMPASS	11639
		5140003116	SA4	PPTYPE		F4820	718
17501	66511		SB5	B1+B1		F4820	719
		7120000044	SX2	36		F4820	720
17502	0324017505		PL	X4,ZVFD8A	IF NOT HEX ASSEMBLY	F4820	721
		6274000002	SB7	X4+2		CPSA213	27
17503	0770017505		MI	B7,ZVFD8A	IF NOT HEX ASSEMBLY.	CPSA213	28
		73441	SX4	X4+B1		F4820	722
		20401	LX4	1		F4820	723
17504	36224		IX2	X2+X4		F4820	724
		66551	SB5	B5+B1		F4820	725
17505	76751		SX7	B5+B1		F4820	726
		27101	IX0	X1/X7		COMPASS	11641
17507	5150004047		SA5	OPVAL		COMPASS	11642
		76751	SX7	B5+B1		F4820	727
		42307	DX3	X0*X7		F4820	728
17510	26000		UX0	X0		F4820	729
		63630	SB6	X3		COMPASS	11645
		23165	AX1	X5,B6	POSITION VALUE	COMPASS	11646
17511	5130003114		SA3	MACHINE		COMPASS	11648
17512	0303017513		ZR	X3,*+1		COMPASS	11649
		7222777764	SX2	X2-11		F4820	730
17513	37220		IX2	X2-X0		COMPASS	11651
		5130004070	SA3	P2TEMPB		COMPASS	11652
		63330	SB3	X3		CPSA288	174
17514	73435		SX4	X3+B5		F4820	731
		76751	SX7	B5+B1		F4820	732
		27404	IX3	X4/X7		COMPASS	11655
		37330	IX3	X3-X0		COMPASS	11656
		5140003123	SA4	LWORD		CPSA288	175
17517	5150003125		SA5	WWORD		CPSA288	176
		37545	IX5	X4-X5		CPSA288	177
17520	0305017522		ZR	X5,ZVFD8B	IF NOT USING ONLY LOWER 12 BITS IN WORD	CPSA288	178
		6133777763	SB3	B3-12		CPSA288	179
17521	0530017522		NZ	B3,ZVFD8B	IF LINE NOT BEGUN AT TOP OF WORD	CPSA288	180
		7233000002	SX3	X3+2	SET TO SHOW TWO LEADING ZEROS	CPSA288	181
17522	0100007773		RJ	PACK0	PACK OCTAL DIGITS	CPSA288	182
17523	5110003110		SA1	POSCTR		COMPASS	11658
		63710	SB7	X1		COMPASS	11659
17524	5140004047		SA4	OPVAL		COMPASS	11660
		5130004070	SA3	P2TEMPB		COMPASS	11661
17525	37231		IX2	X3-X1		COMPASS	11662
		23174	AX1	X4,B7		COMPASS	11663
		43300	MX3	0		COMPASS	11664
		10433	BX4	X3		COMPASS	11665

17526	0100025344		RJ	BINOUT		COMPASS	11666
17527	76600		SX6	B0	CLEAR DETAIL FLAG	COMPASS	11667
	5160003605		SA6	DETFLG		COMPASS	11668
17530	5140003125		SA4	WWORD	RESTORE *LWORD* TO ACTUAL WORD SIZE	CPSA288	183
	10744		BX7	X4		CPSA288	184
17531	5170003123		SA7	LWORD		CPSA288	185
	0400011321		EQ	ZLISTG		COMPASS	11669
						COMPASS	11670
17532	00000000000000000000	ZVFDA	DATA	0		COMPASS	11671
		***	VFDL - FIELD DEFINITION.				CPSA288 187
		*					CPSA288 188
		*					CPSA288 189
		*SYM	VFDL ITEM1/EXP1,ITEM2/EXP2,...,ITEMN/EXPN				CPSA288 190
		*	LEGAL ONLY FOR 180 PPU ASSEMBLIES. SAME AS VFD, EXCEPT IT				CPSA288 191
		*	OVERRIDES THE 12-BIT FIELD SIZE SPECIFIED FOR 180 PPU				CPSA288 192
		*	ASSEMBLIES BY (CIPPU ,S).				CPSA288 193
						CPSA288	194
17533	5110003116	VFDL	QUAL	PASS1		CPSA288	195
	7211000003		SA1	PPTYPE		CPSA288	196
			SX1	X1+3		CPSA288	197
17534	0301017536		ZR	X1,VFDL1	IF 180 PPU ASSEMBLY	CPSA288	198
	76610		SX6	B1	*VFDL* ILLEGAL, POST 0-ERROR	CPSA288	199
17535	5160003345		SA6	EFLG		CPSA288	200
	5160003321		SA6	OERR		CPSA288	201
17536	5110003123	VFDL1	SA1	LWORD	SET WORD SIZE ALWAYS USE FULL WORD	CPSA288	202
	10611		BX6	X1		CPSA288	203
17537	5160003125		SA6	WWORD		CPSA288	204
	0400017241		EQ	VFD.0	GO TO COMMON *VFD* PROCESSING	CPSA288	205
		**	VFDL - FIELD DEFINITION.				CPSA288 207
							CPSA288 208
							CPSA288 209
17540	5110003123	VFDL	QUAL	PASS2		CPSA288	210
	10611		SA1	LWORD	SET WORD SIZE TO ALWAYS USE FULL WORD	CPSA288	211
			BX6	X1		CPSA288	212
17541	5160003125		SA6	WWORD		CPSA288	213
	0400017321		EQ	VFD.0	GO TO COMMON *VFD* PROCESSING	CPSA288	214
		***	XREF - SET TYPE OF CROSS REFERENCE DESIRED.				COMPASS 11673
		*					COMPASS 11674
		*					COMPASS 11675
		*	XREF	CHAR		COMPASS	11676
		*	(CHAR)	= P	SET PAGE/LINE CROSS REFERENCE.	COMPASS	11677
		*		A	SET ADDRESS CROSS REFERENCE.	COMPASS	11678
		*		B	SET BOTH PAGE/LINE AND ADDRESS.	COMPASS	11679
						COMPASS	11680
						COMPASS	11681

14121HE

17556	5130000127		SA3	CP.XNAME	USE DEFAULT FILE NAME	CMP30	3636
	43006		MX0	6		CMP20	100
17557	20306	+	LX3	6	RIGHT JUSTIFY FILE NAME	CMP20	101
	11603		BX6	X0*X3		CMP20	102
	0316017557		NZ	X6,*	LOOP	CMP20	103
17560	43022	XTX1	MX0	18		CMP20	104
	11430		BX4	X3*X0		CMP20	105
	0314017565		NZ	X4,XTX2	IF GREATER THAN 7 CHARACTERS	CMP20	106
17561	43014		MX0	12	LEFT JUSTIFY FILE NAME	CMP20	107
	10633		BX6	X3	SAVE FILE NAME FOR SEQUENCE FIELDS	CMP20	108
	5160003562		SA6	P1TEMPA		CMP20	109
17562	11603	+	BX6	X0*X3		CMP20	110
	20306		LX3	6		CMP20	111
	0306017562		ZR	X6,*	LOOP	CMP20	112
17563	76110		SX1	B1		CMP20	113
	12613		BX6	X1+X3		CMP20	114
	5160003010		SA6	XTF		CMP30	3637
						CMP30	3638
			IFNE	CP#RM,0,2		CMP30	3639
			LX7	X3		CMP30	3640
			SA7	XDUM		CMP30	3641
						CMP30	3642
17564	0326017567		PL	X6,XTX3	IF FILE NAME NON-NUMERIC	CMP20	116
17565	76610	XTX2	SX6	B1		CMP20	117
	5160003345		SA6	EFLG		CMP20	118
17566	5160003320		SA6	LERR	POST BAD LOCATION SYMBOL	CMP20	119
	0400010614		EQ	CTL70		CMP20	120
						CMP30	3643
		RM	IFEQ	CP#RM,0		CMP30	3644
17567	7120003010	XTX3	REWIND	X		CMP20	121
		RM	ELSE			CMP30	3645
		XTX3	SX1	LXDUM	INITIALIZE FILE INFORMATION TABLE	CMP30	3646
			SX2	XDUM		CMP30	3647
			SX3	X		CMP30	3648
			RJ	MOVE		CMP30	3649
		RM	ENDIF			CMP30	3650
						CMP30	3651
17571	5110000130		SA1	CP.IFORM	SAVE AND CLEAR INPUT FORMAT	CMP30	3652
	5120003060		SA2	EOFINP	AND END OF INPUT FLAG	CMP30	3653
17572	10611		BX6	X1		CMP24	62
	22702		LX7	X2		CMP30	3654
	5160003565		SA6	P1TEMPD		CMP24	64
17573	54761		SA7	A6+B1		CMP30	3655
	43600		MX6	0		CMP30	3656
	54610		SA6	A1		CMP30	3657
	54620		SA6	A2		CMP30	3658
17574	0100006025		RJ	SCITEM	GET RECORD NAME	CMP20	122
17575	0306017665		ZR	X6,XTX13A	IF NO NAME	CMP30	3659
	43014		MX0	12	LEFT JUSTIFY NAME	CMP20	126
17576	11306	+	BX3	X0*X6		CMP20	127
	20606		LX6	6		CMP20	128
	0303017576		ZR	X3,*	LOOP	CMP20	129
17577	5160003563		SA6	P1TEMPB		CMP20	130
						CMP20	131
		*		READ RANDOM INDEX AND SEARCH FOR RECORD.		CMP20	132
						CMP20	133
		DM	IFNE	CP#RM,7		CPS028	357

		0100005523	RJ	MTD	MAKE ROOM FOR INDEX	CMP30	3662
17600	5120003437		SA2	0.MEMORY		CMP20	134
		5130003440	SA3	0.ENDTAB		CMP20	136
17601	37332		IX3	X3-X2	NUMBER OF WORDS	CMP20	137
		6273767777	SB7	X3-10000B		CMP20	139
17602	0770017603		NG	B7,XTX4	IF LESS THAN 10000 WORDS	CMP20	140
		7130010000	SX3	10000B		CMP20	141
17603	7233777776	XTX4	SX3	X3-1		CMP20	142
		43700	MX7	0	CLEAR INDEX AREA	CMP20	143
		63730	SB7	X3		CMP20	144
17604	20322		LX3	18		CMP20	145
		53720	SA7	X2		CMP20	146
		12632	BX6	X3+X2		CMP20	147
17605	67771	+	SB7	B7-B1		CMP20	148
		54771	SA7	A7+B1		CMP20	149
		0570017605	NZ	B7,*	LOOP	CMP20	150
17606	5160003017		SA6	X+7	STORE INDEX AREA POINTERS IN FET	CMP20	151
		7120003010	OPEN	X,READ,R	READ INDEX	CMP20	152
17610	5100030053		SA0	VALUES	(A0) = VALUES	CMP20	153
		53121	SA1	X2+B1	RESET RANDOM BIT IN FET	CMP20	154
		76210	SX2	B1		CMP20	155
17611	20257		LX2	47		CMP20	156
		12612	BX6	X1+X2		CMP20	157
		54610	SA6	A1		CMP20	158
17612	5150003017		SA5	XTF+7	(X5) = INDEX POINTERS	CMP30	159
		53350	SA3	X5		CMP20	3690
		20114	LX1	59-47		CMP20	161
17613	11413		BX4	X1*X3		CMP20	162
		21360	AX3	48		CMP20	163
		0324017640	PL	X4,XTX8	IF NOT NAME INDEX OR NOT RANDOM FILE	CMP20	164
17614	7233000777		SX3	X3-777000B		CMP20	165
		5140003563	SA4	P1TEMPB		CMP20	166
17615	0303017623		ZR	X3,XTX6	IF UPDATE PROGRAM LIBRARY	CMP30	3691
						CMP20	167
		*		SEARCH SCOPE RANDOM FILE INDEX.		CMP30	3692
						CMP30	3693
		21522	AX5	18		CMP30	3694
		54331	SA3	A3+B1		CMP20	168
17616	66211		SB2	B1+B1		CMP20	169
		63350	SB3	X5		CMP20	170
17617	67332	XTX5	SB3	B3-B2	SEARCH INDEX	CMP20	171
		13234	BX2	X3-X4		CMP20	172
		46000	NO			CMP30	3695
		54332	SA3	A3+B2		CMP20	174
17620	0730017773		NG	B3,XTXTU	IF NAME NOT IN INDEX	CMP20	175
		0312017617	NZ	X2,XTX5	LOOP	CMP20	176
17621	55331		SA3	A3-B1	SET RECORD ADDRESS IN FET	CMP30	3696
		10633	BX6	X3		CMP20	178
		5160003016	SA6	X+6		CMP20	179
17622	0400017665		EQ	XTX14		CMP20	180
						CMP20	181
		DM	ELSE			CMP30	3703
						CMP30	3704
						CMP30	3705
			OPENM	X,INPUT,E		CMP30	3706
			FETCH	X,RT,X1		CMP30	3707
			FETCH	X,BT,X2		CMP30	3708

				SX3	X1-#WT#		CMP30	3709		
				BX4	X2+X3		CMP30	3710		
				NZ	X4,XTEXTU	IF BLOCKED, OR RECORD TYPE NOT *W*	CMP30	3711		
1				SKIPBL	X,1		CMP30	3712	1	
2				GETP	X,VALUES,50	READ SCOPE2 HEADER AND RANDOM INDEX	CPS172	5	2	
3				FETCH	X,FP,X4		CMP30	3714	3	
4				SX0	EOD		CMP30	3715	4	
5				SA1	=7LDIRECT\$		CMP30	3716	5	
6				SA2	VALUES		CMP30	3717	6	
7				BX3	X0*X4		CMP30	3718	7	
8				SX5	VALUES+2		CMP30	3719	8	
9				BX4	X1-X2		CMP30	3720	9	
10				BX6	X3+X4		CMP30	3721	10	
11				NZ	X6,XTX8	IF NOT UPDATE PROGRAM LIBRARY	CMP30	3722	11	
12							CMP30	3723	12	
13			DM	ENDIF			CMP30	3724	13	
14							CMP20	182	14	
15			*	SEARCH	UPDATE PROGRAM LIBRARY DECK LIST.		CMP20	183	15	
16							CMP20	184	16	
17			RM	IFEQ	CP#RM,0		CMP30	3725	17	
18							CMP30	3726	18	
19	17623	53350		XTX6	SA3	X5	DECK LIST RECORD ADDRESS AND LENGTH	CMP20	185	19
20		20160			LX1	47-59		CMP20	186	20
21		73610			SX6	X1	SET IN = OUT = FIRST	CMP20	187	21
22			10733		BX7	X3		CMP20	188	22
23	17624	54611			SA6	A1+B1		CMP20	189	23
24		55751			SA7	A5-B1	STORE RANDOM ADDRESS IN FET	CMP20	190	24
25		54661			SA6	A6+B1		CMP20	192	25
26	17625	5033000002			SA3	A3+2	MASTER CONTROL CHARACTER	CPS172	6	26
27		5110012205			SA1	=0LCOMDECK		CPS172	7	27
28	17626	43066			MX0	-6	(P1TEMPC) = *COMDECK	CPS172	8	28
29		15330			BX3	-X0*X3	WHERE * IS MASTER	CPS172	9	29
30		12613			BX6	X1+X3	CONTROL CHARACTER	CPS172	10	30
31			20666		LX6	-6		CPS172	11	31
32	17627	5160003564			SA6	P1TEMPC		CPS172	12	32
33		10044			BX0	X4	(X0) = RECORD NAME	CMP30	3727	33
34	17630	7120003010			READ	X		CMP20	193	34
35	17632	64600			READW	X2,A0,2	IGNORE FIRST ENTRY	CMP20	194	35
36	17633	0311017773			NZ	X1,XTEXTU	IF EOR	CMP20	195	36
37		43566			MX5	54	(X5) = NINE-CHARACTER MASK	CMP24	65	37
38	17634	64600		XTX7	READW	X2,A0,2		CMP20	197	38
39	17635	54300			SA3	A0		CMP20	198	39
40		0311017773			NZ	X1,XTEXTU	IF EOR	CMP20	199	40
41			13630		BX6	X3-X0		CMP20	200	41
42	17636	11656			BX6	X5*X6		CMP20	201	42
43		0316017634			NZ	X6,XTX7	LOOP	CMP20	202	43
44		77601			SX6	-B1	CP.IFORM = -1 (UPDATE COMMON DECK)	CMP30	3728	44
45	17637	5160000130			SA6	CP.IFORM	SET INPUT FORMAT	CMP30	3729	45
46		0400017663			EQ	XTX13		CMP20	205	46
47								CMP30	3730	47
48				RM	ELSE			CMP30	3731	48
49								CMP30	3732	49
50				XTX6	SA3	X5+2	MASTER CONTROL CHARACTER	CPS172	13	50
51					SA1	=0LCOMDECK		CPS172	14	51
52					MX0	-6	(P1TEMPC) = *COMDECK	CPS172	15	52
53					BX3	-X0*X3	WHERE * IS MASTER	CPS172	16	53
54					BX6	X1+X3	CONTROL CHARACTER	CPS172	17	54

		LX6	-6			CPS172	18	
		SA6	P1TEMPC			CPS172	19	
		SA3	X5	DECK LIST RECORD ADDRESS AND LENGTH		CPS172	20	
1		MX0	-30			CMP30	3734	1
2		BX6	-X0*X3			CMP30	3735	2
3		POSITION	X,X6			CMP30	3747	3
4		GETP	X,VALUES,20	IGNORE FIRST ENTRY		CMP30	3750	4
5		FETCH	X,FP,X4			CMP30	3751	5
6		SX5	E0D			CMP30	3752	6
7		BX3	X4*X5			CMP30	3753	7
8		NZ	X3,XTEXTU	IF END OF DATA		CMP30	3754	8
9	XTX7	GETP	X,VALUES,20			CMP30	3755	9
10		FETCH	X,FP,X4			CMP30	3756	10
11		SX5	E0D			CMP30	3757	11
12		BX2	X4*X5			CMP30	3758	12
13		NZ	X2,XTEXTU	IF END OF DATA		CMP30	3759	13
14		MX5	54			CMP30	3760	14
15		SA3	VALUES			CMP30	3761	15
16		SA1	P1TEMPB	RECORD NAME		CMP30	3762	16
17		BX6	X3-X1			CMP30	3763	17
18		BX6	X5*X6			CMP30	3764	18
19		NZ	X6,XTX7	LOOP		CMP30	3765	19
20		SX6	-B1	CP.IFORM = -1 (UPDATE COMMON DECK)		CMP30	3766	20
21		SA6	CP.IFORM	SET INPUT FORMAT		CMP30	3767	21
22		MX0	-30			CMP30	3768	22
23		SA1	A3+B1			CMP30	3769	23
24		BX1	-X0*X1			CMP30	3770	24
25		POSITION	X,X1			CMP30	3778	25
26		EQ	XTX14			CMP30	3781	26
27						CMP30	3782	27
28	*			RECORD INDEXED FILE OR MODIFY PROGRAM LIBRARY.		CMP30	3783	28
29						CMP30	3784	29
30	XTX8	REWINDM	X			CMP30	3814	30
31		GET	X,VALUES,10	READ RECORD INDEX POINTER		CMP30	3815	31
32		SA2	VALUES			CMP30	3816	32
33		MX0	6			CMP30	3817	33
34		BX4	X0*X2			CMP30	3818	34
35		LX4	6			CMP30	3819	35
36		SX5	X4-70B			CMP30	3820	36
37		MI	X5,XTEXTU	IF NOT RECORD INDEXED		CMP30	3821	37
38		MX0	-33			CMP30	3825	38
39		BX3	-X0*X2	WORD ADDRESS OF INDEX		CMP30	3826	39
40		MX0	-24			CMP30	3827	40
41		LX2	-33			CMP30	3828	41
42		BX7	-X0*X2			CMP30	3829	42
43		MX4	-1			CMP30	3830	43
44		IX6	X7+X4			CMP30	3831	44
45		SA6	VALUES	LENGTH OF INDEX		CMP30	3832	45
46		NG	X6,XTEXTU	IF ZERO LENGTH INDEX		CMP30	3833	46
47		POSITION	X,X3			CMP30	3838	47
48		FETCH	X,FP,X3			CMP30	3840	48
49		SX3	X3-#EOI#			CMP30	3841	49
50		ZR	X3,XTEXTU	IF EMPTY FILE		CMP30	3842	50
51		GETP	X,VALUES+1,10	READ HEADER WORD		CMP30	3843	51
52		SA1	VALUES+1			CMP30	3844	52
53		PL	X1,XTEXTU	IF NOT NAME INDEX		CMP30	3845	53
54	XTX8A	SA2	VALUES			CMP30	3846	54
55								55
56								56
57								57
58								58
59								59
60								60

				SX4	B1+B1				CMP30	3847
				IX6	X2-X4				CMP30	3848
				SA6	A2				CMP30	3849
1				NG	X2,XTEXTU	IF END OF INDEX			CMP30	3850
2				GETP	X,VALUES+1,20				CMP30	3851
3				SA3	P1TEMPB	RECORD NAME			CMP30	3852
4				SA4	VALUES+1				CMP30	3853
5				BX2	X3-X4				CMP30	3854
6				NZ	X2,XTX8A	LOOP			CMP30	3855
7				SA3	A4+B1				CMP30	3856
8				MX0	-33				CMP30	3857
9				BX6	-X0*X3	WORD ADDRESS OF REQUEST RECORD			CMP30	3858
10				POSITION	X,X6				CMP30	3863
11				EQ	XTX14				CMP30	3865
12									CMP30	3866
13			RM		ENDIF				CMP30	3867
14									CMP20	206
15			*		CHECK FOR MODIFY INDEX.				CMP20	207
16									CMP20	208
17			RM	IFEQ	CP#RM,0				CMP30	3868
18									CMP30	3869
19	17640	7120003010	XTX8	SKIPEI	X	READ INDEX			CMP20	209
20	17643	76111		SKIPB	X2,2				CMP20	210
21	17645	7170000010		READ	X2				CMP20	211
22	17646	7160777775		SX6	-2	CP.IFORM = -2 (MODIFY COMMON DECK)			CMP30	3870
23		5160000130		SA6	CP.IFORM	SET INPUT FORMAT			CMP30	3871
24	17647	64600	XTX9	READW	X2,A0,1				CMP20	212
25	17650	0311017773		NZ	X1,XTEXTU	IF EOR READ			CMP20	213
26	17651	54100	XTX10	SA1	A0	CHECK FOR 7700 TABLE			CMP20	214
27		20122		LX1	18				CMP20	215
28		7271007777		SX7	X1-770000B				CMP20	216
29	17652	43500		MX5	0				CMP20	217
30		0317017655		NZ	X7,XTX11	IF NOT 7700 TABLE			CMP20	218
31		20106		LX1	6	SKIP 7700 TABLE			CMP20	219
32	17653	64600		READW	X2,A0,X1				CMP20	220
33	17654	0311017773		NZ	X1,XTEXTU	IF EOR READ			CMP20	221
34		0400017647		EQ	XTX9	READ NEXT TABLE			CMP20	222
35	17655	7271077777	XTX11	SX7	X1-700000B				CMP20	223
36		0317017773		NZ	X7,XTEXTU	IF NOT OPLD			CMP20	224
37	17656	5140003563		SA4	P1TEMPB				CMP30	3872
38		10044		BX0	X4				CMP30	3873
39	17657	64600	XTX12	READW	X2,A0,2	CHECK RECORD NAME			CMP20	225
40	17660	0311017773		NZ	X1,XTEXTU	IF RECORD NOT FOUND			CMP20	226
41		54100		SA1	A0				CMP20	227
42		13610		BX6	X1-X0				CMP20	228
43	17661	0306017663		ZR	X6,XTX13	IF RECORD FOUND			CMP20	229
44		43471		MX4	-3				CMP20	230
45		17664		BX6	-X4-X6				CMP20	231
46	17662	0316017657		NZ	X6,XTX12	IF RECORD NOT FOUND			CMP20	232
47									CMP20	233
48			*		SET RANDOM ADDRESS.				CMP20	234
49									CMP20	235
50	17663	7120003010	XTX13	RECALL	X				CMP20	236
51	17664	54201		SA2	A0+B1				CMP20	237
52		10622		BX6	X2				CMP20	238
53		5160003016		SA6	X+6				CMP20	239
54	17665		XTX13A	BSS	0				CMP30	3936

			RM	ELSE		CMP30	3937
						CMP30	3938
						CMP30	3939
1						CMP30	3952
2			XTX13A	OPENM	X,INPUT,R OPEN FOR SEQUENTIAL	CMP30	3953
3						CMP30	3954
4			RM	ENDIF		CMP30	3955
5						CMP20	240
6			*	READ RECORD.		CMP20	241
7						CMP20	242
8	17665	43600	XTX14	MX6	0	CMP20	243
9		5160030064		SA6	VALUES+9	CMP20	244
10	17666	5120003466		SA2	L.LASTAB	CMP20	245
11		10622		BX6	X2	CMP20	246
12	17667	5160003561		SA6	P1TEMP	CMP20	247
13		5110003011		SA1	XTF+1 SET IN = OUT = FIRST	CMP30	3956
14	17670	73610		SX6	X1	CMP20	250
15		54611		SA6	A1+B1	CMP20	251
16		54661		SA6	A6+B1	CMP20	252
17	17671	7120003010		SX2	X	CMP30	3957
18		5100030053		SA0	VALUES	CMP20	253
19						CMP30	3958
20				IFEQ	CP#RM,0,1	CMP30	3959
21	17672	7170000010		READ	X2 READ HEADER	CMP30	3960
22						CMP30	3961
23	17673	5110000130		SA1	CP.IFORM	CMP30	3962
24						CMP30	3963
25			RM	IFNE	CP#RM,7	CPS028	366
26		0321017676		PL	X1,XTX15 IF NOT A PROGRAM LIBRARY FILE	CMP24	71
27	17674	20173		LX1	59	CMP24	72
28		0321017725		PL	X1,XTX19 IF UPDATE	CMP24	73
29	17675	0400017702		EQ	XTX16 MODIFY	CMP24	74
30			RM	ELSE		CMP30	3966
31				MI	X1,XTX19 IF UPDATE PROGRAM LIBRARY	CMP30	3967
32			RM	ENDIF		CMP30	3968
33						CMP24	75
34			*	READ FROM A NON-PROGRAM-LIBRARY FILE.		CMP24	76
35						CMP24	77
36	17676	0100005223	XTX15	RJ	CIF CHECK INPUT FORMAT	CMP30	3969
37	17677	5110003060		SA1	EOFINP	CMP30	3970
38		5130000130		SA3	CP.IFORM	CMP30	3971
39	17700	0311017755		NZ	X1,XTX22 IF NO DATA	CMP30	3972
40		0303017735		ZR	X3,XTX20 IF NOT COMPRESSED SOURCE INPUT	CMP30	3973
41	17701	0400017741		EQ	XTX21	CMP24	91
42						CMP24	92
43			*	READ MODIFY COMMON DECK.		CMP24	93
44						CMP24	94
45			RM	IFEQ	CP#RM,0	CMP30	3974
46						CMP30	3975
47	17702	64600	XTX16	READC	X2,A0,9 READ HEADER	CMP24	95
48	17704	0311017773		NZ	X1,XTEXTU IF EMPTY RECORD	CMP24	96
49		54100		SA1	A0 CHECK IF OPLC	CMP20	259
50		20122		LX1	18	CMP20	260
51	17705	7261007777		SX6	X1-770000B	CMP20	261
52		0316017773		NZ	X6,XTEXTU IF NOT 7700 HEADER	CMP24	97
53	17706	20106		LX1	6	CMP20	266
54		64600		READW	X2,A0,X1 SKIP 7700 TABLE	CMP20	267
55							
56							
57							
58							
59							
60							

17710	57161		SA1	B6-B1		CP114	13
	6271777713		SB7	X1-64B	CHECK LAST WORD OF 7700 TABLE	CP114	14
17711	0570017713		NZ	B7,XTX16A	IF NOT 64 CHARACTER SET	CP114	15
	7170777773		SX7	-4	CP.IFORM = -4 (MODIFY COMDECK, 64 CHAR SET)	CP114	16
17712	5170000130		SA7	CP.IFORM	SET INPUT FORMAT	CP114	17
17713	43600	XTX16A	MX6	0		CP114	18
	5160030064		SA6	VALUES+9		CMP24	99
	64600		READW	X2,A0,1		CMP20	268
17715	0311017771		NZ	X1,XTEXTF	IF NO DATA	CMP20	269
	54100		SA1	A0		CMP20	270
	73510		SX5	X1		CMP20	271
17716	20122		LX1	18		CMP20	272
	7261077577		SX6	X1-700200B		CMP20	273
17717	0316017771		NZ	X6,XTEXTF	IF FUNNY DATA	CMP20	274
	0305017723		ZR	X5,XTX18	IF NO CORRECTION IDENT TABLE	CMP24	100
17720	64600	XTX17	READW	X2,A0,1	SKIP CORRECTION IDENT TABLE	CMP24	101
17721	0311017771		NZ	X1,XTEXTF	IF EOR	CMP20	277
	7255777776		SX5	X5-1		CMP20	278
17722	0315017720		NZ	X5,XTX17	LOOP	CMP24	102
17723	0100022141	XTX18	RJ	RNC	READ FIRST ACTIVE CARD	CMP24	103
17724	0400017741		EQ	XTX21		CMP24	104
						CMP30	4017
		RM	ENDIF			CMP30	4018
						CMP24	105
		*		READ UPDATE COMMON DECK.		CMP24	106
						CMP24	107
17725	0100022141	XTX19	RJ	RNC	READ FIRST ACTIVE CARD	CMP24	108
17726	5110003060		SA1	EOFINP		CMP24	109
	53500		SA5	X0		CMP24	110
	43360		MX3	8*6		CPS172	21
17727	0311017773		NZ	X1,XTEXTU	IF NO ACTIVE CARDS	CMP24	112
	5140003564		SA4	P1TEMPC	=8L*COMDECK WHERE * IS	CPS172	22
17730	15153		BX1	-X3*X5	MASTER CONTROL CHARACTER	CPS172	23
	11535		BX5	X3*X5		CMP24	115
	13545		BX5	X4-X5		CMP24	116
17731	0315017773		NZ	X5,XTEXTU	IF NOT *COMDECK	CMP24	117
	21106		AX1	6		CPS172	24
17732	7251777722		SX5	X1-1R	TEST NINTH CHARACTER	CPS172	25
	21506		AX5	6		CPS172	26
	11115		BX1	X1*X5		CPS172	27
17733	0311017773		NZ	X1,XTEXTU	IF NOT 00B NOR 55B-77B	CPS172	28
	0100022141		RJ	RNC	SKIP *COMDECK CARD	CMP24	118
17734	0400017741		EQ	XTX21		CMP24	119
						CMP20	290
		*		READ TEXT.		CMP20	291
						CMP20	292
17735		XTX20	BSS	0		CMP30	4019
						CMP30	4020
		RM	IFEQ	CP#RM,0		CMP30	4021
17735	43052		MX0	-18		CMP30	4022
	54100		SA1	A0		CMP20	294
	15610		BX6	-X0*X1		CMP20	295
17736	0316017741		NZ	X6,XTX21	IF NOT TEXT FORMAT	CMP20	296
	64600		READC	X2,A0,9	READ FIRST LINE	CMP20	297
17740	0311017755		NZ	X1,XTX22	IF EOR	CMP24	120
		RM	ENDIF			CMP30	4023
						CMP30	4024

17741	5110000130	XTX21	SA1	CP.IFORM	RESTORE INPUT FORMAT	CP114	28
	5120003565		SA2	P1TEMPD		CP114	29
17742	10611		BX6	X1		CP114	30
	22702		LX7	X2	SAVE NEW FORMAT	CP114	31
	54620		SA6	A2		CP114	32
	54710		SA7	A1		CP114	33
17743	0100020112		RJ	CWI	WRITE *XTEXT* TO INTERMEDIATE	CP114	34
17744	5110003565		SA1	P1TEMPD		CP114	35
	5120000130		SA2	CP.IFORM		CP114	36
17745	10611		BX6	X1	SET NEW INPUT FORMAT	CP114	37
	22702		LX7	X2		CP114	38
	54620		SA6	A2		CP114	39
	54710		SA7	A1		CP114	40
17746	7120003010	XTX21A	SX2	X		CMP029	87
	5100030053		SA0	VALUES		CMP20	300
17747	0100022211		RJ	RNS	READ NEXT STATEMENT	CMP24	121
17750	0100006066		RJ	SETUP		CMP20	302
17751	5120003103		SA2	IOP		CMP20	303
	7130051604		SX3	3REND		CMP20	304
17752	13623		BX6	X2-X3		CMP20	305
	0306017757		ZR	X6,XTX22A	IF *END* STATEMENT	CMP029	88
17753	7110000025		PCARD	LASTAB		CMP20	309
17754	0400017746		EQ	XTX21A	LOOP	CMP029	89
						CMP20	346
		*		PROCESS END OF TEXT.		CMP20	347
						CMP20	348
17755	5110003565	XTX22	SA1	P1TEMPD	EMPTY RECORD - RESTORE INPUT FORMAT	CP114	41
	10611		BX6	X1		CP114	42
17756	5160000130		SA6	CP.IFORM		CP114	43
	0100020112		RJ	CWI	WRITE *XTEXT* TO INTERMEDIATE	CP114	44
17757	7110000024	XTX22A	SX1	1RT		CMP029	91
	20166		LX1	54		CMP20	350
17760	5100000025		ADDWORD	LASTAB		CMP20	351
17761	5110003565		SA1	P1TEMPD	RESTORE INPUT FORMAT AND END OF INPUT FLAG	CMP30	4025
	54211		SA2	A1+B1		CMP30	4026
	10611		BX6	X1		CMP24	125
17762	22702		LX7	X2		CMP30	4027
	5160000130		SA6	CP.IFORM		CMP30	4028
17763	5170003060		SA7	EOFINP		CMP30	4029
	5110003561		SA1	P1TEMP		CMP20	352
17764	7120000004		SX2	4		CMP20	353
	5140003562		SA4	P1TEMPA	XTEXT FILE NAME	CMP20	354
17765	43500		MX5	0		CMP20	355
	10311		BX3	X1		CMP20	356
	0100021731		RJ	PUSHDOWN		CMP20	357
17766	5110003560		SA1	XLEV	INCREMENT XTEXT LEVEL	CMP036	34
	76610		SX6	B1		CMP20	358
	73711		SX7	X1+B1		CMP036	35
17767	5160003317		SA6	LIBFLG		CMP20	359
	54710		SA7	A1		CMP036	36
						CMP30	4030
			IFNE	CP#RM,0,1		CMP30	4031
			CLOSEM	X,R		CMP30	4032
						CMP30	4033
17770	0400010615		EQ	CTL100		CMP20	360
						CMP20	361
		*		POST *F* ERROR.		CMP20	362

17771	76610	XTEXTF	SX6	B1		CMP20	363
	5160003326		SA6	FERR	FUNNY DATA	CMP26	36
17772	0400017774		EQ	XTEXTQ		CMP26	37
		*		POST	*U* ERROR.	CMP20	367
						CMP20	368
						CMP20	369
17773	76610	XTEXTU	SX6	B1		CMP20	370
	5160003327		SA6	UERR	UNFOUND RECORD	CMP26	38
						CMP26	39
		*			CLOSE THE FILE.	CMP20	374
						CMP20	375
						CMP20	376
17774	5160003345	XTEXTQ	SA6	EFLG		CMP26	40
			IFEQ	CP#RM,0,2		CMP30	4034
	7120003010		REWIND	X		CMP30	4035
			ELSE	1		CMP26	41
			CLOSEM	X,R		CMP30	4036
						CMP30	4037
17776	5110003565		SA1	P1TEMPD	RESTORE INPUT FORMAT AND END OF INPUT FLAG	CMP30	4038
	54211		SA2	A1+B1		CMP30	4039
	10611		BX6	X1		CMP30	4040
17777	22702		LX7	X2		CMP24	129
	5160000130		SA6	CP.IFORM		CMP30	4041
						CMP30	4042
20000	5170003060		SA7	EOFINP		CMP30	4043
	0400010614		EQ	CTL70		CMP20	378
		RM	IFNE	CP#RM,0		CMP30	4045
						CMP30	4074
		**		DUMMY FIT FOR RE-INITIALIZING XTEXT FIT.		CMP30	4075
						CMP30	4076
						CMP30	4077
		XDUM	FILE	F0=SQ,BT=,RT=W,MRL=5120,CM=NO,WSA=VALUES,PD=INPUT		CMP30	4082
		LXDUM	EQU	*-XDUM		CMP30	4083
						CMP30	4084
						CMP30	4085
		RM	ENDIF			CMP30	4086
		**		XTEXT - EXTERNAL INPUT.		COMPASS	11900
						COMPASS	11901
						COMPASS	11902
						COMPASS	11903
	12125	XTEXT	QUAL	PASS2		COMPASS	11904
			EQU	ZLLA			
		***		BLANK OPERATION CODE.		COMPASS	11906
		*				COMPASS	11907
		*				COMPASS	11908
		*SYM				COMPASS	11909

* (SYM) IS ASSIGNED THE VALUE OF THE LOCATION COUNTER,
* AND ONE WORD IS ZEROED AND RESERVED.
* IF (SYM) IS MISSING, THIS CARD IS IGNORED.

COMPASS 11910
COMPASS 11911
COMPASS 11912
COMPASS 11913
COMPASS 11914
COMPASS 11915
COMPASS 11916
COMPASS 11917
COMPASS 11918
COMPASS 11919
COMPASS 11920
COMPASS 11921
COMPASS 11922
COMPASS 11923
COMPASS 11924
COMPASS 11925
COMPASS 11926
COMPASS 11927
COMPASS 11928

			QUAL	PASS1	
20001	5120003102	BLNKOP	SA2	LOCSYM	
	0312020003		NZ	X2,BLNKOP1	
20002	0322010653		PL	X2,CTL300	
20003	6272777732	BLNKOP1	SB7	X2-1R+	
	0470010614		ZR	B7,CTL70	
20004	0471010614		EQ	B7,B1,CTL70	
	76610		SX6	B1	SET FIRST CARD GROUP FLAG
20005	5160003137		SA6	IFCDGP	
	5110003123		SA1	LWORD	
20006	0100023377		RJ	YPRLOC	
20007	5110003123		SA1	LWORD	
	0100006214		RJ	UPPOS	
20010	0400010614		EQ	CTL70	

** BLANK OPERATION CODE.

COMPASS 11930
COMPASS 11931
COMPASS 11932
COMPASS 11933
COMPASS 11934
COMPASS 11935
COMPASS 11936
COMPASS 11937
COMPASS 11938
COMPASS 11939
COMPASS 11940
COMPASS 11941
COMPASS 11942
COMPASS 11943
COMPASS 11944
COMPASS 11945
CPSA281 300
COMPASS 11947
COMPASS 11948
COMPASS 11949
CPS062 37
CPS062 38
COMPASS 11950
COMPASS 11951
COMPASS 11952

			QUAL	PASS2	
20011	5120003102	BLNKOP	SA2	LOCSYM	
	0302012126		ZR	X2,ZLIST	EXIT IF NO LOCATION FIELD ENTRY
20012	5110003123		SA1	LWORD	
	6222777732		SB2	X2-1R+	
20013	0420012126		ZR	B2,ZLIST	EXIT IF SINGLE + OR - (WARNING
	0412012126		EQ	B1,B2,ZLIST	FLAG SET IN PASS 1)
20014	0100025177		RJ	ZPRLOC	
20015	5140003114		SA4	MACHINE	
	7120000044		SX2	36	
20016	7130000024	+	SX3	20	
	0304020020		ZR	X4,*+2	
20017	7120000031		SX2	25	
	5130003262		SA3	PPBYT	
20020	76100		SX1	B0	CALL PACKO WITH 0, 36-11*MACHINE,
	0100007773		RJ	PACKO	21-16*MACHINE
20021	76610		SX6	B1	
	10566		BX5	X6	
	5160003304		SA6	FLAG	SAVE FOR PASS 2
20022	5160003254		SA6	EXVAL	
	5160003137		SA6	IFCDGP	SET FIRST CARD GROUP FLAG
20023	0400012442		EQ	BSSZ5	GO PRETEND ITS BSSZ 1

*** = - SYMBOL DEFINITION.

*
*SYM = EXP
* (SYM) IS ASSIGNED THE VALUE OF THE ADDRESS EXPRESSION.

COMPASS 11954
COMPASS 11956
COMPASS 11957
COMPASS 11958
COMPASS 11959

COMPASS 11960
COMPASS 11961
COMPASS 11962

* = QUAL PASS1
EQU EQU

1		1
2		2
3		3
4		4
5		5
6		6
7		7
8		8
9		9
10		10
11		11
12		12
13		13
14		14
15		15
16		16
17		17
18		18
19		19
20		20
21		21
22		22
23		23
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25		25
26		26
27		27
28		28
29		29
30		30
31		31
32		32
33		33
34		34
35		35
36		36
37		37
38		38
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41		41
42		42
43		43
44		44
45		45
46		46
47		47
48		48
49		49
50		50
51		51
52		52
53		53
54		54
55		55
56		56
57		57
58		58
59		59
60		60

**	AUT - ALLOCATE USE TABLE.	COMPASS 11964
*	ALLOCATES THE FIRST THREE USE BLOCKS. THESE	COMPASS 11965
*	BLOCKS ARE /ABSOLUTE*/, / /, AND /LITERALS*/.	COMPASS 11966
*	COUNTERS SET ARE -	COMPASS 11967
*	(UI) = USE TABLE INDEX.	COMPASS 11968
*	(UI+1) = FIRST BLOCK NUMBER.	CMP30 4087
*	(LI) = LITERAL BLOCK INDEX.	COMPASS 11970
*	(DI) = DEFAULT SYMBOL INDEX.	CMP17 13
		COMPASS 11971
		COMPASS 11972
	USE SUBS	COMPASS 11973
	SEG PASS 1 SUBROUTINES (A-P).	CMP30 4088
	QUAL PASS1	COMPASS 11975
20024 0000000000	AUT PS RETURN EXIT	COMPASS 11976
20025 5110003450	SA1 L.USETAB SET NEW USE INDEX	COMPASS 11977
5120003453	SA2 L.LITAB SET NEW LITERAL INDEX	COMPASS 11978
20026 5130003452	SA3 L.SLITS SET NEW DEFAULT SYMBOL INDEX	CMP17 14
10611	BX6 X1	COMPASS 11979
22702	LX7 X2	COMPASS 11980
20027 5160003153	SA6 UI	COMPASS 11981
5170003156	SA7 LI	COMPASS 11982
20030 10633	BX6 X3	CMP17 15
5160003162	SA6 DI	CMP17 16
76710	SX7 B1 SET NEW USE NUMBER	RSM4159 27
20031 7267000002	SX6 X7+2	CMP17 19
5170003154	SA7 UI+1	CMP17 20
20032 54671	SA6 A7+B1	CMP30 4091
7110000014	MANAGE USETAB,3*4 ALLOCATE 3 BLOCKS	CMP30 4092
20034 6150000004	SB5 4 PRESET FIRST 3 BLOCKS - ABS, 0, LIT	CMP30 4093
5110003123	SA1 LWORD SET POSITION COUNTER	COMPASS 11992
20035 36223	IX2 X2+X3	COMPASS 11993
6272777763	SB7 X2-3*4 BASE ADDRESS	CMP30 4094
10611	BX6 X1	COMPASS 11995
20036 20630	LX6 24	COMPASS 11996
76700	SX7 B0	COMPASS 11997
56671	SA6 B7+B1	COMPASS 11998
54665	SA6 A6+B5	COMPASS 11999
20037 54665	SA6 A6+B5	COMPASS 12000
43600	MX6 0 STORE TYPE = 0	COMPASS 12001
5177000002	SA7 B7+2	COMPASS 12002
20040 54671	SA6 A7+B1 CLEAR MAXIMUM BLOCK SIZE	COMPASS 12003
54775	SA7 A7+B5	COMPASS 12004
54671	SA6 A7+B1	COMPASS 12005
54775	SA7 A7+B5	COMPASS 12006
20041 54671	SA6 A7+B1	COMPASS 12007
5110012206	SA1 =9RLITERALS*	COMPASS 12008
20042 5120012207	SA2 =9RABSOLUTE*	COMPASS 12009
10622	BX6 X2	COMPASS 12010
20043 7170000055	SX7 1R	COMPASS 12011
56670	SA6 B7	COMPASS 12012
54765	SA7 A6+B5	COMPASS 12013
20044 10611	BX6 X1	COMPASS 12014
54675	SA6 A7+B5	COMPASS 12015
5110003537	SA1 USESTK CLEAR USE STACK	CMP30 4095
20045 7120000062	SX2 MSTACK	CMP30 4096
43036	MX0 30	CMP30 4097
11301	BX3 X0*X1	CMP30 4098

9

14121HE

		53420		SA4	X2		COMPASS 12300
		15043		BX0	-X3*X4		COMPASS 12301
	20116	54111		SA1	A1+B1		COMPASS 12302
		0300020115		ZR	X0,CWI1	IF LIST TEST DOESNT FAIL	COMPASS 12303
	20117	7061753216		SX6	A1-/PASS2/RISA-/PASS2/RISAL		COMPASS 12304
		0316020112		NZ	X6,CWI	IF LINE WILL NOT LIST	COMPASS 12305
	20120	0100023001	CWI2	RJ	WINTER	WRITE INTERMEDIATE	COMPASS 12306
	20121	0400020112		EQ	CWI	RETURN	COMPASS 12307
			**		DSL - DEFINE SYMBOL LITERALS.		COMPASS 12309
			*	USES	P1TEMP, P1TEMPA, P1TEMPB, P1TEMPC.		CP154 13
							COMPASS 12311
	20122	5110003113	DSL7	SA1	QVAL+1	RESTORE QUALIFIER	COMPASS 12312
		10611		BX6	X1		CMP19 296
		55611		SA6	A1-B1		CMP19 297
							CMP19 298
							CMP19 299
	20123	0000000000	DSL	PS		RETURN EXIT	COMPASS 12313
	20124	5120003112		SA2	QVAL		CMP19 300
		5130003102		SA3	LOCSYM		CMP19 301
	20125	5110003452		SA1	L.SLITS		CMP19 302
		10722		BX7	X2		CMP19 303
		54721		SA7	A2+B1		CMP19 304
	20126	12623		BX6	X2+X3	SAVE POSSIBLY QUALIFIED END CARD SYMBOL	CMP19 305
		5160003563		SA6	P1TEMPB		CMP19 306
	20127	5120003162	DSL1	SA2	DI		CMP19 307
		7261777776		SX6	X1-1		CMP19 308
	20130	37221		IX2	X2-X1		CMP19 309
		0302020122		ZR	X2,DSL7	IF SYMBOL LITERALS COMPLETE	CMP19 310
	20131	5160003561		SA6	P1TEMP	SAVE INDEXING COUNT	COMPASS 12317
		5120003413		SA2	O.SLITS	FETCH NEXT LITERAL	CMP19 311
	20132	63760		SB7	X6		CMP19 312
		53227		SA2	X2+B7		CMP19 313
		0332020150		NG	X2,DSL3	IF DEFINED	COMPASS 12321
	20133	43014		MX0	12		COMPASS 12322
		15120		BX1	-X0*X2		COMPASS 12323
		43011		MX0	9	SET QUALIFIER	CMP19 314
		20071		LX0	-3		CMP19 315
	20134	11702		BX7	X0*X2		CMP19 316
		21271		AX2	57		CMP19 317
		5170003112		SA7	QVAL		CMP19 318
	20135	10622		BX6	X2		COMPASS 12325
		54661		SA6	A6+B1	STORE TYPE FLAG	COMPASS 12326
		5140003563		SA4	P1TEMPB	CHECK IF THIS IS END CARD SYMBOL	CMP19 319
	20136	13514		BX5	X1-X4		COMPASS 12328
		13557		BX5	X5-X7		CMP19 320
		0305020150		ZR	X5,DSL3		COMPASS 12329
	20137	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL	COMPASS 12330
	20140	5140003562		SA4	P1TEMPA		COMPASS 12331
		20235		LX2	59-30		CMP19 321
	20141	0332020150		NG	X2,DSL3	IF SYMBOL IS ALREADY DEFINED	CMP19 322
		63740		SB7	X4	TYPE FLAG	COMPASS 12333
		76010		SX0	B1		COMPASS 12334
	20142	0277020143		JP	DSL2+B7	JUMP ACCORDING TO TYPE OF LITERAL	CP154 14

							COMPASS 12336
							COMPASS 12337
							COMPASS 12338
	20143		DSL2	BSS	0		CP154 15
	20143	43601	+	MX6	1	=Y LITERAL (WEAK EXTERNAL)	CP154 16
		0400020160		EQ	DSL6		CP154 17
							COMPASS 12339
	20144	5120003411	+	SA2	0.USETAB	=S LITERAL	COMPASS 12340
		0400020151		EQ	DSL4		COMPASS 12341
							COMPASS 12342
	20145	43600	+	MX6	0	=X LITERAL (STRONG EXTERNAL)	CP154 18
		0400020160		EQ	DSL6		COMPASS 12344
							CPS0253 11
	20146	76610	DSL2A	SX6	B1		CPS0253 12
		5160003345		SA6	EFLG		CPS0253 13
	20147	5160003326		SA6	FERR		CPS0253 14
							COMPASS 12345
							COMPASS 12346
			*			MULTIPLE OR ALREADY DEFINED.	COMPASS 12347
							COMPASS 12348
	20150	5110003561	DSL3	SA1	P1TEMP	MULTIPLE OR ALREADY DEFINED	COMPASS 12349
		0400020127		EQ	DSL1		COMPASS 12350
			*			=S SYMBOL LITERAL.	COMPASS 12351
							COMPASS 12352
							COMPASS 12353
	20151	5130003153	DSL4	SA3	UI		CMP19 323
		54431		SA4	A3+B1		CMP19 324
		36223		IX2	X2+X3		CMP19 325
	20152	73341		SX3	X4+B1	RELOCATION = 0 BLOCK	CMP19 326
		5222000005		SA2	X2+4+1	FETCH LENGTH OF 0 BLOCK	CMP30 4107
		43400		MX4	0		COMPASS 12356
	20153	13555		BX5	X5-X5		COMPASS 12357
		36620		IX6	X2+X0	AUGMENT LENGTH	COMPASS 12358
		54620		SA6	A2		COMPASS 12359
	20154	0100023067		RJ	YDEFSYM	DEFINE SYMBOL	COMPASS 12360
	20155	5110003561	DSL5	SA1	P1TEMP	MARK SYMBOL AS DEFINED BY COMPASS	COMPASS 12361
		5120003413		SA2	0.SLITS		COMPASS 12362
	20156	63710		SB7	X1		CMP19 328
		53227		SA2	X2+B7		CMP19 329
		43001		MX0	1		COMPASS 12365
		12620		BX6	X2+X0		COMPASS 12366
	20157	54620		SA6	A2		CMP19 330
		0400020127		EQ	DSL1	LOOP	COMPASS 12368
			*			=X SYMBOL LITERAL.	COMPASS 12369
							COMPASS 12370
							COMPASS 12371
	20160	5120003456	DSL6	SA2	L.EXTAB		CP154 19
		5160003564		SA6	P1TEMPC		CP154 20
	20161	5140003130		SA4	ABSFG	COMPLAIN IF	CP154 21
		0314020150		NZ	X4,DSL3	ABSOLUTE PROGRAM	COMPASS 12373
	20162	10611		BX6	X1		COMPASS 12374
		0100006223		RJ	VFYLINK		COMPASS 12375
	20163	0317020150		NZ	X7,DSL3	IF INAPPROPRIATE AS A LINKAGE SYMBOL	COMPASS 12376
		5130003456		SA3	L.EXTAB		CPS0253 15
	20164	7233777000		SX3	X3-777B		CPS0253 16
		0323020146		PL	X3,DSL2A	IF EXCEEDS 511 EXTERNALS	CPS0253 17
	20165	73421		SX4	X2+B1		COMPASS 12377

13222
43300
76500BX2 X2-X2
MX3 0
SX5 B0
MX7 0
SA7 QVAL
RJ YDEFSYM
SA2 P1TEMPC
BX1 X1+X2
ADDWORD EXTAB
EQ DSL5COMPASS 12378
COMPASS 12379
COMPASS 12380
CMP19 331
CMP19 332
COMPASS 12381
CP154 22
CP154 23
COMPASS 12382
COMPASS 12383

** EDIT - EDIT STATEMENT TO REMOVE MICROS/CONCATENATION.
* EDIT IS A NULL FUNCTION IF (EDITFG) IS POSITIVE, OR IF CARD
* IS A COMMENT. OTHERWISE, EDIT WILL SCAN THE CARD CHECKING
* FOR * * AND "*" MARKS. THE CARD IS WRITTEN ON THE
* INTERMEDIATE (MICFLG = 1) AND A NEW CARD IS CREATED.
* EXIT (CCT) = CARD COUNT.
* (LASTCOL) = INDEX OF LAST CHARACTER.

COMPASS 12385
COMPASS 12386
COMPASS 12387
COMPASS 12388
COMPASS 12389
COMPASS 12390
COMPASS 12391

20173 0000000000 EDIT PS RETURN EXIT

COMPASS 12392
COMPASS 12393
COMPASS 1239420174 5120003267 SA2 EDITFG
0322020173 PL X2,EDIT IF NO EDITINGCOMPASS 12395
COMPASS 12396

20175 5110026437 SA1 CARD

COMPASS 12397

6271777730 SB7 X1-1R*

COMPASS 12398

20176 0470020173 ZR B7,EDIT IF COMMENT CARD

COMPASS 12399

5140003261 SA4 LASTCOL CHECK FOR CONCATENATION AND MICRO MARKS

COMPASS 12400

20177 76210 SX2 B1

COMPASS 12401

63710 SB7 X1

CMP64G 145

20473 LX4 -1

CMP64G 146

13666 BX6 X6-X6

CMP64G 147

20200 54511 SA5 A1+B1

CMP64G 148

63340 SB3 X4

CMP64G 149

0324020203 PL X4,EDT1 IF (LASTCOL) IS EVEN

CMP64G 150

20201 54111 SA1 A1+B1

CMP64G 151

54551 SA5 A5+B1

CMP64G 152

22372 LX3 X2,B7

CMP64G 153

12663 BX6 X6+X3

CMP64G 154

20202 63710 SB7 X1

CMP64G 155

20203 54151 EDT1 SA1 A5+B1

CMP64G 156

22372 LX3 X2,B7

CMP64G 157

67331 SB3 B3-B1

CMP64G 158

12663 BX6 X6+X3

CMP64G 159

20204 63750 SB7 X5

CMP64G 160

22372 LX3 X2,B7

CMP64G 161

54511 SA5 A1+B1

CMP64G 162

12663 BX6 X6+X3

COMPASS 12408

20205 63710 SB7 X1

COMPASS 12409

0631020203 GE B3,B1,EDT1 IF NOT END OF CARD

CMP12 20

20607 LX6 59-MICMARK

COMPASS 12411

20206 0336020241 NG X6,EDT6 IF MICRO MARK

COMPASS 12412

20673 LX6 60+MICMARK-CONCAT

COMPASS 12413

20207 0326020173 PL X6,EDIT IF NO CONCATENATION MARK

COMPASS 12414

COMPASS 12415

* REMOVE CONCATENATION MARK ONLY.

COMPASS 12416

COMPASS 12417

COMPASS 12418

COMPASS 12419

COMPASS 12420

COMPASS 12421

COMPASS 12422

COMPASS 12423

CMP12 21

COMPASS 12425

COMPASS 12426

COMPASS 12427

COMPASS 12428

COMPASS 12429

COMPASS 12430

COMPASS 12431

COMPASS 12432

COMPASS 12433

CMP12 22

COMPASS 12435

COMPASS 12436

COMPASS 12437

COMPASS 12438

COMPASS 12439

COMPASS 12441

CMP27 18

CMP27 19

COMPASS 12442

COMPASS 12443

CMP12 23

COMPASS 12445

CMP12 24

COMPASS 12447

CMP12 25

CMP12 26

COMPASS 12450

COMPASS 12451

COMPASS 12452

COMPASS 12453

CMP12 27

COMPASS 12455

COMPASS 12456

COMPASS 12457

COMPASS 12458

COMPASS 12459

COMPASS 12460

COMPASS 12461

CPS213 5

CPS213 6

CPS213 7

CPS213 8

CPS213 9

CPS213 10

CPS213 11

CPS213 12

CPS213 13

CPS213 14

76610

SX6

B1

WRITE CARD ON INTERMEDIATE

20210 5160003311

SA6

MICFLG

0100020112

RJ

CWI

20211 5140003261

SA4

LASTCOL

5110026436

SA1

STYPE

20212 6120777712

SB2

-CONCAT

6234026436

SB3

X4+CARD-1 (B3) = LWA OF STATEMENT

20213 63440

SB4

X4

10611

BX6

X1

5160026436

SA6

STYPE

20214 54111

EDT2

SA1

A1+B1

REMOVE CONCATENATION

67441

SB4

B4-B1

73712

SX7

X1+B2

20215 0307020214

10611

BX6

X1

54661

ZR

X7,EDT2

IF CONCATENATION

20216 0641020214

SA6

A6+B1

GE

B4,B1,EDT2 LOOP TO END OF CARD

* PROCESS END OF CARD.

20217 64560

EDT3

SB5

A6

64660

SB6

A6

7076751341

SX7

A6-CARD+1

20220 0317020221

+

NZ

X7,*+1

IF NOT ALL BLANKS

76710

SX7

B1

20221 5170003261

SA7

LASTCOL

7160000055

SX6

1R

20222 0663020224

GE

B6,B3,EDT4 IF NEW (LASTCOL) \ OLD (LASTCOL)

66730

SB7

B3

20223 66661

+

SB6

B6+B1

CLEAR TO END OF CARD

54661

SA6

A6+B1

20224 0763020223

LT

B6,B3,*

20224 43600

EDT4

MX6

0

5160003263

SA6

SQLGN

20225 5160003311

SA6

MICFLG

76700

SX7

B0

COUNT NUMBER OF CARDS

20226 6160000107

SB6

71

6155751340

SB5

B5-CARD

20227 67556

EDT5

SB5

B5-B6

73771

SX7

X7+B1

0705020227

GT

B5,EDT5

LOOP

20230 5170003306

SA7

CCT

7257777776

SX5

X7-1

20231 0305020173

ZR

X5,EDIT

RETURN

5110030003

SA1

SEQ

COPY SEQUENCE FIELDS

20232 5120000130

SA2

CP.IFORM

20273

LX2

59-0

20233 0322020236

PL

X2,EDT5.2

IF NOT MODIFY FORMAT

10611

BX6

X1

54610

SA6

A1

20234 5066000001

EDT5.1

SA6

A6+1

COPY ONE WORD MODIFY SEQUENCE NUMBERS

7255777776

SX5

X5-1

20235 0315020234

NZ

X5,EDT5.1

LOOP

0400020173

EQ

EDIT

RETURN

20236		EDT5.2	BSS	0	COPY TWO WORD UPDATE SEQUENCE FIELDS	CPS213	15
20236	54211		SA2	A1+B1		COMPASS	12462
	10611		BX6	X1		COMPASS	12463
	22702		LX7	X2		COMPASS	12464
	54720		SA7	A2		COMPASS	12465
20237	54671	+	SA6	A7+B1		COMPASS	12466
	54761		SA7	A6+B1		COMPASS	12467
	7255777776		SX5	X5-1		COMPASS	12468
20240	0315020237		NZ	X5,*-1	LOOP	COMPASS	12469
	0400020173		EQ	EDIT	RETURN	COMPASS	12470
		*			REMOVE CONCATENATION AND REPLACE MICROS.	COMPASS	12471
						COMPASS	12472
20241	76610	EDT6	SX6	B1	WRITE CARD ON INTERMEDIATE	COMPASS	12473
	5160003311		SA6	MICFLG		COMPASS	12474
20242	0100020112		RJ	CWI		COMPASS	12475
		*			PACK CARD REMOVING CONCATENATION.	COMPASS	12476
						CMP64G	163
						CMP64G	164
20243	6170000074		SB7	60		CMP64G	165
	5110026436		SA1	STYPE		CMP64G	166
20244	5140003261		SA4	LASTCOL		COMPASS	12478
	6120000065		SB2	CONCAT		COMPASS	12479
20245	63541		SB5	X4+B1		COMPASS	12480
	6160000006		SB6	6		COMPASS	12481
	13666		BX6	X6-X6		CMP64G	167
20246	27076		PX0	X6,B7		CMP64G	168
	66450		SB4	B5		CMP64G	169
	5160030617		SA6	SQIMAGE		CMP64G	170
						COMPASS	12486
						COMPASS	12487
20247	20606	EDT7	LX6	6	PACK CHARACTER	CMP64G	171
	67776		SB7	B7-B6		CMP64G	172
	12661		BX6	X6+X1		CMP64G	173
	54111		SA1	A1+B1		COMPASS	12490
20250	0570020251	EDT8	NZ	B7,EDT9	IF WORD NOT FULL	CMP64G	174
	54661		SA6	A6+B1		COMPASS	12493
	26670		UX6,B7	X0		CMP64G	175
20251	67551	EDT9	SB5	B5-B1		COMPASS	12495
	63310		SB3	X1		COMPASS	12496
	0450020254		ZR	B5,EDT10	IF END OF CARD	COMPASS	12497
20252	0532020247		NE	B3,B2,EDT7	IF NOT CONCATENATION	COMPASS	12498
	67441		SB4	B4-B1		CMP64G	176
	54111		SA1	A1+B1		COMPASS	12499
20253	0400020251		EQ	EDT9	LOOP	CMP64G	177
20254	22676	EDT10	LX6	X6,B7		COMPASS	12501
	54661		SA6	A6+B1		COMPASS	12502
		*			UNPACK CARD AND REPLACE MICROS.	COMPASS	12503
						COMPASS	12504
						COMPASS	12505
20255	6234026436		SA0	10	(B3) = LWA OF STATEMENT	COMPASS	12506
	5110030620		SB3	X4+CARD-1		CMP12	28
20256	43066		SA1	SQIMAGE+1		COMPASS	12508
	20106		MX0	54		COMPASS	12509
	6120777713		LX1	6		COMPASS	12510
20257	15610		SB2	-MICMARK		COMPASS	12511
	65701		BX6	-X0*X1		COMPASS	12512
			SB7	A0-B1		COMPASS	12513

20260	6150001306	5160026436		SA6	STYPE		COMPASS	12514
				SB5	71*NCARDS		COMPASS	12515
		0400020262		EQ	EDT12		COMPASS	12516
20261	0750020262		EDT11	NG	B5,EDT12	IF PAST END OF CARD AREA	CMP64G	178
		67551		SB5	B5-B1		CMP64G	179
		54661		SA6	A6+B1		COMPASS	12519
20262	20106		EDT12	LX1	6		COMPASS	12520
	67771			SB7	B7-B1		COMPASS	12521
		15610		BX6	-X0*X1		COMPASS	12522
		67441		SB4	B4-B1		CMP64G	180
20263	0570020264		+	NZ	B7,*+1	IF NOT END OF WORD	COMPASS	12524
		54111		SA1	A1+B1		COMPASS	12525
		64700		SB7	A0		COMPASS	12526
20264	73762		+	SX7	X6+B2		CMP64G	181
	0440020217			ZR	B4,EDT3	IF END OF CARD	CMP64G	182
20265	0317020261			NZ	X7,EDT11	IF NOT MICRO MARK	COMPASS	12528
							COMPASS	12529
			*		COMPILE MICRO NAME.		COMPASS	12530
							COMPASS	12531
		54460		SA4	A6		COMPASS	12532
20266	0750020267		EDT13	NG	B5,EDT14	IF PAST END OF CARD AREA	COMPASS	12534
		67551		SB5	B5-B1		CMP64G	183
		54661		SA6	A6+B1		COMPASS	12535
20267	67771		EDT14	SB7	B7-B1		COMPASS	12536
	20106			LX1	6		COMPASS	12537
		15610		BX6	-X0*X1		COMPASS	12538
		67441		SB4	B4-B1		CMP64G	184
20270	0570020271			NZ	B7,EDT15	IF NOT END OF WORD	COMPASS	12540
		54111		SA1	A1+B1		COMPASS	12541
		64700		SB7	A0		COMPASS	12542
20271	0440020217		EDT15	ZR	B4,EDT3	IF END OF CARD	CMP64G	185
		20706		LX7	6		COMPASS	12544
		63662		SB6	X6+B2		CMP64G	186
20272	12776			BX7	X7+X6		COMPASS	12545
	0560020266			NZ	B6,EDT13	IF NOT MICRO MARK	COMPASS	12546
							COMPASS	12547
			*		SEARCH FOR MICRO.		COMPASS	12548
							COMPASS	12549
		21706		AX7	6		COMPASS	12550
20273	76340			SX3	B4	SAVE (B4)	CMP30	4108
	43214			MX2	12		CMP30	4109
	11527			BX5	X2*X7		CMP30	4110
		66410		SB4	B1		CMP18	93
20274	0315020277			NZ	X5,EDT17	IF NAME > 8 CHARACTERS	COMPASS	12555
	0307020302			ZR	X7,EDT18	IF EMPTY MICRO NAME	CMP18	94
20275	0100022621			RJ	TLUMIC	LOOK UP MICRO	CMP30	4111
20276	43066			MX0	-6	SET UP MASK	CPS192	6
	0540020302			NZ	B4,EDT18	IF FOUND	CMP30	4112
							COMPASS	12565
			*		POST MICRO ERROR.		COMPASS	12566
							COMPASS	12567
20277	76710		EDT17	SX7	B1		COMPASS	12568
	63430			SB4	X3		CPSA175	5
	77602			SX6	-B2		COMPASS	12569
20300	5170003343			SA7	W9ERR		COMPASS	12570
	5170003345			SA7	EFLG		COMPASS	12571
20301	0400020261			EQ	EDT11		COMPASS	12572

```
*      REPLACE MICRO NAME.
```

COMPASS	12573
COMPASS	12574
COMPASS	12575
COMPASS	12576
COMPASS	12577
COMPASS	12578
COMPASS	12579
CMP18	102
CMP18	103
COMPASS	12583
CMP18	104
CMP18	105
CMP18	106
CMP64G	191
CMP18	108
CMP18	109
CMP18	110
CMP18	111
CMP18	112
CMP18	113
COMPASS	12588
CMP18	114
CMP18	115
CMP18	116
COMPASS	12591
CMP18	117
CMP64G	192
CMP18	119
COMPASS	12593
COMPASS	12594
CMP18	120
CMP18	121
CMP18	122
CMP18	123
CMP18	124
CMP64G	193
CMP64G	194
COMPASS	12597
COMPASS	12598
CMP26	42
CMP26	43
CMP26	44
CMP26	45
CMP26	46
CMP26	47
COMPASS	12606
COMPASS	12607
CMP18	125
COMPASS	12609
COMPASS	12610
COMPASS	12611
COMPASS	12612
COMPASS	12613

```

**      EMT - ENTER MICRO TABLE.
*      ENTRY  (X6) = NUMBER OF WORDS IN MICRO.
*      (RELVEC) = MICRO.

```

20317	0000000000	EMT	PS		RETURN	EXIT
20320	5160003561		SA6	P1TEMP		
	5150003102		SA5	LOCSYM		

9

		10611		BX6	X1	DECK NAME	CMP30	4129
20353	5140012137			SA4	=1HT		CMP30	4130
		11303		BX3	X0*X3		CMP30	4131
		22704		LX7	X4		COMPASS	12667
20354	15440			BX4	-X0*X4		CMP30	4132
		5160003231		SA6	DPBA+1		COMPASS	12668
		54731		SA7	A3+B1	DECK TYPE = T	CMP30	4133
20355	12634			BX6	X3+X4		CMP30	4134
		54630		SA6	A3	TARGET, VALID, *F = BLANKS	CMP30	4135
		6140003240		SB4	PRFXC		CMP30	4136
20356	6150003247			SB5	PRFXC+7		CMP30	4137
		43600		MX6	0		CMP30	4138
20357	56640		+	SA6	B4	CLEAR PRFX COMMENT AREA	CMP30	4139
		66441		SB4	B4+B1		CMP30	4140
		0745020357		LT	B4,B5,*		CMP30	4141
20360	5140003457			SA4	L.SEGTAB	FIND COMMENT TEXT IN IDTAB	CMP30	4142
		5130003421		SA3	0.IDTAB		CMP30	4143
20361	63730			SB7	X3		CMP30	4144
		43060		MX0	-12		CMP30	4145
		7254777772		SX5	X4-5		CMP30	4146
20362	5120003460			SA2	L.IDTAB		CMP30	4147
		0335020364		MI	X5,*+2	IF ONLY ONE SEGMENT	CMP30	4148
20363	5140003420		+	SA4	0.SEGTAB		CMP30	4149
		5224000005		SA2	X4+5		CMP30	4150
20364	6140003240		+	SB4	PRFXC		CMP30	4151
		63631		SB6	X3+B1		CMP30	4152
		63727		SB7	B7+X2		CMP30	4153
20365	56160		+	SA1	B6	FIND END OF COMPRESSED IDENT STATEMENT	CMP30	4154
		15610		BX6	-X0*X1		CMP30	4155
		66661		SB6	B6+B1		CMP30	4156
20366	0316020365			NZ	X6,*-1		CMP30	4157
20367	0667020372		+	GE	B6,B7,GSM0	IF END OF COMMENT TEXT	CMP30	4158
		56160		SA1	B6		CMP30	4159
		66661		SB6	B6+B1		CMP30	4160
20370	10611			BX6	X1		CMP30	4161
		56640		SA6	B4		CMP30	4162
		66441		SB4	B4+B1		CMP30	4163
20371	0745020367			LT	B4,B5,*-2	IF PRFX TABLE NOT FULL	CMP30	4164
20372	5110012210		GSM0	SA1	=50000101BS36		CMP30	4165
		10611		BX6	X1		CMP30	4166
20373	5160003247			SA6	OVLHDR		CMP30	4167
							CMP30	4168
				IFEQ	CP#RM,0,1		CMP30	4169
		6160003230		WRITEW	B,PRFX,LPRFX+1		CMP30	4170
							CMP30	4171
20376	5110003447			SA1	L.SYMTAB	GENERATE SYSTEM SYMBOL TABLE	COMPASS	12672
		73111		MANAGE	DUPTAB,X1+B1		COMPASS	12673
20400	6273777776			SB7	X3-1		COMPASS	12674
		53720		SA7	X2		COMPASS	12675
		63620		SB6	X2		COMPASS	12676
20401	5140003410			SA4	0.SYMTAB		COMPASS	12677
		63447		SB4	X4+B7		COMPASS	12678
		43014		MX0	12		COMPASS	12679
20402	43147			MX1	60-21		COMPASS	12680
		66211		SB2	B1+B1		COMPASS	12681
		5150012211		SA5	=36777BS21		COMPASS	12682
20403	6150000035			SB5	59-30		CPS028	372

6130770706

SB3 -2R'?

CP096A 434

COMPASS 12683

COMPASS 12684

COMPASS 12685

COMPASS 12686

CP096A 435

CP096A 436

COMPASS 12688

COMPASS 12689

CP096A 437

CP096A 438

COMPASS 12691

COMPASS 12692

COMPASS 12693

CMP19 333

CP096A 439

CP096A 440

COMPASS 12699

COMPASS 12701

CPS028 373

COMPASS 12702

CPS028 374

COMPASS 12703

COMPASS 12704

COMPASS 12705

COMPASS 12706

COMPASS 12707

CMP30 4172

CMP30 4173

COMPASS 12708

CMP30 4174

CMP30 4175

CMP30 4176

CMP30 4177

CMP30 4178

CMP30 4179

CMP30 4180

CMP30 4181

CMP30 4182

CMP30 4183

CMP30 4184

CMP30 4185

CMP30 4186

CPS028 375

CMP30 4187

CPS028 376

CPS028 377

CMP30 4188

CMP30 4189

CMP30 4190

CMP30 4191

CMP30 4192

CMP30 4193

CMP30 4194

CMP042 274

COMPASS 12709

COMPASS 12710

*

TRANSFER SYMBOLS FROM SYMTAB TO DUPTAB.

20404 0470020413

GSM1

ZR

B7,GSM2

IF END OF SYMBOL TABLE

77747

SX7

B4-B7

53270

RX2

X7

20405 67772

SB7

B7-B2

0302020404

ZR

X2,GSM1

IF NO SYMBOL

73771

SX7

X7+B1

20406 53370

RX3

X7

11602

BX6

X0*X2

0316020404

NZ

X6,GSM1

IF QUALIFIED SYMBOL

20407 10622

BX6

X2

21244

AX2

36

73423

SX4

X2+B3

54671

SA6

A7+B1

20410 0304020404

ZR

X4,GSM1

IF LOCAL SYMBOL

11453

BX4

X5*X3

22753

LX7

X3,B5

20411 0314020404

NZ

X4,GSM1

IF SET, EXTERNAL, RELOCATABLE, OR XTEXT

0327020404

PL

X7,GSM1

IF NOT DEFINED

20412 15731

BX7

-X1*X3

54761

SA7

A6+B1

0400020404

EQ

GSM1

LOOP

20413 75676

GSM2

SX6

A7-B6

56660

SA6

B6

RM

IFEQ

CP#RM,0

63761

WRITEW

B,B6,X6+B1

RM

ELSE

SA1 L.MICTAB

SX2

X6+B1

SYMBOL TABLE LENGTH

IX3

X2+X2

LX2

3

MULTIPLY BY TEN

IX6

X2+X3

SA6

T6RM1

SAVE IT

IX2

X1+X1

LX1

3

MULTIPLY MICRO TABLE LENGTH BY TEN

IX7

X1+X2

SA7

A6+B1

SAVE IT TOO

SX3

10*LPRFX+10

ADD LENGTH OF PRFX + OVERLAY HEADER

IX5

X6+X7

SA1

B-1

IX4

X5+X3

+

ZR

X1,*+1

IF RECORD TYPE W

SX4

0

STORE

B,RL=X4

PUTP

B,PRFX,X3

SA3

T6RM1

SA2

O.DUPTAB

PUTP

B,X2,X3

RM

ENDIF

20415 0100005102

RJ

ASU

ACCUMULATE STORAGE USED

20416 76600

SX6

B0

5160003467

SA6

L.DUPTAB

					COMPASS 12720	
					COMPASS 12721	
					COMPASS 12722	
1	20417	5130003474	SA3	L.MICTAB	CMP30	4195
2		5120003435	SA2	O.MICTAB	CMP30	4196
3	20420	54630	SA6	A3	CPS028	378
4		7263777776	SX6	X3-1	CMP30	4197
5		53620	SA6	X2	CMP30	4198
6				STORE WORD COUNT	CMP30	4199
7			IFEQ	CP#RM,0,2	CMP30	4200
8	20421	63620	WRITEW	B,X2,X3	CMP30	4201
9			ELSE	2	CMP30	4202
10			SA3	T6RM2	CMP30	4203
11			PUTP	B,X2,X3	CMP30	4204
12					CMP043	8
13	* GENERATE MACRO NAME TABLE.				CMP043	9
14					CMP043	10
15	20423	5110003442	SA1	L.OPTAB	CMP043	11
16		73111	MANAGE	TEMTAB,X1+B1	CMP043	12
17	20425	0100005102	RJ	ASU	CMP043	13
18	20426	5110003403	SA1	O.OPTAB	CMP043	14
19		5120003431	SA2	O.TEMTAB	CMP043	15
20	20427	66211	SB2	B1+B1	CMP043	16
21		63510	SB5	X1	CMP043	17
22		6261000376	SB6	X1+NOPCT*2-2	CMP043	18
23	20430	63721	SB7	X2+B1	CMP043	19
24		43014	MX0	12	CMP043	20
25	20431	0765020450	GT	B5,B6,GSM9	CMP043	21
26		56150	SA1	B5	CMP043	22
27		56251	SA2	B5+B1	CMP043	23
28	20432	66552	SB5	B5+B2	CMP043	24
29		11501	BX5	X0*X1	CMP043	25
30		0301020431	ZR	X1,GSM3	CMP043	26
31	20433	10322	BX3	X2	CMP043	27
32		20214	LX2	59-47	CMP043	28
33		76410	SX4	B1	CMP043	29
34		10733	BX7	X3	CMP043	30
35	20434	21371	AX3	57	CMP043	31
36		37615	IX6	X1-X5	CMP043	32
37		12434	BX4	X3+X4	CMP043	33
38		20515	LX5	13	CMP043	34
39	20435	0304020441	ZR	X4,GSM6A	CMP043	35
40		0332020440	MI	X2,GSM6	CMP043	36
41	20436	0305020431	ZR	X5,GSM3	CMP043	37
42		53156	SA1	B6+X5	CMP043	38
43		54211	SA2	A1+B1	CMP043	39
44	20437	11501	BX5	X0*X1	CMP043	41
45		0400020433	EQ	GSM4	CPS118X	5
46	20440	76410	SX4	B1	CMP043	49
47		20457	LX4	47	CMP043	50
48		0400020442	EQ	GSM7	CMP043	51
49	20441	76410	SX4	B1	CMP043	52
50		0313020436	NZ	X3,GSM5	CMP043	53
51		20471	LX4	57	CMP043	54
52	20442	15774	BX7	-X4*X7	CMP043	55
53		64410	SB4	A1	CPS118X	6
54		57152	SA1	B5-B2	CPS118X	7
55						
56						
57						
58						
59						
60						

Address	Label	Op	Reg	Comment	Op	Reg
20443	64310	GSM8	SB3	A1	CPS118X	8
	0434020446		EQ	B3,B4,GSM8A IF CURRENT ENTRY	CPS118X	9
	11301		BX3	X0*X1	CPS118X	10
20444	37213		IX2	X1-X3 REMOVE HASH LINK	CPS118X	11
	20315		LX3	13	CPS118X	12
	13262		BX2	X6-X2	CPS118X	13
	53136		SA1	B6+X3 GET NEXT TO COMPARE WITH CURRENT	CPS118X	14
20445	0312020443		NZ	X2,GSM8 IF NOT DUPLICATE, LOOP	CPS118X	15
	0400020436		EQ	GSM5 DUPLICATE FOUND, IGNORE CURRENT ENTRY	CPS118X	16
20446	56670	GSM8A	SA6	B7 NO DUPLICATE FOUND, STORE	CPS118X	17
	56771		SA7	B7+B1 CURRENT ENTRY IN TEMTAB	CPS118X	18
	66772		SB7	B7+B2	CPS118X	19
20447	0400020436		EQ	GSM5	CPS118X	20
20450	5110003431	GSM9	SA1	0.TEMTAB STORE WORD COUNT IN FIRST WORD	CMP043	76
	63610		SB6	X1	CMP043	77
	77676		SX6	B7-B6	CMP043	78
20451	7276777776		SX7	X6-1	CMP043	79
	5160003470		SA6	L.TEMTAB REDUCE TABLE SIZE	CMP043	80
20452	53710		SA7	X1	CMP043	81
					CMP043	82
		*		GENERATE MACRO DEFINITION TABLE.	CMP043	83
	76010		SX0	B1	CMP043	84
	10277		BX2	X7	CMP043	85
	43152		MX1	-18	CMP043	86
20453	6170000071		SB7	57	CPS028	379
	20046		LX0	38	CMP043	87
	23610		AX6	X0,B1	CMP043	88
20454	13116		BX1	X1-X6 (X1) = MASK TO CLEAR LCM BIT AND ADDRESS	CPS028	380
20455	53326	GSM10	SA3	X2+B6 SEARCH MACRO NAME TABLE	CPS028	381
	0302020504		ZR	X2,GSM14 IF END OF TABLE	CMP043	89
	23473		AX4	X3,B7	CMP043	90
20456	73541		SX5	X4+B1	CMP043	91
	7222777775		SX2	X2-2	CMP043	92
	11603		BX6	X0*X3	CMP043	93
20457	0315020455		NZ	X5,GSM10 IF NOT A MACRO	CMP043	94
	0306020461		ZR	X6,GSM11 IF NOT ALREADY ADJUSTED	CMP043	95
20460	15630		BX6	-X0*X3	CMP043	96
	54630		SA6	A3 CLEAR FLAG BIT	CMP043	97
	0400020455		EQ	GSM10	CMP043	98
20461	5140003467	GSM11	SA4	L.DUPTAB CHECK FOR SYNONYMS	CMP043	99
	11613		BX6	X1*X3	CMP043	100
	36764		IX7	X6+X4 ADJUST TEXT POINTER	CPS028	382
20462	73520		SX5	X2	CMP043	103
	54730		SA7	A3	CMP043	104
	12707		BX7	X0+X7	CMP043	105
20463	0305020466	GSM12	ZR	X5,GSM13 IF END OF TABLE	CMP043	106
	53456		SA4	X5+B6	CMP043	107
	13634		BX6	X3-X4	CMP043	108
20464	7255777775		SX5	X5-2	CMP043	109
	0316020463		NZ	X6,GSM12 IF NOT SYNONYMOUS	CMP043	110
20465	54740		SA7	A4 SET FLAG BIT	CMP043	111
	0400020463		EQ	GSM12	CMP043	112
20466	73620	GSM13	SX6	X2 SAVE POINTERS	CMP043	113
	21747		AX7	39	CMP043	114
	5160003561		SA6	P1TEMP P1TEMP = TEMTAB INDEX	CMP043	115
20467	54761		SA7	A6+B1 P1TEMPA = TEXT WORD COUNT	CMP043	116

15631
54671
73170BX6 -X1*X3 P1TEMPB = TEXT FWA IN MACDEF OR LCM
SA6 A7+B1
MANAGE DUPTAB,X7 MAKE ROOM FOR TEXTCPS028 383
CMP043 119
CMP043 120

20471 36723

5110003562

54211

IX7 X2+X3
SA1 P1TEMPA
SA2 A1+B1CMP043 121
CMP043 122
CMP043 123

20472 20226

0322020476

20246

LX2 59-37
PL X2,GSM13A IF IN MACDEF
LX2 37-59CPS028 384
CPS028 385
CPS028 386

20473 73310

10122

37273

SX3 X1
BX1 X2
IX2 X7-X3CPS028 387
CPS028 388
CPS028 389

20474 0100005733

20475 0400020500

20476 20246

GSM13A

RJ RLC MOVE TEXT FROM LCM TO DUPTAB
EQ GSM13B
LX2 37-59CPS028 390
CPS028 391
CPS028 392

5130003404

73110

SA3 0.MACDEF
SX1 X1CMP043 124
CMP043 125

20477 36223

37371

0100005515

IX2 X2+X3
IX3 X7-X1CMP043 126
CMP043 127

20500 5110003431

GSM13B

RJ MOVE MOVE TEXT FROM MACDEF TO DUPTAB
SA1 0.TEMTABCMP043 128
CPS028 393

5120003561

20501 76010

6170000071

SA2 P1TEMP
SX0 B1
SB7 57CMP043 130
CMP043 131
CMP043 132

63610

20502 43152

20046

SB6 X1
MX1 -18
LX0 38CMP043 133
CPS028 394
CMP043 134

23610

13116

AX6 X0,B1
BX1 X1-X6CPS028 395
CPS028 396

20503 0312020455

NZ X2,GSM10 IF NOT END OF MACRO NAME TABLE

CMP043 135

* WRITE MACRO TABLES.

CMP043 136
CMP043 137

RM

IFEQ CP#RM,0

CMP043 138

20504 6160003467

GSM14

WRITEW B,L.DUPTAB,1

CMP30 4205

20506 5130003430

5140003467

SA3 0.DUPTAB

CMP30 4206

SA4 L.DUPTAB

CMP043 139

20507 63630

WRITEW X2,X3,X4 WRITE MACRO DEFINITION TABLE

CMP043 140

20510 5130003431

5140003470

SA3 0.TEMTAB

CMP043 141

SA4 L.TEMTAB

CMP043 142

20511 63630

WRITEW X2,X3,X4 WRITE MACRO NAME TABLE

CMP043 143

RM

ELSE

CMP043 144
CMP043 145

GSM14

SA5 L.DUPTAB

CMP30 4207

SA4 L.TEMTAB

CMP30 4208

SX3 X5+B1

MACRO DEFS SIZE + 1 FOR HEADER WORD

CMP30 4209

IX2 X3+X4

CMP30 4210

IX7 X2+X2

CMP30 4211

LX2 3

CMP30 4212

SA1 B-1

CMP30 4213

IX4 X2+X7

CMP30 4214

+

ZR X1,*+1

IF RECORD TYPE W

CPS028 397

SX4 0

CMP30 4215

STORE B,RL=X4

CPS028 399

PUTP B,L.DUPTAB,10

CMP30 4216

CPS028 398
CPS028 399
CMP30 4217
CMP30 4218

			SA5	L.DUPTAB		CMP30	4219
			ZR	X5,GSM14A	IF NO MACRO DEFINITIONS	CPS028	400
			IX7	X5+X5		CMP30	4220
1			LX5	3		CMP30	4221
2			IX3	X5+X7		CMP30	4222
3			SA2	O.DUPTAB		CMP30	4223
4			PUTP	B,X2,X3	DUMP MACRO DEFINITION TABLE	CMP30	4224
5		GSM14A	SA5	L.TEMTAB		CPS028	401
6			IX7	X5+X5		CMP30	4226
7			LX5	3		CMP30	4227
8			IX3	X5+X7		CMP30	4228
9			SA2	O.TEMTAB		CMP30	4229
10			PUTP	B,X2,X3	DUMP MACRO NAME TABLE	CMP30	4230
11						CMP30	4231
12		RM	ENDIF			CMP30	4232
13						CMP30	4233
14	20512	7120000241	GSM15	WEOR	B	CMP30	4234
15	20514	0100005102	RJ	ASU	ACCUMULATE STORAGE USED	CMP043	147
16	20515	76600	SX6	B0		CMP043	148
17		5160003467	SA6	L.DUPTAB		CMP043	149
18	20516	5160003470	SA6	L.TEMTAB		CMP043	150
19		0400020346	EQ	GSM	RETURN	COMPASS	12768
20							
21							
22							
23							
24		**		INPUT1 - PASS 1 INPUT ROUTINE.		COMPASS	12770
25		*		INPUT1 CREATES NEXT STATEMENT, EITHER BY UNPACKING FROM THE		COMPASS	12771
26		*		TABLE DICTATED BY THE TOP-MOST STACK ENTRY, OR BY CALLING		COMPASS	12772
27		*		RNS TO READ NEXT STATEMENT FROM THE SOURCE INPUT FILE.		CMP041	33
28		*		INPUT1 ALSO CLEARS OUT...		COMPASS	12774
29		*		SQLGN TO PERMIT PACKING OF STATEMENT.		COMPASS	12775
30		*		ERFLAGS TO CLEAR HANGING ERROR FLAGS.		COMPASS	12776
31		*		FLAG TO MINIMIZE INTERMEDIATE USAGE OF IT.		COMPASS	12777
32		*		OPTYPE TO AVOID CONFUSION IN *WINTER*.		CMP029	92
33		*		INPUT1 WILL COMPLAIN IF RECURSION DEPTH IS TOO BIG.		COMPASS	12778
34		*		EXIT (X1) " 0 IF PUSHUP OCCURRED.		COMPASS	12779
35						COMPASS	12780
36						COMPASS	12781
37	20517	0000000000	INPUT1	PS	RETURN EXIT	COMPASS	12782
38	20520	5120003462	SA2	L.STACK		COMPASS	12800
39		5110003423	SA1	O.STACK		COMPASS	12801
40	20521	0302020576	ZR	X2,IN4	IF NORMAL INPUT	CPS004	22
41		6242777774	SB4	X2-3		COMPASS	12802
42	20522	53314	SA3	X1+B4	GET SECOND WORD OF STACK	COMPASS	12803
43		55131	SA1	A3-B1	GET CURRENT WORD POINTER	CMP24	132
44		43052	MX0	42		CMP24	133
45	20523	5043000002	SA4	A3+2		COMPASS	12804
46		5150012212	SA5	=3R		CMP24	134
47	20524	11601	BX6	X0*X1		CMP24	135
48		22704	LX7	X4		COMPASS	12805
49		12665	BX6	X6+X5		CMP24	136
50	20525	5170030003	SA7	SEQ	STORE MACRO NAME	COMPASS	12806
51		54671	SA6	A7+B1	STORE LEVEL NUMBER	COMPASS	12807
52		21370	AX3	56	LOOK AT TYPE	CMP24	137
53	20526	63430	SB4	X3	SAVE TYPE OF STACK ENTRY	COMPASS	12814
54		73110	SX1	X1		CMP24	138
55							
56							
57							
58							
59							
60							

0244020526	JP	**B4	JUMP ON TYPE OF STACK ENTRY	COMPASS 12816
				COMPASS 12817
20527 0400020566	+	EQ	INMAC	MACRO DEFINITION
20530 0400020571	+	EQ	INDUP	DUPTAB
20531 0400020542	+	EQ	INRMT	REMOTE TABLE INPUT
20532 0400020537	+	EQ	INLIB	LIBRARY TABLE INPUT
20533 0400020534	+	EQ	INECH	ECHO TABLE INPUT
	*		INPUT FROM ECHTAB.	COMPASS 12822
				COMPASS 12823
				COMPASS 12824
20534 5120003432	INECH	SA2	0.ECHTAB	COMPASS 12825
36112		IX1	X1+X2	COMPASS 12826
20535 0100022715		RJ	UCARD	COMPASS 12827
20536 5110003432		SA1	0.ECHTAB	COMPASS 12828
0400020545		EQ	IN2	COMPASS 12829
	*		INPUT FROM LASTAB.	COMPASS 12830
				COMPASS 12831
20537 5120003427	INLIB	SA2	0.LASTAB	COMPASS 12832
36121		IX1	X2+X1	COMPASS 12833
20540 0100022715		RJ	UCARD	COMPASS 12834
20541 5110003427		SA1	0.LASTAB	COMPASS 12835
0400020545		EQ	IN2	COMPASS 12836
	*		INPUT FROM REMOTE ASSEMBLY TABLE (RASTAB).	COMPASS 12837
				COMPASS 12838
20542 5120003426	INRMT	SA2	0.RASTAB	COMPASS 12839
36121		IX1	X2+X1	COMPASS 12840
20543 0100022715		RJ	UCARD	CONSTRUCT ADDRESS
20544 5110003426		SA1	0.RASTAB	UNPACK CARD
20545 5120003462	IN2	SA2	L.STACK	COMPASS 12842
5130003423		SA3	0.STACK	COMPASS 12843
20546 6252777773		SB5	X2-4	COMPASS 12844
53235		SA2	X3+B5	COMPASS 12845
54421		SA4	A2+B1	CMP24 139
20547 37761		IX7	X6-X1	CMP24 140
43601		MX6	1	CMP24 141
73320		SX3	X2	CMP24 142
37323		IX3	X2-X3	CMP24 143
20550 12737		BX7	X3+X7	CMP24 144
21470		AX4	56	CMP24 145
5160003267		SA6	EDITFG	CMP24 146
20551 54720		SA7	A2	CMP24 147
43600		MX6	0	CMP64G 200
5160003263		SA6	SQLGN	SET FLAG TO CAUSE EDIT SCAN
20552 5130026436		SA3	STYPE	COMPASS 12852
6244777775		SB4	X4-2	COMPASS 12853
20553 6273777753		SB7	X3-1RT	COMPASS 12854
0570020574		NZ	B7,INP5	COMPASS 12855
20554 0440020561		ZR	B4,IN3A	COMPASS 12856
6144777774		SB4	B4-3	COMPASS 12857
20555 0540020557		NZ	B4,IN3	COMPASS 12858
0100020610		RJ	ITE	COMPASS 12859
20556 0302020520		ZR	X2,INPUT1+1	COMPASS 12860
20557 0100022000	IN3	RJ	PUSHUP	IF NOT ECHO
20560 0400020520		EQ	INPUT1+1	ITERATE ECHO
20561 5047000002	IN3A	SA4	A7+2	IF NOT DONE, GO READ NEXT CARD
				ELSE PUSH STACK UP, RETURN FOR
				NEXT CARD
				FETCH DUPLICATION CONTROL

□

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		54271		SA2	A7+B1		COMPASS 12974
		36232		IX2	X3+X2		CMP64G 220
20630	5150003433			SA5	0.MARDIS		CMP64G 221
		7222777776		SX2	X2-1		COMPASS 12976
20631	63250			SB2	X5		CMP64G 223
		53222		SA2	B2+X2	READ ARGUMENT POINTER	COMPASS 12980
		26672		UX6,B7	X2	SETUP ITERATIVE DESCRIPTOR WORD...	CMP165 37
		67707		SB7	-B7		CMP165 38
20632	27676			PX6	B7	- CHARACTER COUNT	CMP165 39
		20622		LX6	59-41		CMP165 40
		27606		PX6	B0	CHARACTER OFFSET	CMP165 41
		20614		LX6	41-29		CMP165 42
20633	27606			PX6	B0	WORD OFFSET	CMP165 43
		20636		LX6	29-59		CMP165 44
		0470020636		ZR	B7,ITP3	IF EMPTY ARGUMENT	CMP165 45
20634	54620			SA6	A2		COMPASS 12987
		73170		SX1	X7	PACK STACK WORD	CMP64G 229
		75622		SX6	A2-B2		COMPASS 12989
		20122		LX1	18		COMPASS 12990
20635	12661			BX6	X6+X1		COMPASS 12991
		54640		SA6	A4		COMPASS 12992
		0400020622		EQ	ITP	RETURN	CMP64G 230
							CMP64G 231
			*			EMPTY ARGUMENT, SKIP TO SECOND IRP.	CMP64G 232
							CMP64G 233
20636	36171		ITP3	IX1	X7+X1	NEXT CARD ADDRESS	CMP64G 234
		53110		SA1	X1		CMP64G 235
		43060		MX0	-12		CMP64G 236
20637	7130250001			SX3	1LU+0001B	LOOK FOR U-CARD WITH COLON IN COLUMN 1	CMP64G 237
		76210		SX2	B1		CMP64G 238
		20352		LX3	42		CMP64G 239
20640	15610		ITP4	BX6	-X0*X1		CMP64G 240
		36772		IX7	X7+X2		CMP64G 241
		46000		NO			CMP64G 242
		54111		SA1	A1+B1		CMP64G 243
20641	0316020640			NZ	X6,ITP4	IF NOT END OF STATEMENT	CMP64G 244
		13613		BX6	X1-X3		CMP64G 245
20642	0316020640			NZ	X6,ITP4	IF NOT SECOND IRP	CMP64G 246
		36772		IX7	X7+X2		CMP64G 247
		54770		SA7	A7	UPDATE CARD POINTER IN STACK	CMP64G 248
20643	5067000002			SA6	A7+2	CLEAR IRP SWITCH	CMP64G 249
		0400020622		EQ	ITP	RETURN	COMPASS 12993
			**			MACALL - PROCESS MACRO/OPDEF CALL (NOT RJ SUBROUTINE).	COMPASS 12995
			*			ENTRY (MACRO) (B7) " 0.	COMPASS 12996
			*			(OPDEF) (B7) = 0.	COMPASS 12997
			*			(X1) = OPERATION SYNTAX SCAN.	COMPASS 12998
			*				COMPASS 12999
			*			SCRATCH CELL USAGE.	COMPASS 13000
			*				COMPASS 13001
			*		P1TEMP	LOCATION ARGUMENT FLAG.	COMPASS 13002
			*		P1TEMPA	TOTAL PARAMETER COUNT.	COMPASS 13003
			*		P1TEMPB	LOCAL PARAMETER COUNT.	COMPASS 13004
			*		P1TEMPC	MACRO FLAG (B7 ON ENTRY).	COMPASS 13005

*

P1TEMPD

SYNTAX (X1 ON ENTRY).

COMPASS 13006

COMPASS 13008

COMPASS 13009

COMPASS 13010

COMPASS 13011

COMPASS 13013

20644 76770

MACALL

SX7

B7

ENTRY

5150003303

10611

SA5

OPTYPE

BX6

X1

20645 5170003564

54671

20526

SA7

P1TEMPC

SAVE MACRO/OPDEF FLAG

SA6

A7+B1

SAVE SYNTAX

LX5

59-37

20646 0325020656

21501

73150

PL

X5,MCL0

IF TEXT NOT IN LCM

AX5

39-60+59-37

MANAGE

MACDEF,X5

MAKE ROOM IN MACDEF TABLE

20650 5150003303

36223

43052

SA5

OPTYPE

IX2

X2+X3

MX0

-18

20651 15150

11605

20525

BX1

-X0*X5

LCM ADDRESS

BX6

X0*X5

LX5

-39

20652 7170000024

37034

20752

SX4

X5

WORD COUNT

SX7

1RT

IX0

X3-X4

20653 12660

36774

54650

20714

BX6

X6+X0

INSERT MACDEF INDEX INTO OPTYPE

IX7

X7+X4

SA6

A5

LX7

12

ADD T-CARD WITH WORD COUNT IN BITS 29-12

20654 5272777776

7235777776

SA7

X2-1

SX3

X5-1

WORD COUNT - 1

20655 37224

0100005733

IX2

X2-X4

RJ

RLC

MOVE TEXT FROM LCM TO MACDEF

20656 5150003303

76210

43066

MCL0

SA5

OPTYPE

SX2

B1

MX0

-6

20657 73150

21522

11625

21501

SX1

X5

AX5

18

BX6

X2*X5

AX5

1

20660 15750

5160003561

BX7

-X0*X5

SA6

P1TEMP

20661 21506

15650

20565

54671

SA7

A6+B1

AX5

6

BX6

-X0*X5

LX5

-7

20662 0325020667

37476

5120003404

SA6

A7+B1

PL

X5,MCL01

IF NOT MACROE

IX4

X7-X6

MOVE KEYWORDS TO RELVEC+64

20663 5130003561

5120003404

SA3

P1TEMP

SA2

0.MACDEF

20664 63210

37143

73222

63212

SB2

X1

IX1

X4-X3

SX2

X2+B2

SB2

B2+X1

20665 7130030317

0100005515

SX3

RELVEC+64

RJ

MOVE

20666 76120

20667 5120003473

5130003472

MCL01

SX1

B2

SA2

L.MARGS

SAVE PARAMETERS FOR LATER PUSHDOWN CALL

SA3

L.MARDIS

CMP029 93

COMPASS 13027

CMP029 94

CMP029 95

CMP029 96

CMP029 97

CMP029 98

CMP029 99

CMP029 100

CMP029 101

CMP029 102

CMP029 103

CPS004 23

CPS004 24

20670	5140003103		SA4	IOP		COMPASS 13033
	10611		BX6	X1		CPS004 25
	22702		LX7	X2		CPS004 26
20671	5160021071		SA6	MCLA		CPS004 27
	54761		SA7	A6+B1		CPS004 28
	10633		BX6	X3		CPS004 29
20672	22704		LX7	X4		CPS004 30
	54671		SA6	A7+B1		CPS004 31
	54761		SA7	A6+B1		CPS004 32
* SCAN OFF PARAMETERS.						COMPASS 13037
						COMPASS 13038
						COMPASS 13039
20673	5110003561		SA1	P1TEMP	CHECK ON LOCATION TYPE	COMPASS 13040
	0301020710		ZR	X1,MCL10		COMPASS 13041
20674	76110		MANAGE	MARGS,1	GET ROOM FOR LOCATION SYMBOL	CMP165 46
20676	6273777776		SB7	X3-1		CMP165 47
	5130003102		SA3	LOCSYM		COMPASS 13046
20677	43006		MX0	6		COMPASS 13047
	66600		SB6	B0		CMP165 48
	0333020701		MI	X3,MCL1A	IF LOCATION SYMBOL NON-EMPTY	CMP165 49
20700	0303020704		ZR	X3,MCL1		COMPASS 13048
20701	11430	MCL1A	BX4	X3*X0		COMPASS 13049
	20306		LX3	6		COMPASS 13050
	6166777776		SB6	B6-1	COUNT CHARACTERS	CMP165 50
20702	0304020701		ZR	X4,MCL1A		COMPASS 13051
	20366		LX3	54		COMPASS 13052
20703	6166000013		SB6	11+B6		CMP165 51
20704	10633	MCL1	BX6	X3		COMPASS 13053
	76170		SX1	B7	SETUP ARGUMENT DESCRIPTOR WORD	CMP165 52
	53627		SA6	X2+B7		COMPASS 13055
	27161		PX1	B6		CMP165 53
20705	5100000031		ADDWORD	MARDIS		CMP165 54
20706	5110003562		SA1	P1TEMPA	REDUCE PARAMETER COUNT	COMPASS 13057
	7261777776		SX6	X1-1		COMPASS 13058
20707	54610		SA6	A1		COMPASS 13059
	0400020713		EQ	MCL15		COMPASS 13060
20710	76100	MCL10	SX1	B0	PROCESS LOCATION FIELD	COMPASS 13061
	5120003102		SA2	LOCSYM		COMPASS 13062
20711	0302020712	+	ZR	X2,*+1	AVOID PRLOC IF NO LOCSYM	COMPASS 13063
	0100023377		RJ	YPRLOC		COMPASS 13064
20712	5120003564		SA2	P1TEMPC	MACRO FLAG	COMPASS 13065
	0302020767		ZR	X2,MCLO	IF OPDEF EXPANSION REQUIRED	COMPASS 13066
20713	5110003303	MCL15	SA1	OPTYPE		COMPASS 13067
	20134		LX1	-32		COMPASS 13068
20714	0331020736		NG	X1,MCLE	IF MACROE EXPANSION	COMPASS 13069
20715	5110003562	MCL20	SA1	P1TEMPA	GET PARAMETER COUNT	COMPASS 13070
	0301021054		ZR	X1,MCL60	JUMP IF DONE	COMPASS 13071
20716	54211		SA2	A1+B1		COMPASS 13075
	37021		IX0	X2-X1		COMPASS 13076
	0330020734		NG	X0,MCL30	JUMP IF THIS IS A NON-LOCAL PARAMETER	COMPASS 13077
20717	5110003122		SA1	INVENT	AUGMENT INVENTION NUMBER	COMPASS 13078
	66700		SB7	B0		COMPASS 13079
	43066		MX0	54		COMPASS 13080
20720	76310		SX3	B1		COMPASS 13081
	36131		IX1	X3+X1		COMPASS 13082
20721	23471	MCL21	AX4	X1,B7		COMPASS 13083
	15340		BX3	-X0*X4		COMPASS 13084

14121HE

20750	5110030317		SA1	RELVEC+64		CMP029	114
	63721		SB7	X2+B1		CMP029	115
	77707		SX7	-B7		CMP165	64
20751	13316	MCLE5	BX3	X1-X6		CMP029	117
	7277000001		SX7	X7+1		CMP165	65
	54111		SA1	A1+B1		CMP029	120
20752	0327020763		PL	X7,MCLE9	IF KEYWORD NOT FOUND	CMP165	66
	0313020751		NZ	X3,MCLE5	LOOP	CMP029	122
20753	5170003566		SA7	P1TEMPE		CMP165	67
	0100021226		RJ	PMA	PACK MACRO ARGUMENT	CMP165	68
20754	10611		BX6	X1		CMP165	69
	5110003433		SA1	O.MARDIS		CMP029	123
20755	5120003472		SA2	L.MARDIS		CMP029	124
	5130003566		SA3	P1TEMPE		CMP165	70
20756	36412		IX4	X1+X2		CMP029	126
	63730		SB7	X3		CMP165	71
	53647		SA6	X4+B7	STORE POINTER TO VALUE	CMP029	128
20757	5110003145		SA1	CHAR	CHECK FOR END OF FIELD	COMPASS	13166
	6271777722		SB7	X1-1R		COMPASS	13167
20760	0570020744		NZ	B7,MCLE4	LOOP TO END OF CALL	CMP029	129
20761	5110003563	MCLE8	SA1	P1TEMPB	SET COUNT TO LOCAL PARAMETERS	COMPASS	13183
	10611		BX6	X1		COMPASS	13184
	55611		SA6	A1-B1		COMPASS	13185
20762	0400020715		EQ	MCL20	EXIT	COMPASS	13186
						COMPASS	13187
		*		BAD FORMAL PARAMETER NAME.		CMP029	130
						COMPASS	13189
20763	76610	MCLE9	SX6	B1	SET *4* ERROR	CMP029	131
	5160003336		SA6	W4ERR		CMP029	132
20764	5160003345		SA6	EFLG		CMP029	133
20765	0100021263	MCLE9A	RJ	PMACE	SKIP VALUE	CMP029	134
20766	0317020744		NZ	X7,MCLE4	IF NOT END OF CARD	CMP029	135
	0400020761		EQ	MCLE8		CMP029	136
		**		MCLO - OPDEF EXPANSION.		COMPASS	13195
		*				COMPASS	13196
		*		ADDITIONAL TEMPORARY STORAGE USED BY OPDEF EXPANSIONS.		COMPASS	13197
		*				COMPASS	13198
		*		OPADS+1	WORD INDEX FOR ADDRESS ACCUMULATION.	CMP165	72
		*		OPADS+2	BIT POSITION AND CHAR COUNT FOR ADDRESS.	CMP165	73
		*		OPADS+3	COLUMN RESET WITH OPERATOR.	CMP165	74
		*		OPADS+4	COLUMN RESET WITHOUT OPERATOR.	CMP165	75
						COMPASS	13204
						COMPASS	13205
20767	5110003142	MCLO	SA1	COL	RESET TO OP-CODE REGISTER	COMPASS	13206
	5120003565		SA2	P1TEMPD	AND PREPARE SYNTAX WORD	CMP9	28
20770	73611		SX6	X1+B1		COMPASS	13207
	10722		BX7	X2		CMP9	29
	5160003144		SA6	COLUMN		COMPASS	13208
20771	20730		LX7	24		CMP9	30
	76600		SX6	B0	CLEAR VARIABLE FIELD FLAG	CMP9	31
	54720		SA7	A2		CMP9	32
20772	5160021075		SA6	MCLOA		CMP9	33
	0100005444		RJ	GETCH		COMPASS	13209

20773	6271777775		SB7	X1-2		COMPASS	13210
	6261777747		SB6	X1-1RX		COMPASS	13211
20774	0460020777		ZR	B6,MCL01	IF X	COMPASS	13212
	0771020777		LT	B7,B1,MCL01	IF *A* OR *B*	CPS216	6
20775	0100005444		RJ	GETCH		CPS216	7
20776	0400021000		EQ	MCL02		CPS216	8
						CPS216	9
20777	0100021103	MCL01	RJ	MCLOR	PACK REGISTER	COMPASS	13214
21000	6271777721	MCL02	SB7	X1-1R,		CMP9	34
	0470021004		ZR	B7,MCL02A		CMP9	35
						CMP9	36
		*		ENTRY ON NEW FIELD.		CMP9	37
						CMP9	38
21001	5110021075		SA1	MCLOA		CMP9	39
	5120003143		SA2	COL+1		CMP9	40
21002	0311021051		NZ	X1,MCL09	IF END OF VARIABLE FIELD	CMP9	41
	10622		BX6	X2		CMP9	42
	54610		SA6	A1	END OF OPCODE FIELD, RESET SCAN	CMP9	43
21003	5160003144		SA6	COLUMN	TO BEGINNING OF VARIABLE FIELD	CMP9	44
						COMPASS	13222
		*		ENTRY ON NEW SUBFIELD.		COMPASS	13223
						COMPASS	13224
21004	76600	MCL02A	SX6	B0	PREPARE COUNTERS FOR ADDRESSES	CMP165	76
	5160003274		SA6	OPADS+1		CMP165	77
	27706		PX7	X6,B0		CMP165	78
21005	54761		SA7	A6+B1		CMP165	79
	0100005444		RJ	GETCH		COMPASS	13230
21006	5110003145	MCL03	SA1	CHAR		COMPASS	13231
	6271777722		SB7	X1-1R		COMPASS	13232
21007	0470021037		ZR	B7,MCL08	IF END OF ADDRESS FIELD	COMPASS	13233
	0471021037		EQ	B7,B1,MCL08		COMPASS	13234
21010	5120003144		SA2	COLUMN		COMPASS	13235
	10622		BX6	X2		COMPASS	13236
21011	7130360000		SX3	360000B	MASK FOR +-*/&	CPS010	71
	6271000006		SB7	X1+6		CPS010	72
21012	27303		PX3	X3		CPS010	73
	5160003276		SA6	OPADS+3	SAVE COLUMN	COMPASS	13239
	22373		LX3	X3,B7		COMPASS	13240
21013	0323021014	+	PL	X3,*+1		COMPASS	13241
	0100005444		RJ	GETCH		COMPASS	13242
21014	5120003144		SA2	COLUMN		COMPASS	13243
	10622		BX6	X2		COMPASS	13244
21015	5160003277		SA6	OPADS+4		COMPASS	13245
	0100023145		RJ	YEVITEM	EVALUATE ITEM	COMPASS	13246
21016	5110006300		SA1	ELREG		COMPASS	13247
	0301021023		ZR	X1,MCL06	IF NOT REGISTER	COMPASS	13248
21017	5120003277		SA2	OPADS+4	GO BACK TO START OF REGISTER	COMPASS	13249
	7262777776		SX6	X2-1		COMPASS	13250
21020	5160003144		SA6	COLUMN		COMPASS	13251
	0100005444		RJ	GETCH		COMPASS	13252
21021	0100021103		RJ	MCLOR	PACK REGISTER	COMPASS	13253
21022	0400021006		EQ	MCL03		COMPASS	13254
21023	5120003144	MCL06	SA2	COLUMN		COMPASS	13255
	5130003276		SA3	OPADS+3	GO BACK TO OPERATOR PREC. ELEMENT	COMPASS	13256
21024	7263777776		SX6	X3-1		COMPASS	13257
	63220		SB2	X2		COMPASS	13258
	54620		SA6	A2		COMPASS	13259

21025	0100005444	MCL06A	RJ	GETCH		COMPASS	13260
21026	5120003144		SA2	COLUMN		COMPASS	13261
	63320		SB3	X2		COMPASS	13262
21027	0423021006		EQ	B2,B3,MCL03	IF AT END OF ELEMENT	COMPASS	13263
	5120003274		SA2	OPADS+1	ADD CHARACTER TO ADDRESS	CMP165	80
21030	54321		SA3	A2+B1		COMPASS	13265
	26773		UX7,B7	X3		CMP165	81
	5242030216		SA4	RELVEC-1+X2		CMP165	82
21031	0470021034		ZR	B7,MCL07	IF AT END OF WORD	CMP165	83
	6177777771		SB7	B7-6		CMP165	84
21032	73731		SX7	X3+B1	COUNT CHARACTERS	CMP165	85
	22171		LX1	B7		CMP165	86
	27777		PX7	B7		CMP165	87
	12641		BX6	X4+X1	INSERT NEW CHARACTER	CMP165	88
21033	54730		SA7	A3		CMP165	89
	54640		SA6	A4		CMP165	90
	0400021025		EQ	MCL06A	LOOP	CMP165	91
21034	6170000066	MCL07	SB7	60-6		CMP165	92
	73721		SX7	X2+B1	ADVANCE WORD INDEX	CMP165	93
	22671		LX6	X1,B7		CMP165	94
21035	54720		SA7	A2		CMP165	95
	73331		SX3	X3+B1	COUNT CHARACTERS	CMP165	96
	5267030216		SA6	RELVEC-1+X7		CMP165	97
21036	27773		PX7	X3,B7		CMP165	98
	54730		SA7	A3		CMP165	99
	0400021025		EQ	MCL06A		COMPASS	13279
						COMPASS	13280
		*		MOVE ADDRESS.		CMP26	48
						COMPASS	13282
21037	5150003565	MCL08	SA5	P1TEMPD	CHECK IF THIS SUBFIELD HAS AN ADDR	COMPASS	13283
	20507		LX5	7		COMPASS	13284
	22615		LX6	X5,B1		COMPASS	13285
21040	54650		SA6	A5		COMPASS	13286
	0325021050		PL	X5,MCL08A		COMPASS	13287
21041	5110003473		SA1	L.MARGS		COMPASS	13299
	5120003275		SA2	OPADS+2	SETUP ARGUMENT DESCRIPTOR WORD	CMP165	100
21042	63720		SB7	X2		CMP165	101
	27171		PX1	B7		CMP165	102
	5100000031			ADDWORD MARDIS		COMPASS	13300
21044	5110003274		SA1	OPADS+1		COMPASS	13301
	5100000032		MANAGE	MARGS,X1		COMPASS	13302
21046	36232		IX2	X3+X2		COMPASS	13303
	5110003274		SA1	OPADS+1		COMPASS	13304
	37321		IX3	X2-X1		COMPASS	13305
21047	7120030217		SX2	RELVEC		COMPASS	13306
	0100005515		RJ	MOVE		COMPASS	13307
21050	5110003145	MCL08A	SA1	CHAR	TEST FOR END OF SUBFIELD ONLY	COMPASS	13308
	0400021000		EQ	MCL02		CMP9	45
						CMP9	46
		*		END OF VARIABLE FIELD.		CMP9	47
						CMP9	48
21051	76600	MCL09	SX6	B0	CLEAR OUT OPCODE ERRORS	CMP9	49
	5160003322		SA6	AERR		COMPASS	13312
21052	5160003327		SA6	UERR		COMPASS	13313
	5120003563		SA2	P1TEMPB		COMPASS	13314
21053	10622		BX6	X2	CHECK IF THERE ARE ANY LOCALS TO	COMPASS	13315
	55621		SA6	A2-B1	GENERATE	COMPASS	13316

0312020715

NZ

X2,MCL20

COMPASS 13317

COMPASS 13318

COMPASS 13319

* END OF EXPANSION.

COMPASS 13320

21054 0100020105

MCL60

RJ

CRL

CHECK RECURSION LIMIT

CPS004 33

21055 5110003561

SA1

P1TEMP

CPS004 34

43602

MX6

2

CREATE OPTYPE FOR INTERMEDIATE

COMPASS 13322

20171

LX1

57

COMPASS 13323

21056 12616

BX6

X1+X6

COMPASS 13324

5120003303

SA2

OPTYPE

COMPASS 13325

10722

BX7

X2

COMPASS 13326

21057 54620

SA6

A2

COMPASS 13327

54710

SA7

A1

COMPASS 13328

5110003102

SA1

LOCSYM

COMPASS 13329

21060 0301021062

ZR

X1,MCL61

IF NO LOCATION SYMBOL

COMPASS 13330

0100023001

RJ

WINTER

COMPASS 13331

21061 0400021063

EQ

MCL62

COMPASS 13332

21062 0100020112

MCL61

RJ

CWI

COMPASS 13333

21063 5110021071

MCL62

SA1

MCLA

RECALL PUSHDOWN PARAMETERS

CPS004 35

76210

SX2

B1

CPS004 36

54311

SA3

A1+B1

CPS004 37

21064 54531

SA5

A3+B1

CPS004 38

54451

SA4

A5+B1

CPS004 39

0100021731

RJ

PUSHDOWN

ADD STACK ENTRY

CPS004 40

21065 5120003561

SA2

P1TEMP

COMPASS 13336

76610

SX6

B1

CPS004 41

20202

LX2

2

COMPASS 13337

21066 0322021070

PL

X2,MCL63

IF SYSTEM MACRO

CMP029 137

5160003314

SA6

MACFLG

CMP029 138

21067 0400010615

EQ

CTL100

CMP029 139

21070 5160003313

MCL63

SA6

SYSFLG

CMP029 140

0400010615

EQ

CTL100

AND BACK FOR GENERAL PROCESSING

COMPASS 13342

21071 4

MCLA

BSS

4

PUSHDOWN PARAMETERS

CPS004 42

21075 00000000000000000000

MCLOA

DATA

0

ZERO IN OPCODE FIELD, NZ IN VARIABLE FIELD

CMP9 51

** MCLS - STORE NEXT MACRO CHARACTER.

COMPASS 13344

COMPASS 13345

COMPASS 13346

21076 0000000000

MCLS

PS

RETURN EXIT

COMPASS 13347

21077 20706

LX7

6

ACCUMULATE CHARACTER

COMPASS 13348

67661

SB6

B6-B1

COMPASS 13349

66331

SB3

B3+B1

BUMP CHARACTER COUNT

CMP165 103

12717

BX7

X1+X7

COMPASS 13350

21100 0560021076

NZ

B6,MCLS

COMPASS 13351

54771

SA7

A7+B1

COMPASS 13352

21101 6160000012

SB6

10

COMPASS 13353

43700

MX7

0

COMPASS 13354

21102 0400021076

EQ

MCLS

COMPASS 13355

** MCLOR - PACK REGISTER.

COMPASS 13357

* USES P1TEMPC.

CMP165 104

COMPASS 13358

COMPASS 13359

COMPASS 13360

COMPASS 13363

COMPASS 13364

COMPASS 13365

COMPASS 13366

COMPASS 13367

COMPASS 13368

CMP165 105

CMP165 106

CMP165 107

CMP165 108

CMP165 109

CMP165 110

CMP165 111

CMP165 112

CMP165 113

CMP165 114

CMP165 115

CMP165 116

COMPASS 13374

CMP165 117

CMP165 118

COMPASS 13375

COMPASS 13376

** PCARD - PACK CARD INTO TABLE.
* ENTRY (X1) = TABLE NAME.

COMPASS 13378

COMPASS 13379

COMPASS 13380

COMPASS 13381

COMPASS 13382

COMPASS 13383

COMPASS 13384

COMPASS 13385

COMPASS 13386

COMPASS 13387

COMPASS 13388

COMPASS 13389

COMPASS 13390

COMPASS 13391

COMPASS 13392

COMPASS 13393

COMPASS 13394

COMPASS 13395

COMPASS 13396

** PDC - PROCESS DEFINITION CARD.
* FORMAL PARAMETER SEPARATORS ARE +-*/()\$= ,. "-
* ENTRY (SQIMAGE) = PACKED IMAGE OF CARD.

COMPASS 13398

COMPASS 13399

COMPASS 13400

			*	(P1TEMPA) = TOTAL PARAMETER COUNT.	COMPASS 13401
			*	(RELVEC) = PARAMETER NAMES.	COMPASS 13402
			*	EXIT (CARD) = STRING BUFFER WITH PARAMETER MARKS.	COMPASS 13403
1					COMPASS 13404
2					COMPASS 13405
3	21133	0000000000	PDC	PS RETURN EXIT	COMPASS 13406
4				IFEQ IP.CSET,IP.C64.1	CPS0267 5
5	21134	5130012213		SA3 =6077760000000000001B DELIMITER MASK	COMPASS 13407
6				ELSE	CPS0267 6
7				SA3 =7077760000000000001B	CPS0267 7
8				ENDIF	CPS0267 8
9		6160000011		SB6 9	COMPASS 13408
10	21135	76460		SX4 B6	COMPASS 13409
11		5110030617		SA1 SQIMAGE PACKED IMAGE	COMPASS 13410
12		43066		MX0 -6	COMPASS 13411
13	21136	6150776474		SB5 -71*NCARDS+3 LIMITING COLUMN COUNT	COMPASS 13412
14		5100027741		SA0 STYPE+71*NCARDS-3	COMPASS 13413
15					COMPASS 13414
16			*	ENTRY FOR NEW POTENTIAL SUBSTITUTABLE ARGUMENT.	COMPASS 13415
17					COMPASS 13416
18	21137	66450	PDC1	SB4 B5 RESET ADDRESS IN CASE IF ARGUMENT	COMPASS 13417
19		43500		MX5 0	COMPASS 13418
20					COMPASS 13419
21			*	ENTRY FOR NEXT CHARACTER.	COMPASS 13420
22					COMPASS 13421
23	21140	20106	PDC2	LX1 6	COMPASS 13422
24		15610		BX6 -X0*X1 ISOLATE NEW CHARACTER	COMPASS 13423
25		63760		SB7 X6	COMPASS 13424
26		23773		AX7 X3,B7	COMPASS 13425
27	21141	0661021142	+	GE B6,B1,*+1 IF STILL CHARACTERS IN WORD	COMPASS 13426
28		63641		SB6 X4+B1	CMP64G 250
29		54111		SA1 A1+B1 FETCH NEW WORD	COMPASS 13427
30	21142	20773	+	LX7 59	CMP64G 251
31		67661		SB6 B6-B1	CMP64G 252
32		0337021145		NG X7,PDC3 IF THIS IS A DELIMITER	COMPASS 13431
33	21143	0650021144	+	PL B5,*+1 IF ROOM REMAINS IN CARD	COMPASS 13432
34		54605		SA6 A0+B5 STORE CHARACTER	COMPASS 13433
35		66551		SB5 B5+B1 UP COLUMN COUNT	COMPASS 13434
36	21144	20506		LX5 6	COMPASS 13435
37		12565		BX5 X6+X5 OR INTO POTENTIAL PARAMETER NAME	COMPASS 13436
38		0400021140		EQ PDC2 AND LOOP	COMPASS 13437
39					COMPASS 13438
40			*	DELIMITER FOUND.	COMPASS 13439
41					COMPASS 13440
42	21145	5120003562	PDC3	SA2 P1TEMPA TOTAL PARAMETER COUNT	COMPASS 13441
43		6222777776		SB2 X2-1	COMPASS 13442
44	21146	0302021151		ZR X2,PDC5 IF NOT PARAMETERS	COMPASS 13443
45		5120030217		SA2 RELVEC	COMPASS 13444
46	21147	13725	PDC4	BX7 X2-X5	COMPASS 13445
47		67221		SB2 B2-B1	COMPASS 13446
48		54221		SA2 A2+B1	COMPASS 13447
49	21150	0307021153		ZR X7,PDC6 IF PARAMETER FOUND	COMPASS 13448
50		0620021147		PL B2,PDC4	COMPASS 13449
51	21151	0470021157	PDC5	ZR B7,PDC7 PROCESS DELIMITER... IF BLANK MARK	COMPASS 13450
52		0650021137		PL B5,PDC1 IF CARD EXHAUSTED	COMPASS 13451
53	21152	54605		SA6 A0+B5 STORE DELIMITER	COMPASS 13452
54		66551		SB5 B5+B1	COMPASS 13453
55					
56					
57					
58					
59					
60					

0400021137

EQ PDC1

COMPASS 13454

COMPASS 13455

COMPASS 13456

* PARAMETER FOUND.

COMPASS 13457

21153 14700

PDC6

BX7

-X0

GET A 77

COMPASS 13458

6154000002

SB5

B4+2

UPDATE COLUMN NO

COMPASS 13459

21154 0650021137

PL

B5,PDC1

IF OUT OF RANGE

COMPASS 13460

54704

SA7

A0+B4

STORE 77 (PARAMETER MARK)

COMPASS 13461

21155 7072747560

SX7

A2-RELVEC

STORE PARAMETER NUMBER

COMPASS 13462

54771

SA7

A7+B1

COMPASS 13463

21156 0400021151

EQ

PDC5

GO PROCESS DELIMITER

COMPASS 13465

COMPASS 13466

* 00 CHARACTER.

COMPASS 13467

COMPASS 13468

21157 20106

PDC7

LX1

6

FETCH NEXT CHARACTER

COMPASS 13469

15610

BX6

-X0*X1

COMPASS 13470

63760

SB7

X6

COMPASS 13471

21160 0661021161

+

GE

B6,B1,*+1

COMPASS 13472

63641

SB6

X4+B1

COMPASS 13473

54111

SA1

A1+B1

COMPASS 13474

21161 67661

+

SB6

B6-B1

COMPASS 13475

13666

BX6

X6-X6

CMP64G 253

0470021167

ZR

B7,PDC8

IF END OF CARD

COMPASS 13476

21162 0471021151

EQ

B7,B1,PDC5

IF 0001 (COLON), GO STORE 00

CMP64G 254

7160000055

SX6

1R

STORE BLANKS OUT TO END OF CARD

COMPASS 13477

21163 54605

SA6

A0+B5

COMPASS 13478

66257

SB2

B5+B7

COMPASS 13479

66221

SB2

B2+B1

COMPASS 13480

21164 0620021137

PL

B2,PDC1

IF OUT OF BOUNDS

COMPASS 13481

21165 67771

+

SB7

B7-B1

COMPASS 13482

54661

SA6

A6+B1

COMPASS 13483

0570021165

NZ

B7,*

COMPASS 13484

21166 66520

SB5

B2

COMPASS 13485

0400021137

EQ

PDC1

COMPASS 13486

COMPASS 13487

* END OF CARD.

COMPASS 13488

COMPASS 13489

21167 7160000055

PDC8

SX6

1R

BLANK OUT REMAINDER OF CARD

COMPASS 13490

5110003261

SA1

LASTCOL

CMP12 29

21170 54605

SA6

A0+B5

COMPASS 13491

7076751340

SX7

A6-STYPE-1

COMPASS 13492

63610

SB6

X1

CMP12 30

21171 0317021172

+

NZ

X7,*+1

IF NOT ALL BLANKS

CMP27 20

76710

SX7

B1

CMP27 21

21172 5170003261

SA7

LASTCOL

UPDATE LASTCOL

COMPASS 13493

63770

SB7

X7

CMP12 31

43700

MX7

0

COMPASS 13494

21173 66771

+

SB7

B7+B1

CMP12 32

54661

SA6

A6+B1

COMPASS 13496

0776021173

LT

B7,B6,*

CMP12 33

21174 5170003263

SA7

SQLGN

PERMIT REPACKING

COMPASS 13498

0400021133

EQ

PDC

RETURN

COMPASS 13499

** PEC - PROCESS END CARD.

COMPASS 13501

COMPASS 13502
COMPASS 13503
COMPASS 13504

**	PMA - PROCESS MACRO ARGUMENTS.	COMPASS 13553
*	ENTRY (CARD) = ARGUMENTS SEPARATED BY *,*.	COMPASS 13554
*	EXIT (MARGS) = PACKED ARGUMENT.	COMPASS 13555
*	(X1) = ARGUMENT DESCRIPTOR WORD FOR MARDIS TABLE.	CMP165 119
*	USES P1TEMPC.	COMPASS 13556
*	CALLS MCLS.	COMPASS 13557
21226	0000000000 PMA PS RETURN EXIT	COMPASS 13558
21227	6160000012 SB6 10	COMPASS 13559
	5170030417 SA7 RELVEC+128	COMPASS 13560
21230	66200 SB2 B0 PREPARE TO STORE CHARACTER STRINGS	CMP029 141
	66300 SB3 B0	COMPASS 13563
	76700 SX7 B0	CMP165 120
21231	5110003145 SA1 CHAR	COMPASS 13564
	6271777726 SB7 X1-1R(	COMPASS 13565
21232	0470021241 ZR B7,PMA5 IF OPEN PAREN	COMPASS 13566
21233	6271777722 PMA1 SB7 X1-1R	COMPASS 13567
	0470021246 ZR B7,PMA7	COMPASS 13568
21234	0471021245 EQ B7,B1,PMA6	COMPASS 13569
	0100021076 RJ MCLS STORE CHARACTER	COMPASS 13570
21235	0100005444 PMA2 RJ GETCH GET NEXT ONE	COMPASS 13571
21236	0400021233 EQ PMA1	COMPASS 13572
21237	66777 PMA3 SB7 B7+B7	COMPASS 13573
	77317 SX3 B1-B7	COMPASS 13574
	63232 SB2 B2+X3	COMPASS 13575
21240	0720021235 PMA4 NG B2,PMA2 IF OUT OF BRACKETS	COMPASS 13576
	0100021076 RJ MCLS	COMPASS 13577
21241	0100005444 PMA5 RJ GETCH	COMPASS 13578
21242	6271777726 SB7 X1-1R(	COMPASS 13579
	0470021237 ZR B7,PMA3 IF OPEN PAREN	COMPASS 13580
21243	0471021237 EQ B7,B1,PMA3 IF CLOSE PREN	COMPASS 13581
	0100021076 RJ MCLS STORE CHARACTER	COMPASS 13582
21244	0322021241 PL X2,PMA5 IF STILL WITHIN RANGE OF CARD	COMPASS 13583
21245	0100005444 PMA6 RJ GETCH	COMPASS 13584
21246	6176777765 PMA7 SB7 B6-10	COMPASS 13585
	0470021251 ZR B7,PMA8 IF NO PARTIAL WORD	CMP165 121
21247	66766 SB7 B6+B6	CMP165 122
	66667 SB6 B6+B7	CMP165 123
	66766 SB7 B6+B6 LEFT JUSTIFY CHARACTERS IN LAST WORD	CMP165 124
	22777 LX7 B7	CMP165 125
21250	54771 SA7 A7+B1	CMP165 126
21251	7017747360 PMA8 SX1 A7-RELVEC-128 WORD COUNT OF ARGUMENT	CMP165 127
	27631 PX6 X1,B3	CMP165 128
21252	5160003564 SA6 P1TEMPC	CMP165 129
	5100000032 MANAGE MARGS,X1	COMPASS 13591
21254	5110003564 SA1 P1TEMPC SIZE OF PARAMETER	CMP165 130
	26131 UX1,B3	COMPASS 13593
	37431 IX4 X3-X1	CMP165 131
21255	27634 PX6 X4,B3	COMPASS 13594
	36324 IX3 X2+X4	CMP165 132
	7120030420 SX2 RELVEC+129	COMPASS 13595
21256	54610 SA6 A1	CMP029 143
	0100005515 RJ MOVE	CMP165 133
21257	5110003564 SA1 P1TEMPC (X1) = DESCRIPTOR WORD	COMPASS 13597
	0400021226 EQ PMA RETURN	CMP165 134
		COMPASS 13598

CMP029	145
CMP029	146
CMP029	147
CMP029	148
CMP029	149

CMP029	151
CMP029	152
CMP029	153
CMP029	154
CMP029	155
CMP029	156
CMP029	157
CMP029	158
CMP029	159
CMP029	160
CMP029	161
CMP029	162
CMP029	163
CMP029	164
CMP029	165
CMP029	166
CMP029	167
CMP029	168
CMP029	169
CMP029	170
CMP029	171
CMP029	172
CMP029	173
CMP029	174
CMP029	175
CMP029	176
CMP029	177
CMP029	178
CMP029	179
CMP029	180
CMP029	181
CMP029	182
CMP029	183
CMP029	184
CMP029	185
CMP029	186
CMP029	187
CMP029	188
CMP029	189
CMP029	190
CMP029	191
CMP029	192
CMP029	193
CMP029	194

COMPASS	13600
COMPASS	13601
COMPASS	13602

* EXIT (X6) = PARAMETER NAME.

COMPASS	13603
COMPASS	13604
COMPASS	13605
COMPASS	13606
COMPASS	13607
COMPASS	13608
COMPASS	13609
COMPASS	13610
COMPASS	13611
COMPASS	13612
COMPASS	13613
COMPASS	13614
COMPASS	13615
COMPASS	13616
COMPASS	13617
COMPASS	13618
COMPASS	13619
COMPASS	13620
COMPASS	13621
COMPASS	13622
COMPASS	13623
COMPASS	13624
COMPASS	13625
COMPASS	13626
COMPASS	13627
COMPASS	13628
COMPASS	13629
COMPASS	13630
COMPASS	13631
COMPASS	13632
COMPASS	13633
COMPASS	13634
COMPASS	13635
CMP029	195
COMPASS	13637
COMPASS	13638
COMPASS	13639
COMPASS	13640
COMPASS	13641
COMPASS	13642
COMPASS	13643
CMP029	196
COMPASS	13645
COMPASS	13646
COMPASS	13647
COMPASS	13648
COMPASS	13649
COMPASS	13650
COMPASS	13651
COMPASS	13652
COMPASS	13653
COMPASS	13654
COMPASS	13655
COMPASS	13656
COMPASS	13657
COMPASS	13658
COMPASS	13659

1	21301	76610	PMACFER	SX6	B1	POST REJECTED FORMAL PARAMETER ERROR
2		5160003336		SA6	W4ERR	
3	21302	5160003345		SA6	EFLG	
4	21303	43600	PMACFN	MX6	0	
5						
6	21304	0000000000	PMACF	PS		RETURN EXIT
7	21305	5110003144		SA1	COLUMN	
8		43361		MX3	49	ISOLATE THE FORMAL PARAMETER NAME
9		14233		BX2	-X3	
10	21306	5211026436		SA1	X1+CARD-1	
11		20214		LX2	12	
12		13666		BX6	X6-X6	
13	21307	6261777744		SB6	X1-1R0	
14		6251777732		SB5	X1-1R9-1	
15	21310	0400021312		EQ	PMACF1	
16	21311	20606	PMACF1A	LX6	6	
17		12616		BX6	X1+X6	
18		54111		SA1	A1+B1	
19	21312	63710	PMACF1	SB7	X1	
20		22372		LX3	X2,B7	
21		0323021311		PL	X3,PMACF1A	
22	21313	6177777722		SB7	B7-1R	
23	21314	0470021315	+	ZR	B7,*+1	
24		54111		SA1	A1+B1	THROW AWAY NAME TERMINATOR
25	21315	7071751341		SX7	A1-CARD+1	
26		5170003144		SA7	COLUMN	
27	21316	10711		BX7	X1	
28		5170003145		SA7	CHAR	
29	21317	0306021303		ZR	X6,PMACFN	
30	21320	0760021321	+	NG	B6,*+1	
31		0750021301		NG	B5,PMACFER	IF FIRST CHARACTER OF NAME IS 0-9
32	21321	5120003562		SA2	P1TEMPA	FETCH PARAMETER COUNT
33		5130030217		SA3	RELVEC	AND COMPARE WITH EXISTING PARAMETERS
34	21322	0302021325		ZR	X2,PMACF3	
35		6272777776		SB7	X2-1	
36	21323	13436	PMACF2	BX4	X3-X6	
37		54331		SA3	A3+B1	
38		67771		SB7	B7-B1	
39	21324	0304021301		ZR	X4,PMACFER	IF DUPLICATED NAME
40		0670021323		PL	B7,PMACF2	
41	21325	5140012214	PMACF3	SA4	=0RENDM	
42		7100051604		SX0	3REND	CHECK FOR ILLEGAL NAME
43	21326	5130012215		SA3	=0RLOCAL	
44		37060		IX0	X6-X0	
45		13363		BX3	X6-X3	
46	21327	0300021301		ZR	X0,PMACFER	IF PARAMETER NAME IS END
47		0303021301		ZR	X3,PMACFER	IF PARAMETER NAME IS LOCAL
48	21330	7100112220		SX0	3RIRP	
49		13464		BX4	X6-X4	
50		37060		IX0	X6-X0	
51	21331	43314		MX3	12	
52		11363		BX3	X6*X3	
53		0300021301		ZR	X0,PMACFER	IF IRP
54	21332	0304021301		ZR	X4,PMACFER	IF PARAMETER NAME IS ENDM
55						
56						
57						
58						
59						
60						

21333	6272777700	0313021301	NZ	X3,PMACFER	IF PARAMETER NAME IS OVER 8 CHARS LONG	COMPASS 13660
			SB7	X2-63		COMPASS 13661
		0670021336	PL	B7,PMACFF	IF PARAMETER COUNT WILL EXCEED 63	COMPASS 13662
21334	73721		SX7	X2+B1		COMPASS 13663
		5167030316	SA6	RELVEC+63+B7	STORE FORMAL PARAMETER NAME	COMPASS 13664
		54720	SA7	A2		COMPASS 13665
21335	0400021304		EQ	PMACF		COMPASS 13666
						COMPASS 13667
21336	76610		PMACFF	SX6	B1	POST OVERFLOW IF MORE THAN
		5160003326	SA6	FERR	63 FORMAL/LOCAL PARAMETERS	COMPASS 13668
21337	5160003345		SA6	EFLG		COMPASS 13669
		0400021303	EQ	PMACFN		COMPASS 13670
						COMPASS 13671
		**	PMACRO - PROCESS MACRO DEFINITION (OPDEF ALSO).			COMPASS 13673
		*	ENTRY (X0) = 0 IF MACRO.			COMPASS 13674
		*	(X0) < 0 IF OPDEF.			COMPASS 13675
		*	(X0) = 20000 IF MACROE.			COMPASS 13676
		*	SCRATCH CELL USE EXPLAINED HERE...			COMPASS 13677
		*				COMPASS 13678
		*	P1TEMP	MACRO NAME.		COMPASS 13679
		*	P1TEMPA	PARAMETER COUNT.		COMPASS 13680
		*	P1TEMPB	LOCAL PARAMETER COUNT.		COMPASS 13681
		*	P1TEMPC	LOCATION ARGUMENT FLAG.		COMPASS 13682
		*	P1TEMPC	REQUIRED PARAMETER COUNT AND FLAG.		COMPASS 13683
		*	P1TEMPE	BRACKET NAME.		COMPASS 13684
		*	OPADS	USED BY OPDEF TO RECORD FORMAT.		COMPASS 13685
						COMPASS 13686
21340	0000000000		PMACRO	PS	RETURN EXIT	COMPASS 13687
21341	5110003102		SA1	LOCSYM	SET MACRO NAME AND BRACKET NAME	COMPASS 13688
		10611	BX6	X1		COMPASS 13689
21342	5160003561		SA6	P1TEMP		COMPASS 13690
		43700	MX7	0		COMPASS 13691
		54761	SA7	A6+B1	P1TEMPA	CLEAR PARAMETER COUNT
21343	54771		SA7	A7+B1	P1TEMPB	LOCAL PARAMETER COUNT
		54771	SA7	A7+B1	P1TEMPC	
		54771	SA7	A7+B1	P1TEMPC	
		54671	SA7	A7+B1	P1TEMPC	
			SA6	A7+B1	P1TEMPC	
21344	5170022000		SA7	PUSHUP	BRACKET TO P1TEMPE	COMPASS 13696
					CLEAR PUSHUP FLAG	COMPASS 13697
		0320021347	PL	X0,PMAC9	IF MACRO OR MACROE	COMPASS 13698
						COMPASS 13699
		*	OPDEF DEFINITIONS.			COMPASS 13700
						COMPASS 13701
21345	5110026437		SA1	CARD	SCAN OPERATION SYNTAX	COMPASS 13702
		0100022501	RJ	SOS		COMPASS 13703
21346	0306021527		ZR	X6,PMACER	IF SYNTAX ERROR	COMPASS 13704
		0400021356	EQ	PMAC10		COMPASS 13705
						COMPASS 13706
		*	MACRO DEFINITION.			COMPASS 13707
						COMPASS 13708
						COMPASS 13709
21347	10600		PMAC9	BX6	X0	MACROE FLAG
		5160003564	SA6	P1TEMPC		COMPASS 13710
		43773	MX7	59		COMPASS 13711
21350	5170003565		SA7	P1TEMPC	FP COUNT SET TO -1	COMPASS 13712
						COMPASS 13713

	21351	73701	0311021356	NZ	X1,PMAC10	IF LOCSYM IS MACRO NAME	COMPASS	13714
				SX7	X0+B1		COMPASS	13715
			5170003564	SA7	P1TEMPC		COMPASS	13716
1	21352	0100006036		RJ	SCLIST	GET MACRO NAME	COMPASS	13717
2	21353	5110003145		SA1	CHAR		CMP30	4242
3			5160003561	SA6	P1TEMP	AND SAVE IT	COMPASS	13718
4	21354	5160003566		SA6	P1TEMPE		COMPASS	13719
5			6271777722	SB7	X1-1R		CMP30	4243
6	21355	0470021523		ZR	B7,PMACL	IF NO MACRO NAME OR NO FIRST PARAMETER	CMP30	4244
7	21356	0100021304	PMAC10	RJ	PMACF	GET PARAMETER	COMPASS	13722
8	21357	5110003145		SA1	CHAR	CHECK FOR END OF FIELD	COMPASS	13723
9			6271777722	SB7	X1-1R		COMPASS	13724
10	21360	0570021356		NZ	B7,PMAC10	KEEP GOING UNTIL END OF FIELD	COMPASS	13725
11	21361	5110003561	PMAC21	SA1	P1TEMP		COMPASS	13726
12			76610	SX6	B1		COMPASS	13727
13	21362	7100051604		SX0	3REND	CHECK FOR INVALID MACRO NAMES	COMPASS	13728
14			5120012215	SA2	=0RLOCAL	THOSE BEING...	COMPASS	13729
15	21363	13010		BX0	X1-X0	(BLANK)	COMPASS	13730
16			13212	BX2	X1-X2	END	COMPASS	13731
17			0300021523	ZR	X0,PMACL	LOCAL	COMPASS	13732
18	21364	7100112220		SX0	3RIRP		COMPASS	13733
19			13010	BX0	X1-X0		COMPASS	13734
20	21365	0301021523		ZR	X1,PMACL		COMPASS	13735
21			0302021523	ZR	X2,PMACL		COMPASS	13736
22	21366	43214		MX2	12		COMPASS	13737
23			11221	BX2	X2*X1		COMPASS	13738
24			0300021523	ZR	X0,PMACL	IF IRP	COMPASS	13739
25	21367	0312021523		NZ	X2,PMACL	IF MORE THAN 8 CHARACTERS	COMPASS	13740
26			0100006166	RJ	TLUOP	LOOK UP MACRO NAME IN OP CODE TABLE	COMPASS	13741
27	21370	76700		SX7	B0	CLEAR OUT POSSIBLE OP-CODE ERROR	COMPASS	13742
28			5170003321	SA7	OERR		COMPASS	13743
29	21371	0306021400		ZR	X6,PMAC30	IF NOT IN TABLE	COMPASS	13744
30			5130003137	SA3	IFCDGP	CHECK FOR DUPLICATE MACRO DEFINITION	COMPASS	13745
31	21372	0303021376		ZR	X3,PMAC22	IF ASSEMBLY MODE NOT YET KNOWN	COMPASS	13746
32			0336021376	NG	X6,PMAC22	OR OLD WAS PSEUDO OPERATION	COMPASS	13747
33	21373	21671		AX6	57		COMPASS	13748
34			5130003114	SA3	MACHINE		COMPASS	13749
35			63760	SB7	X6		COMPASS	13750
36	21374	13663		BX6	X6-X3		COMPASS	13751
37			0717021376	GT	B7,B1,PMAC22	AGAIN, IF OLD WAS PSEUDO-OPERATION	COMPASS	13752
38	21375	0316021400		NZ	X6,PMAC30	OR FOR SAME MACHINE,	COMPASS	13753
39	21376	76610	PMAC22	SX6	B1	POST DUPLICATION WARNING FLAG	COMPASS	13754
40			5160003345	SA6	EFLG		COMPASS	13755
41	21377	5160003335		SA6	W3ERR		COMPASS	13756
42	21400	5110003562	PMAC30	SA1	P1TEMPA	CHECK PARAMETER COUNT IF A FIXED	COMPASS	13757
43			54211	SA2	A1+B1	NUMBER WAS REQUIRED (OPDEF ONLY)	COMPASS	13758
44			37712	IX7	X1-X2		COMPASS	13759
45	21401	5130003565		SA3	P1TEMPD		COMPASS	13760
46			37673	IX6	X7-X3		COMPASS	13761
47			21374	AX3	60		COMPASS	13762
48	21402	15563		BX5	-X3*X6		COMPASS	13763
49			0315021525	NZ	X5,PMACER1	WRONG NUMBER OF PARAMETERS	COMPASS	13764
50	21403	76610	PMAC31	SX6	B1		COMPASS	13765
51			5160003310	SA6	TXTFLG		COMPASS	13766
52	21404	0100020112		RJ	CWI	WRITE CARD	COMPASS	13767
53	21405	0100020517		RJ	INPUT1	READ NEXT ONE	COMPASS	13768
54	21406	0311021546		NZ	X1,PMAC202	IF PUSHUP OCCURRED	CMP64G	257

	21407	5120026436	0100006066	RJ	SETUP		COMPASS	13770
				SA2	STYPE		COMPASS	13771
			6272777730	SB7	X2-1R*		COMPASS	13772
1	21410	7130051604		SX3	3REND		COMPASS	13773
2			0470021403	ZR	B7,PMAC31	IF COMMENT S CARD	COMPASS	13774
3	21411	5140003103		SA4	IOP		COMPASS	13775
4			13334	BX3	X3-X4		COMPASS	13776
5	21412	0303013546		ZR	X3,END	IF END OP	COMPASS	13777
6			7234772222	SX3	X4-2R		COMPASS	13778
7	21413	0313021415		NZ	X3,PMAC310	IF OP-CODE	COMPASS	13779
8			5130003102	SA3	LOCSYM		COMPASS	13780
9	21414	0303021403		ZR	X3,PMAC31	IF NO LOC FIELD	COMPASS	13781
10	21415	5130012215	PMAC310	SA3	=0RLOCAL		COMPASS	13782
11			13434	BX4	X3-X4		COMPASS	13783
12	21416	0314021424		NZ	X4,PMAC100	IF NOT LOCAL OP	COMPASS	13784
13	21417	0100021304	PMAC35	RJ	PMACF	GET LOCAL NAME	COMPASS	13785
14	21420	5110003145		SA1	CHAR		COMPASS	13786
15			5120003563	SA2	P1TEMPB		COMPASS	13787
16	21421	0306021422		ZR	X6,PMAC36		COMPASS	13788
17			73621	SX6	X2+B1		COMPASS	13789
18			54620	SA6	A2	UP LOCAL COUNT	COMPASS	13790
19	21422	6271777722	PMAC36	SB7	X1-1R		COMPASS	13791
20			0470021403	ZR	B7,PMAC31	IF END OF FIELD	COMPASS	13792
21	21423	0400021417		EQ	PMAC35		COMPASS	13793
22							COMPASS	13794
23			*		PROCESS MACRO DEFINITION CARDS.		COMPASS	13795
24							COMPASS	13796
25	21424	5110003562	PMAC100	SA1	P1TEMPA	TOTAL PARAMETER COUNT	CMP64G	258
26			54211	SA2	A1+B1	LOCAL PARAMETER COUNT	CMP64G	259
27			54321	SA3	A2+B1	LOCATION ARGUMENT, MACROE FLAGS	CMP64G	260
28	21425	5140003443		SA4	L.MACDEF		CMP64G	261
29			22511	LX5	X1,B1	FORM SECOND WORD OF OPTAB	CMP64G	262
30			12653	BX6	X5+X3	ENTRY AND SAVE IN P1TEMPB	CMP64G	263
31	21426	37712		IX7	X1-X2		CMP64G	264
32			20231	LX2	25		CMP64G	265
33			76010	SX0	B1		CMP64G	266
34			12524	BX5	X2+X4		CMP64G	267
35	21427	20622		LX6	18		CMP64G	268
36			11203	BX2	X0*X3		CMP64G	269
37			37172	IX1	X7-X2	KEYWORD COUNT	CMP64G	270
38			12565	BX5	X6+X5		CMP64G	271
39	21430	43403		MX4	3		CMP64G	272
40			76700	SX7	B0		CMP64G	273
41			12645	BX6	X4+X5		CMP64G	274
42			54620	SA6	A2		CMP64G	275
43	21431	20356		LX3	59-13		CMP64G	276
44			54730	SA7	A3	CLEAR IRP SWITCH (P1TEMPC)	CMP64G	277
45			0323021437	PL	X3,PMAC120	IF NOT MACROE	CMP64G	278
46	21432	20122		LX1	18		CMP64G	279
47			12612	BX6	X1+X2	KEYWORD COUNT, LOC ARG FLAG	CMP64G	280
48			21122	AX1	18		CMP64G	281
49			54631	SA6	A3+B1	P1TEMPD	CMP64G	282
50	21433	56011		MANAGE	MACDEF,X1		CMP64G	283
51	21434	5110003565		SA1	P1TEMPD	STORE KEYWORD NAMES	CMP64G	284
52			36423	IX4	X2+X3		CMP64G	285
53	21435	7221030217		SX2	RELVEC+X1		CMP64G	286
54			21122	AX1	18		CMP64G	287

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Address	Label	Symbol	Op	Op2	Text	Op3	Op4
21460	5130003404	37427	IX4	X2-X7		CPS028	446
			SA3	0.MACDEF		CPS028	447
	12440		BX4	X4+X0		CPS028	448
21461	5110003053		SA1	LCMPGM	LCM FWA OF TEXT	CP096A	465
	36237		IX2	X3+X7		CPS028	450
	22305		LX3	X5		CPS028	451
21462	12641		BX6	X4+X1		CPS028	452
	54620		SA6	A2		CPS028	453
	36613		IX6	X1+X3	UPDATE LWA+1 OF MACRO TEXT	CP096A	466
	54610		SA6	A1		CP096A	467
21463	0100006245		RJ	WLC	MOVE TEXT FROM MACDEF TO LCM	CPS028	454
21464	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CPS028	455
21465	5170003443		SA7	L.MACDEF	DELETE TEXT FROM MACDEF	CPS028	456
	10155		BX1	X5		CPS028	457
21466	5120003563	PMAC135	SA2	P1TEMPB	ADD WORD COUNT TO OPTAB ENTRY	CPS028	458
	20147		LX1	39		CPS028	459
	12221		BX2	X2+X1		CPS028	460
21467	5110003561		SA1	P1TEMP		CMP64G	293
	0100005374		RJ	ENTOP	ENTER OPCODE TABLE	CMP64G	298
21470	5110022000		SA1	PUSHUP		CPS028	461
	0311010623		NZ	X1,CTL105	IF PUSHUP OCCURRED	CPS028	462
21471	0400021340		EQ	PMACRO		COMPASS	13849
						COMPASS	13850
		*		PROCESS IRP.		COMPASS	13851
						COMPASS	13852
21472	5110003564	PMAC140	SA1	P1TEMPC		CMP64G	299
	0311021514		NZ	X1,PMAC146	IF SECOND IRP OF A PAIR	CMP64G	300
21473	76111		PCARD	MACDEF	FIRST OF A PAIR, PACK INTO MACDEF	CMP64G	301
21474	0100006066		RJ	SETUP		CMP64G	302
21475	5110003143		SA1	COL+1	CHECK FOR VALID ADDRESS FIELD	CMP64G	303
	5211026437		SA1	CARD+X1		CMP64G	304
21476	6271777700		SB7	X1-77B		CMP64G	305
	5130003563		SA3	P1TEMPB		CMP64G	306
21477	0570021520		NZ	B7,PMAC190	IF NOT A PARAMETER MARK	CMP109	1
	21331		AX3	25		CMP64G	308
	55231		SA2	A3-B1		CMP64G	309
21500	43066		MX0	-6		CMP64G	310
	15430		BX4	-X0*X3		CMP64G	311
	37224		IX2	X2-X4	NUMBER OF SUBSTITUTABLE PARAMETERS	CMP64G	312
	54111		SA1	A1+B1		CMP64G	313
21501	46000		NO			CMP64G	314
	37221		IX2	X2-X1		CMP64G	315
	0301021510		ZR	X1,PMAC142	IF PARAMETER NUMBER IS ZERO	CMP64G	316
21502	0332021510		MI	X2,PMAC142	OR TOO LARGE	CMP64G	317
	54311		SA3	A1+B1		CMP64G	318
	10611		BX6	X1		CMP64G	319
21503	6273777722		SB7	X3-1R		CMP64G	320
	0570021510		NZ	B7,PMAC142	IF NEXT CHARACTER IS NOT BLANK	CMP64G	321
21504	7110002500		SX1	1RU*100B	NO ERRORS	CMP64G	322
	5160003564		SA6	P1TEMPC	SET IRP SWITCH	CMP64G	323
21505	12116		BX1	X1+X6		CMP64G	324
	20160		LX1	48	PACK U-CARD WITH PARAMETER	CMP64G	325
	56011		ADDWORD	MACDEF	NUMBER IN COLUMN 1	CMP64G	326
21507	0400021520		EQ	PMAC190		CMP64G	327
21510	76610	PMAC142	SX6	B1	BAD IRP CARD	CMP64G	328
	77701		SX7	-B1	(P1TEMPC) = -1	CMP64G	329
	5160003322		SA6	AERR	SET ADDRESS ERROR	CMP64G	330

21511	5170003564		SA7	P1TEMPC		CMP64G	331
	5160003345		SA6	EFLG		CMP64G	332
21512	0100023001		RJ	WINTER	WRITE CARD AGAIN	CMP64G	333
21513	0400021520		EQ	PMAC190		CMP64G	334
21514	76600	PMAC146	SX6	B0	SECOND IRP OF A PAIR	CMP64G	335
	54610		SA6	A1	CLEAR IRP SWITCH	CMP64G	336
		0331021517	MI	X1,PMAC148	IF ERRORS IN FIRST IRP	CMP64G	337
21515	7110250001		SX1	1LU+0001B	PACK U-CARD WITH COLON IN COLUMN 1	CMP64G	338
	20152		LX1	42		CMP64G	339
		56011	ADDWORD	MACDEF		CMP64G	340
21517	76111	PMAC148	PCARD	MACDEF	PACK TERMINAL IRP INTO MACDEF	CMP64G	341
						COMPASS	13861
		*			CONTINUE TO NEXT CARD.	COMPASS	13862
						COMPASS	13863
21520	0100020517	PMAC190	RJ	INPUT1		COMPASS	13864
21521	0311021544		NZ	X1,PMAC200	IF PUSHUP OCCURRED	COMPASS	13865
	0100006066		RJ	SETUP		COMPASS	13866
21522	0400021437		EQ	PMAC120		COMPASS	13867
						COMPASS	13868
		*			ENTRY ON ERRONEOUS MACRO DEFINITION.	COMPASS	13869
						COMPASS	13870
21523	76610	PMACL	SX6	B1	NOTE BAD MACRO NAME	COMPASS	13871
	5160003345		SA6	EFLG		COMPASS	13872
21524	5160003320		SA6	LERR		COMPASS	13873
	0400021527		EQ	PMACER	AND THROW DEFINITION AWAY	COMPASS	13874
						COMPASS	13875
21525	76610	PMACER1	SX6	B1	NOTE ARGUMENT COUNT ERROR	COMPASS	13876
	5160003345		SA6	EFLG		COMPASS	13877
21526	5160003337		SA6	W5ERR		COMPASS	13878
21527	0100020112	PMACER	RJ	CWI		COMPASS	13879
21530	76610		SX6	B1		CMP27	22
	5160003310		SA6	TXTFLG		CMP27	23
21531	0100020517		RJ	INPUT1		COMPASS	13880
21532	0311021546		NZ	X1,PMAC202	IF PUSHUP OCCURRED	CMP64G	342
	0100006066		RJ	SETUP		COMPASS	13882
21533	5110003103		SA1	IOP		COMPASS	13883
	5120012214		SA2	=0RENDM		COMPASS	13884
21534	7100051604		SX0	0REND		COMPASS	13885
	5130003102		SA3	LOCSYM		COMPASS	13886
21535	5140003566		SA4	P1TEMPE		COMPASS	13887
	37010		IX0	X1-X0		COMPASS	13888
	13212		BX2	X1-X2		COMPASS	13889
21536	0300013546		ZR	X0,END		COMPASS	13890
	0312021527		NZ	X2,PMACER		COMPASS	13891
21537	37434		IX4	X3-X4		COMPASS	13892
21540	0303021541	+	ZR	X3,*+1		COMPASS	13893
	0314021527		NZ	X4,PMACER		COMPASS	13894
21541	0100020112		RJ	CWI		COMPASS	13895
21542	43600		MX6	0		COMPASS	13896
	5160003310		SA6	TXTFLG		COMPASS	13897
21543	0400021340		EQ	PMACRO		COMPASS	13898
						COMPASS	13899
		*			ENTRY ON ILLEGAL NESTING OF MACROS.	COMPASS	13900
						COMPASS	13901
21544	76610	PMAC200	SX6	B1		CPS028	463
	5160003324		SA6	EERR	SET *E* ERROR	CPS028	464
21545	5160003345		SA6	EFLG		CPS028	465

Address	Label	Op	Op2	Op3	Op4	Op5	Op6	Op7	Op8
21546	76610	0400021445	PMAC202	EQ	PMAC130	GO ENTER OP	CODE	TABLE	CPS028 466
	43700			SX6	B1	SET *E*	ERROR		CMP64G 358
				MX7	0				CMP64G 359
21547	5170003310	5160003345		SA6	EFLG				COMPASS 13906
				SA7	TXTFLG	CLEAR TEXT	FLAG		CMP64G 360
				SA6	EERR				COMPASS 13907
21550	0400010623			EQ	CTL105	GO PROCESS	NEXT	STATEMENT	CMP64G 361
** PRS - PRESET CONSTANTS.									
									COMPASS 13913
									COMPASS 13914
									COMPASS 13915
21551	0000000000		PRS	PS		RETURN	EXIT		COMPASS 13916
21552	7120003102			SX2	CLP1	CLEAR OUT	PASS 1	CELLS	CMP30 4245
		7130003201		SX3	CLP1+LCLP1				CMP30 4246
21553	0100005250			RJ	CLS				CMP30 4247
21554	5160022676			SA6	QUALMIC				CMP30 4248
		5170003556		SA7	IFCNT				COMPASS 13924
21555	5160003271			SA6	PSIM2	RESET FOR	NO PPU	PREFETCH CHECKING	CPSA297 58
		5160003124		SA6	VWORD	RESET 180	PPU *CON*	AND *VFD* CONTROL	CPSA288 215
21556	5160003252			SA6	VALID	VALID = 0			CMP30 4249
		76710		SX7	B1	SET PASS = 1			CPS038 1
21557	5170003260			SA7	PASS				CPS038 2
		5110012204		SA1	=9R				CMP30 4250
21560	7170005555			SX7	2R				CMP30 4251
		10611		BX6	X1				CMP30 4252
21561	5170003251			SA7	TARGET	TARGET =	TWO	BLANKS	CMP30 4253
		5160003253		SA6	HTYPE	HTYPE =	NINE	BLANKS	CMP30 4254
21562	76611			SX6	B1+B1				COMPASS 13925
		5160003105		SA6	ORGCTR+1	SET	RELOCATION	OF * TO 2	COMPASS 13926
21563	5160003107			SA6	LOCCTR+1				COMPASS 13927
		7170000074		SX7	60				COMPASS 13928
21564	7160000012			SX6	10				COMPASS 13929
		5170003110		SA7	POSCTR	POSITION	COUNTER =	60	COMPASS 13930
21565	5160003127			SA6	NCHARS	NUMBER	OF	CHARACTERS PER WORD	COMPASS 13931
		5170003123		SA7	LWORD	LENGTH	OF	COMPUTER WORD	COMPASS 13932
21566	5160003133			SA6	NBASE	NOMINAL	NUMERIC	BASE = 10	COMPASS 13933
		5160003134		SA6	MBASE	VFD	BIT	BASE = 10	COMPASS 13934
21567	7160000014			SX6	12				CPSA281 301
		5160003126		SA6	PPMEMSZ	PP	MEMORY	SIZE (ADDRESS FITS IN 12 BITS)	CPSA281 302
21570	7160000104			SX6	100B+1RD				CMP30 4255
		20666		LX6	-6				CMP30 4256
21571	5160022674			SA6	BASEMIC	SET	BASE	AND	CODE MICROS = *D*
		5160022675		SA6	CODEMIC				CMP30 4258
21572	7170777776			SX7	XRDV	SET	XREF	DEFAULT	VALUE
		5170003176		SA7	XR				CPS010 74
				SA7	XR				CPS010 75
21573	6170000016			SB7	LLISTOPS/2	SET	LIST	OPTIONS	COMPASS 13939
		5110003346		SA1	LISTOPS				COMPASS 13940
21574	26601		PRS2	UX6	X1				COMPASS 13941
		67771		SB7	B7-B1				COMPASS 13942
		54611		SA6	A1+B1				COMPASS 13943
		54161		SA1	A6+B1				COMPASS 13944
21575	0570021574			NZ	B7,PRS2	LOOP			COMPASS 13945
		0100005312		RJ	CPS	CLEAR	PUSH-DOWN	STACKS	CMP30 4259
21576	7160035736			SX6	BUCKET				CMP042 276

21577	5110003052	5160003043		SA6	MAXCORE	SET MAXCORE = BUCKET	CMP042	277
		10711		SA1	LCMSYS		CP096A	468
				BX7	X1	RESET FWA OF PROGRAM MACRO TEXT	CP096A	469
21600	7261777576			SX6	X1-201B		CP096A	470
		5170003053		SA7	LCMPGM		CP096A	471
21601	5170003054			SA7	LCMEND		CP096A	472
21602	0336021603		+	MI	X6,*+1	IF NO SYSTEXT TABLES IN LCM	CP096A	473
		5170003172		SA7	ALCM	INITIALIZE LCM USED FOR THIS ASSEMBLY	CP096A	474
							CP096A	475
			RM	IFNE	CP#RM,7		CP096A	476
21603	5110003447			SA1	L.SYMTAB		COMPASS	13947
		7120001000		SX2	2*NSYMT		COMPASS	13948
21604	37121			IX1	X2-X1		COMPASS	13949
		5100000006		MANAGE	SYMTAB,X1	ALLOCATE INITIAL SYMBOL TABLE	COMPASS	13950
21606	36323			IX3	X2+X3	CLEAR IT	COMPASS	13951
		0100005250		RJ	CLS		CMP30	4260
			RM	ELSE			CP096A	477
				SX6	X7+777B	ROUND UP TO LEAVE ROOM FOR MACROS	CP096A	478
				AX6	9		CP096A	479
				LX6	9		CP096A	480
				SX7	2*NSYMT	SET SYMBOL TABLE POINTERS	CP096A	481
				SA6	O.SYMTAB		CP096A	482
				SA7	L.SYMTAB		CP096A	483
				IX2	X6+X7	MAKE ROOM FOR SYMBOL TABLE	CP096A	484
				IX1	X2-X1		CP096A	485
				RJ	ILF	INCREASE LCM FIELD LENGTH	CP096A	486
				MI	X6,ILC	IF NO ROOM IN LCM	CP096A	487
				SA2	O.SYMTAB	CLEAR INITIAL SYMBOL TABLE	CP096A	488
				SX3	X2+2*NSYMT		CP096A	489
				RJ	CLL		CP096A	490
			RM	ENDIF			CP096A	491
							CP096A	492
21607	7160241115			DATE	DATE		COMPASS	13954
21612	7160241115			CLOCK	TIME		COMPASS	13955
21615	7160241115			JDATE	P1TEMPD		CMP30	4261
21620	5110003050			SA1	LCMOPC		CMP30	4262
		0301021623		ZR	X1,PRS2A	IF OPCODE TABLE NOT IN LCM	CMP30	4263
21621	21136			AX1	30		CMP30	4264
		56010		MANAGE	OPTAB,X1	ALLOCATE TABLE IN SCM	CMP30	4265
21622	5110003050			SA1	LCMOPC		CMP30	4266
		0100005733		RJ	RLC	COPY TABLE TO SCM	CMP30	4267
21623	5110003046		PRS2A	SA1	LCMMIC		CPS028	467
		0301021631		ZR	X1,PRS2C	IF SYSTEM MICROS NOT IN LCM	CMP30	4275
21624	21136			AX1	30		CMP30	4276
		73111		MANAGE	MICTAB,X1+B1	ALLOCATE TABLE IN SCM	CMP30	4277
21626	5110003046			SA1	LCMMIC		CMP30	4278
		73221		SX2	X2+B1	ALLOW SCRATCH WORD AT START OF TABLE	CMP30	4279
21627	7233777776			SX3	X3-1		CMP30	4280
		0100005733		RJ	RLC	COPY TABLE TO SCM	CMP30	4281
21630	0400021636			EQ	PRS3		CMP30	4282
21631	5110003445		PRS2C	SA1	L.SYSMIC	STORE SYSTEM MICROS	CMP30	4283
		73111		MANAGE	MICTAB,X1+B1		COMPASS	13957
21633	7213777776			SX1	X3-1		COMPASS	13958
		73321		SX3	X2+B1		COMPASS	13959
21634	5120003406			SA2	O.SYSMIC		COMPASS	13960
		0301021636		ZR	X1,PRS3	IF TABLE EMPTY	COMPASS	13961
21635	0100005515			RJ	MOVE		COMPASS	13962

21636	5110012216	PRS3	SA1	=0RDATE	STORE DATE AND TIME MICROS	COMPASS	13963
	5140003212		SA4	DATE		COMPASS	13964
21637	10611		BX6	X1		COMPASS	13965
	22704		LX7	X4		COMPASS	13966
	5160003102		SA6	LOCSYM		COMPASS	13967
21640	5170030217		SA7	RELVEC		CMP18	143
	43700		MX7	0		COMPASS	13969
	54771		SA7	A7+B1		COMPASS	13970
21641	7160000003		SX6	3		COMPASS	13971
	0100020317		RJ	EMT		COMPASS	13972
21642	5110012217		SA1	=0RTIME		COMPASS	13973
	5140003213		SA4	TIME		COMPASS	13974
21643	10611		BX6	X1		COMPASS	13975
	22704		LX7	X4		COMPASS	13976
	5160003102		SA6	LOCSYM		COMPASS	13977
21644	5170030217		SA7	RELVEC		CMP18	144
	7160000003		SX6	3		COMPASS	13979
21645	0100020317		RJ	EMT		COMPASS	13980
21646	5140003565		SA4	P1TEMPD		CMP30	4284
	5110012220		SA1	=0RJDATE		CMP30	4285
21647	7150000005		SX5	5		CMP30	4286
	20436		LX4	30		CMP30	4287
	10611		BX6	X1		CMP30	4288
21650	36745		IX7	X4+X5		CMP30	4289
	5160003102		SA6	LOCSYM		CMP30	4290
21651	5170030217		SA7	RELVEC		CMP30	4291
	76611		SX6	B1+B1		CMP30	4292
21652	0100020317		RJ	EMT		CMP30	4293
21653	5110012221		SA1	=0RMODELEVEL		CMP30	4294
	5120000205		SA2	CP.MODL		CMP30	4295
21654	10611		BX6	X1		CMP30	4296
	43006		MX0	6		CMP30	4297
	5160003102		SA6	LOCSYM		CMP30	4298
21655	0302021661		ZR	X2,PRS4	IF NO *ML* ARGUMENT, USE JDATE	CMP30	4299
	7170000000		SX7	0		CMP30	4300
21656	15320	+	BX3	-X0*X2	COUNT CHARACTERS	CMP30	4301
	7277000001		SX7	X7+1		CMP30	4302
	21006		AX0	6		CMP30	4303
21657	0313021656		NZ	X3,*-1		CMP30	4304
	12727		BX7	X2+X7		CMP30	4305
21660	5170030217		SA7	RELVEC		CMP30	4306
21661	76611	PRS4	SX6	B1+B1	DEFINE *MODELEVEL* MICRO	CMP30	4307
	0100020317		RJ	EMT		CMP30	4308
21662	5110000206		SA1	CP.PCOM		CMP30	4309
	54211		SA2	A1+B1		CMP30	4310
	10611		BX6	X1		CMP30	4311
21663	22702		LX7	X2		CMP30	4312
	54121		SA1	A2+B1		CMP30	4313
	5120012222		SA2	=0RPCOMMENT		CMP30	4314
21664	5160030217		SA6	RELVEC		CMP30	4315
	54761		SA7	A6+B1		CMP30	4316
	10611		BX6	X1		CMP30	4317
21665	22702		LX7	X2		CMP30	4318
	54671		SA6	A7+B1		CMP30	4319
	5170003102		SA7	LOCSYM		CMP30	4320
21666	43600		MX6	0		CMP30	4321
	54661		SA6	A6+B1		CMP30	4322

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21740	73130	7110000004	MANAGE	STACK,4	GET 4 WORDS FOR THE STACK	COMPASS	14053
			SX1	X3		CMP24	157
		6233777773	SB3	X3-4		CMP24	158
		21102	AX1	2	RECURSION LEVEL = L.STACK / 4	CMP24	159
21741	0100005270		RJ	CONDEC	CONVERT TO DECIMAL	CMP24	160
21742	5130021773		SA3	PUSHDT	RECLAIM BYTE WORD	COMPASS	14055
		67202	SB2	-B2		CMP24	161
21743	7140000002		SX4	1R.-1R		CMP24	162
		5120003423	SA2	0.STACK		CMP24	163
21744	23424		AX4	X4,B2		CMP24	164
		6122000066	SB2	54+B2		CMP24	165
		43752	MX7	42		CMP24	166
21745	36664		IX6	X6+X4		CMP24	167
		22626	LX6	X6,B2		CMP24	168
		11776	BX7	X7*X6		CMP24	169
		12673	BX6	X7+X3		CPS004	50
21746	53623		SA6	X2+B3	STORE FIRST WORD OF STACK ENTRY	CPS004	51
		6160000004	SB6	LFLG-1	PACK AWAY MODE INDICATORS	COMPASS	14059
21747	5150003313		SA5	SYSFLG		COMPASS	14060
		43600	MX6	0		CPS004	52
21750	20601		LX6	1		COMPASS	14061
		12665	BX6	X6+X5		COMPASS	14062
		54551	SA5	A5+B1		COMPASS	14063
		67661	SB6	B6-B1		COMPASS	14064
21751	0660021750		PL	B6,PUSHDN1		COMPASS	14065
		20622	LX6	18		COMPASS	14066
		54331	SA3	A3+B1	STACK ENTRY TYPE	CPS004	53
21752	5150003473		SA5	L.MARGS		COMPASS	14067
		5140003472	SA4	L.MARDIS		COMPASS	14068
21753	63730		SB7	X3		CPS004	54
		0571021756	NE	B7,B1,PUD4	IF NOT MACRO/OPDEF CALL	CPS004	55
		54531	SA5	A3+B1		CPS004	56
21754	5140021777		SA4	PUSHDT+4		CPS004	57
		43700	MX7	0		CPS004	58
		54750	SA7	A5		CPS004	59
21755	54740		SA7	A4		CPS004	60
21756	12656		BX6	X5+X6		CPS004	61
		20622	LX6	18		COMPASS	14070
		12646	BX6	X4+X6		COMPASS	14071
		20370	LX3	56		COMPASS	14073
21757	12663		BX6	X6+X3		COMPASS	14074
		54661	SA6	A6+B1	STORE SECOND WORD	CPS004	62
		54431	SA4	A3+B1	RECLAIM DUP COUNT	COMPASS	14076
		54341	SA3	A4+B1	RECLAIM NEST NAME	COMPASS	14077
21760	54531		SA5	A3+B1	RECLAIM DUP RESET QUANTITY	COMPASS	14078
		20422	LX4	18		COMPASS	14079
		36654	IX6	X5+X4		COMPASS	14080
		54661	SA6	A6+B1	STORE DUP CONTROL	COMPASS	14081
21761	7110000055		SX1	1R		COMPASS	14084
		43014	MX0	12		COMPASS	14088
		15730	BX7	-X0*X3		COMPASS	14090
21762	20706		LX7	6	POSITION AND FILL NAME	COMPASS	14091
		11307	BX3	X0*X7		COMPASS	14092
		36771	IX7	X7+X1		CMP24	172
21763	0303021762		ZR	X3,PUD2		CMP24	173
		21706	AX7	6		CMP24	174
		54761	SA7	A6+B1	STORE NEST NAME	COMPASS	14099

21764	0400021731		EQ	PUSHDOWN	AND QUIT	COMPASS 14100
						CPS004 63
		*			RECURSION LIMIT EXCEEDED.	CPS004 64
21765	0100005102	PUD3	RJ	ASU	ACCUMULATE STORAGE USED	CPS004 65
21766	43600		MX6	0		CPS004 66
	76700		SX7	B0		CPS004 67
	5160003462		SA6	L.STACK	CLEAR ALL SOURCE PUSHDOWN TABLES	CPS004 68
21767	5170003472		SA7	L.MARDIS		CPS004 69
	5160003473		SA6	L.MARGS		CPS004 70
21770	5170003467		SA7	L.DUPTAB		CPS004 71
	5160003465		SA6	L.RASTAB		CPS004 72
21771	5170003466		SA7	L.LASTAB		CPS004 73
	5160003471		SA6	L.ECHTAB		CPS004 74
21772	5170003310		SA7	TXTFLG	CLEAR TEXT FLAG	CPS004 75
	0200010615		JP	CTL100	GO READ NEXT SOURCE CARD	CPS004 76
						CPS004 77
21773		5	PUSHDT	BSS	5	TEMPORARY STORAGE
						COMPASS 14101
						COMPASS 14102
		**			PUSHUP - PUSH UP RECURSION STACK.	COMPASS 14104
						COMPASS 14105
						COMPASS 14106
22000	0000000000	PUSHUP	PS		RETURN EXIT	COMPASS 14107
22001	0100005102		RJ	ASU	ACCUMULATE STORAGE USED	CMP042 278
22002	5150003462		SA5	L.STACK		COMPASS 14108
	5120003423		SA2	0.STACK		COMPASS 14109
22003	7265777773		SX6	X5-4		COMPASS 14110
	36362		IX3	X6+X2		COMPASS 14111
	53231		SA2	X3+B1		COMPASS 14112
22004	43073		MX0	59		COMPASS 14113
	54650		SA6	A5	RESET STACK SIZE	COMPASS 14114
	21244		AX2	36		COMPASS 14115
22005	6170000004		SB7	LFLG-1		COMPASS 14116
22006	15620	PUSHUP1	BX6	-X0*X2	STORE MODE FLAGS	COMPASS 14117
	5167003313		SA6	SYSFLG+B7		COMPASS 14118
	67771		SB7	B7-B1		COMPASS 14119
22007	21201		AX2	1		COMPASS 14120
	0670022006		PL	B7,PUSHUP1		COMPASS 14121
	21217		AX2	20-LFLG		COMPASS 14122
22010	63720		SB7	X2		COMPASS 14123
	0277022010		JP	*+B7		COMPASS 14124
						COMPASS 14125
22011	0400022017	+	EQ	PUSHUP2	MACRO	COMPASS 14126
22012	0400022026	+	EQ	PUSHUP3	DUPTAB	COMPASS 14127
22013	0400022030	+	EQ	PUSHUP4	RMT	COMPASS 14128
22014	0400022032	+	EQ	PUSHUP5	XTEXT	COMPASS 14129
22015	5032000001	+	SA3	A2+1	ECHO	COMPASS 14130
	21322		AX3	18		COMPASS 14131
	73630		SX6	X3		COMPASS 14132
22016	5160003471		SA6	L.ECHTAB		COMPASS 14133
22017	54220	PUSHUP2	SA2	A2		COMPASS 14134
	73620		SX6	X2		COMPASS 14135
	21222		AX2	18		COMPASS 14136
	73720		SX7	X2		COMPASS 14137

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RM IFEQ CP#RM,0

CPSA227 18
CPSA227 19
CPSA227 20

** RIV - REDEFINE INSTRUCTIONS FOR MACHINE 8.

F4830CP 59

F4830CP 60

F4830CP 61

22045 0000000000 RIV PS 0 ENTRY/EXIT

F4830CP 62

22046 0100005523 RJ MTD MOVE TABLES DOWN

F4830CP 63

22047 5110012224 SA1 =0LAIDTEXT SET UP *LDV* PARAMETER LIST

F4830CP 64

10611

BX6

X1

F4830CP 65

22050 5160022120 SA6 RIVA 42/NAME,18/0

F4830CP 66

22051 5110003440 RIV1A SA1 0.ENDTAB

F4830CP 67

5120003437 SA2 0.MEMORY

F4830CP 68

22052 20122 LX1 18

F4830CP 69

7150101014 SX5 0101014B

F4830CP 70

20547

LX5

39

F4830CP 71

22053 12615 BX6 X1+X5

F4830CP 72

12662 BX6 X6+X2

F4830CP 73

54661 SA6 A6+B1 6/L1,6/L2,2/N,3/0,1/U,1/V,5/0,18/LWA,18/FWA

F4830CP 74

76600

SX6

B0

F4830CP 75

22054 5160000067 SA6 RA.LDR

F4830CP 76

7160140426 LOADREQ RIVA

CPSA259 5

CPSA259 6

22057 0100000266 RIV2 RECALL

CPSA259 7

22060 5140000067 SA4 RA.LDR

CPSA259 8

0304022057 ZR X4,RIV2

CPSA259 9

22061 5110022120 SA1 RIVA

CPSA259 10

7261777766 SX6 X1-9

F4830CP 85

22062 0316022065 NZ X6,RIV2A IF LOADED, CONTINUE

F4830CP 86

7110000000 SX1 0 ELSE ATTEMPT TO GET MORE FL

F4830CP 87

22063 0100005705 RJ RFL

F4830CP 88

22064 0303005064 ZR X3,ALC17 IF ALREADY AT MAX. FL. ABORT

F4830CP 89

0400022051 EQ RIV1A ELSE TRY AGAIN

F4830CP 90

F4830CP 91

F4830CP 92

22065 5110003437 RIV2A SA1 0.MEMORY

F4830CP 93

5120003476 SA2 L.MEMORY

F4830CP 94

22066 53311 SA3 X1+B1 SSYMS LENGTH

F4830CP 95

7233000002 SX3 X3+2

F4830CP 96

36613

IX6

X1+X3

F4830CP 97

22067 37723 IX7 X2-X3

F4830CP 98

53360 SA3 X6 SYSMIC LENGTH

F4830CP 99

7233000001 SX3 X3+1

F4830CP 100

22070 36663 IX6 X6+X3

F4830CP 101

37773 IX7 X7-X3

F4830CP 102

54610 SA6 A1

F4830CP 103

54720 SA7 A2

F4830CP 104

22071 53160 SA1 X6 MACDEF LENGTH

F4830CP 105

73211 SX2 X1+B1

F4830CP 106

74310 SX3 A1

F4830CP 107

36323 IX3 X2+X3

F4830CP 108

22072 53230 SA2 X3 OPCODES LENGTH

F4830CP 109

36612 IX6 X1+X2

F4830CP 110

		7266000002		SX6	X6+2		F4830CP	111
22073	5160003476			SA6	L.MEMORY	REMAINING LENGTH	F4830CP	112
		0301022102		ZR	X1,RIV3	IF NO MACROS	F4830CP	113
22074	5120003443			SA2	L.MACDEF		F4830CP	114
		10722		BX7	X2		F4830CP	115
22075	5170022122			SA7	RIVB	SAVE MACDEF INDEX	F4830CP	116
		56011		MANAGE	MACDEF,X1		F4830CP	117
22077	5140003437			SA4	O.MEMORY		F4830CP	118
		53140		SA1	X4	(X1) = WORD COUNT OF MACDEF	F4830CP	119
		73241		SX2	X4+B1	(X2) = FWA OF MACROS	F4830CP	120
22100	5130003404			SA3	O.MACDEF		F4830CP	121
		5140022122		SA4	RIVB	MACDEF INDEX	F4830CP	122
22101	36334			IX3	X3+X4	(X3) = DESTINATION ADDRESS	F4830CP	123
		0100005515		RJ	MOVE	MOVE TEXT INTO MACDEF	F4830CP	124
22102	5140003437		RIV3	SA4	O.MEMORY		F4830CP	125
		5150003476		SA5	L.MEMORY		F4830CP	126
22103	53340			SA3	X4		F4830CP	127
		7233000002		SX3	X3+2	MACDEF LENGTH + 1	F4830CP	128
		36743		IX7	X4+X3		F4830CP	129
22104	37653			IX6	X5-X3		F4830CP	130
		54740		SA7	A4		F4830CP	131
		54650		SA6	A5		F4830CP	132
22105	5217777776			SA1	X7-1	OPCODE LENGTH	F4830CP	133
		0301022116		ZR	X1,RIV7	IF NO OPCODES	F4830CP	134
22106	53170		RIV4	SA1	X7	GET OPCODE ENTRY	F4830CP	135
		54211		SA2	A1+B1		F4830CP	136
		43703		MX7	3		F4830CP	137
		11327		BX3	X2*X7	EXTRACT OPCODE TYPE	F4830CP	138
22107	20303			LX3	3		F4830CP	139
		7233777771		SX3	X3-6		F4830CP	140
22110	5140022122			SA4	RIVB	MACDEF INDEX	F4830CP	141
		0303022112		ZR	X3,RIV5	IF MACRO	F4830CP	142
22111	43400			MX4	0		F4830CP	143
		76710		SX7	B1		F4830CP	144
		20757		LX7	47-0		F4830CP	145
22112	12227		RIV5	BX2	X2+X7	ADD PROGRAM DEFINED FLAG	F4830CP	146
		36224		IX2	X2+X4	ADD MACDEF INDEX IF PRESENT	F4830CP	147
		0100005374		RJ	ENTOP	ENTER INTO OPCODE TABLE	F4830CP	148
22113	5140003437			SA4	O.MEMORY		F4830CP	149
		5150003476		SA5	L.MEMORY		F4830CP	150
22114	7274000002			SX7	X4+2		F4830CP	151
		7265777775		SX6	X5-2		F4830CP	152
22115	54740			SA7	A4		F4830CP	153
		54650		SA6	A5		F4830CP	154
		0316022106		NZ	X6,RIV4	IF MORE OPCODES	F4830CP	155
22116	43600		RIV7	MX6	0		F4830CP	156
		5160003476		SA6	L.MEMORY		F4830CP	157
22117	0400022045			EQ	RIV	RETURN	F4830CP	158
							F4830CP	159
22120	00000000000000000000		RIVA	DATA	0	*LDV* PARAMETER LIST	F4830CP	160
22121	00000000000000000000			DATA	0		F4830CP	161
22122	00000000000000000000		RIVB	DATA	0	MACDEF INDEX	F4830CP	162
			RM	ENDIF			CPSA227	21
							CPSA227	22

**	RNC - READ NEXT CARD.	COMPASS 14178
*	ENTRY (X2) = FET/FIT ADDRESS.	CMP30 4339
*	(A0) = FWA OF CARD BUFFER.	COMPASS 14180
*	EXIT (X0) = FWA OF CARD IMAGE.	CMP24 175
*	(X2) = FET/FIT ADDRESS.	CMP30 4340
*	(A0) = FWA OF CARD BUFFER.	CMP30 4341
		COMPASS 14183
		COMPASS 14184
	SEG PASS 1 SUBROUTINES (Q-Z).	CMP30 4342
	RM IFEQ CP#RM,0	CMP30 4343
		CMP30 4344
		CMP30 4345
22123	74000 RNC1 SX0 A0 READ NORMAL CARD (AMODE = 0)	CMP24 177
	64600 READC X2,A0,16	CPS146 5
		CMP30 4346
22125	10611 RNCX BX6 X1	CMP24 179
	5160003060 SA6 EOFINP	CMP24 180
22126	0301022141 ZR X1,RNC IF NOT EOR	COMPASS 14189
	5130010550 SA3 INPRES IF NO INPUT, LEAVE	CPSA141 13
22127	0303022141 ZR X3,RNC	CPSA141 14
	10600 BX6 X0 ENSURE THAT *END* IS IN OPTAB	CPSA115 6
22130	5160022205 SA6 RNCA SAVE CONTENTS OF X0	CPSA115 7
	74600 SX6 A0	CPSA115 8
	54661 SA6 A6+B1 SAVE CONTENTS OF A0	CPSA115 9
22131	10622 BX6 X2	CPSA115 10
	54661 SA6 A6+B1 SAVE CONTENTS OF X2	CPSA115 11
	7110051604 SX1 3REND NOT DESTROYED BY TLUOP	CPSA115 12
22132	0100006166 RJ TLUOP SCAN OPTAB	CPSA115 13
22133	0316022135 NZ X6,RNCX1 IF END IS IN OPTAB	CPSA115 14
	5120022210 SA2 ENDLOST ELSE	CPSA115 15
22134	0100005374 RJ ENTOP MAKE ENTRY (X1)=END, (X2)=EQUIVALENT	CPSA115 16
22135	5120022205 RNCX1 SA2 RNCA	CPSA115 17
	10022 BX0 X2 RESTORE CONTENTS OF X0	CPSA115 18
	54221 SA2 A2+B1	CPSA115 19
22136	53020 SA0 X2 RESTORE CONTENTS OF A0	CPSA115 20
	54221 SA2 A2+B1 RESTORE CONTENTS OF X2	CPSA115 21
	5110012225 SA1 =C* ////////// END CARD MISSING.*	CMP4 5
22137	54311 SA3 A1+B1	COMPASS 14191
	10611 BX6 X1	COMPASS 14192
	22703 LX7 X3	COMPASS 14193
	54131 SA1 A3+B1	CMP24 181
22140	53600 SA6 X0	CMP24 182
	53701 SA7 X0+B1	CMP24 183
	10611 BX6 X1	CMP24 184
	54671 SA6 A7+B1	CMP24 185
		CMP30 4348
22141	0000000000 RNC PS RETURN EXIT	CMP24 186
22142	5110000130 SA1 CP.IFORM	CMP30 4349
	0301022123 ZR X1,RNC1 IF NOT COMPRESSED	CMP24 188
22143	0321022145 PL X1,RNC2 IF NOT COMMON DECK	CMP24 189
	20173 LX1 59	CMP24 190
22144	0321022160 PL X1,RNC5 IF UPDATE	CMP24 191
	0400022172 EQ RNC6 MODIFY	CMP24 192
22145	20173 RNC2 LX1 59	CMP24 193
	0331022153 MI X1,RNC4 IF MODIFY	CMP24 194
		CMP24 195
*	CP.IFORM = +2, READ UPDATE COMPRESSED TEXT.	CMP30 4350

			64600	READW	X2,A0,2	GET SEQUENCE FIELD AND WORD COUNT	CMP24	197
	22147	54301		SA3	A0+B1		CMP24	198
		43600		MX6	0		CMP24	199
		7000000002		SX0	A0+2		CMP24	200
	22150	0311022125		NZ	X1,RNCX	IF EOR	CMP24	201
		63730		SB7	X3		CMP24	202
		53607		SA6	X0+B7		CMP24	203
	22151	63600		READW	X2,X0,B7	READ CARD IMAGE	CMP24	204
	22152	0400022125		EQ	RNCX		CMP24	205
			*		CP.IFORM = +1 OR +3, READ MODIFY COMPRESSED TEXT.		CMP24	206
							CP114	207
							CMP24	209
	22153	64601	RNC4	READW	X2,A0+B1,1	GET SEQUENCE FIELD	CMP24	210
	22154	7000000002		SX0	A0+2		CMP24	211
		0311022125		NZ	X1,RNCX	IF EOR	CMP24	212
	22155	63600		READC	X2,X0,12	READ CARD IMAGE	CP114	213
	22157	0400022125		EQ	RNCX		CMP24	214
			*		CP.IFORM = -1, READ UPDATE COMMON DECK.		CMP24	215
							CMP30	4352
							CMP24	217
	22160	64600	RNC5	READW	X2,A0,1	READ FIRST CHB WORD	CMP24	218
	22161	54300		SA3	A0		CMP24	219
		7000000002		SX0	A0+2		CMP24	220
	22162	0311022125		NZ	X1,RNCX	IF EOR	CMP24	221
		0333022166		MI	X3,RNC5B	IF LAST CHB WORD	CMP24	222
	22163	64601	RNC5A	READW	X2,A0+B1,1	READ NEXT CHB WORD	CMP24	223
	22164	54301		SA3	A0+B1		CMP24	224
		0311022125		NZ	X1,RNCX	IF EOR	CMP24	225
	22165	0323022163		PL	X3,RNC5A	IF NOT LAST CHB WORD	CMP24	226
		54300		SA3	A0		CMP24	227
	22166	21344	RNC5B	AX3	36		CMP24	228
		76600		SX6	B0		CMP24	229
		63730		SB7	X3	WORD COUNT	CMP24	230
		53607		SA6	X0+B7		CMP24	231
	22167	63600		READW	X2,X0,B7	READ CARD IMAGE	CMP24	232
	22170	54300		SA3	A0		CMP24	233
		20301		LX3	59-58		CMP24	235
		0333022125		MI	X3,RNCX	IF CARD IS ACTIVE	CMP24	236
	22171	0301022160		ZR	X1,RNC5	IF NOT EOR	CMP24	237
		0400022125		EQ	RNCX		CMP24	238
			*		CP.IFORM = -2 OR -4, READ MODIFY COMMON DECK.		CMP24	239
							CP114	47
							CMP24	241
	22172	64600	RNC6	READW	X2,A0,1	READ FIRST MHB WORD	CMP24	242
	22173	54300		SA3	A0		CMP24	243
		7000000002		SX0	A0+2		CMP24	244
		43654		MX6	-16		CMP24	245
	22174	0311022125		NZ	X1,RNCX	IF EOR	CMP24	246
		15636		BX6	-X6*X3		CMP24	247
	22175	0306022201		ZR	X6,RNC6B	IF LAST MHB WORD	CMP24	248
	22176	64601	RNC6A	READW	X2,A0+B1,1	READ NEXT MHB WORD	CMP24	249
	22177	54301		SA3	A0+B1		CMP24	250
		43654		MX6	-16		CMP24	251
		0311022125		NZ	X1,RNCX	IF EOR	CMP24	252
	22200	15636		BX6	-X6*X3		CMP24	253
		0316022176		NZ	X6,RNC6A	IF NOT LAST MHB WORD	CMP24	254

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		SA3	EOFINP		CMP30	4384
		SA1	CP.IFORM		CMP30	4385
		SX6	A0		CMP30	4386
1		SA0	X2	SAVE FIT ADDRESS IN A0	CMP30	4387
2		SA6	T6RM1	SAVE FWA OF CARD BUFFER IN T6RM1	CMP30	4388
3		ZR	X1,RNC1	IF NOT COMPRESSED	CMP30	4390
4		SX7	X6+2		CMP30	4391
5		SA7	A6+B1	SAVE FWA OF CARD IMAGE IN T6RM2	CMP30	4392
6		NZ	X3,RNCX	IF NO DATA TO READ	CPS028	482
7		MI	X1,RNC5	IF COMMON DECK	CMP30	4405
8					CMP30	4408
9	*		CP.IFORM = +2,	READ UPDATE COMPRESSED TEXT.	CMP30	4409
10					CMP30	4410
11		SA1	X6+15	MOVE HEADER WORDS FROM END	CPS028	484
12		SA3	A1-B1	OF CARD IMAGE BUFFER	CPS028	485
13		BX7	X1		CPS028	486
14		SB7	X1+2	SET WORD COUNT TO INCLUDE TWO	CPS028	487
15		SA7	X6+B1	HEADER WORDS FOR NEXT CARD	CPS028	488
16		LX6	X3		CPS028	489
17		SA6	A7-B1		CPS028	490
18		SX7	B1+B1		CPS028	491
19		RJ	RNC7	READ CARD IMAGE	CMP30	4428
20		EQ	RNCX		CMP30	4429
21					CMP30	4430
22					CMP30	4461
23	*		CP.IFORM = -1,	READ UPDATE COMMON DECK.	CMP30	4462
24					CMP30	4463
25	RNC5	GETP	X2,X6,10	GET FIRST CHB WORD	CMP30	4464
26		SA5	T6RM1		CMP30	4465
27		SX2	A0		CMP30	4466
28		SA3	X5		CMP30	4467
29	RNC5A	SX1	X5+B1		CMP30	4468
30		FETCH	X2,FP,X4		CMP30	4469
31		SX0	E0D		CMP30	4474
32		BX6	X0*X4		CMP30	4476
33		NZ	X6,RNCX	IF END OF DATA	CMP30	4477
34		MI	X3,RNC5B	IF LAST CHB WORD	CMP30	4478
35		GETP	X2,X1,10	GET NEXT CHB WORD	CMP30	4479
36		SA5	T6RM1		CMP30	4480
37		SX2	A0		CMP30	4481
38		SA3	X5+B1		CMP30	4482
39		EQ	RNC5A	LOOP	CMP30	4483
40					CMP30	4484
41	RNC5B	SA5	T6RM1	GET WORD COUNT FROM FIRST CHB WORD	CMP30	4485
42		SA3	X5		CMP30	4486
43		AX3	36		CMP30	4487
44		SX7	B0	NO HEADER WORDS	CPS028	493
45		SB7	X3		CMP30	4488
46		RJ	RNC7	READ CARD IMAGE	CMP30	4489
47		SA5	T6RM1		CMP30	4490
48		SA3	X5		CMP30	4491
49		LX3	59-58		CMP30	4492
50		MI	X3,RNCX	IF CARD IS ACTIVE	CMP30	4493
51		SX6	X5		CMP30	4494
52		EQ	RNC5		CMP30	4495
53					CPSA115	41
54	ENDLOST	VFD	3/3,12/0,9/N.,18//PASS1/END,18//PASS2/END		CPSA115	42

CPSA115	43
CMP30	4533
CMP30	4534
CMP30	4535
CMP30	4536
CMP30	4537
CPS028	496
CMP30	4538
CMP30	4539
CMP30	4540
CMP30	4541
CMP30	4542
CPS028	497
CPS028	498
CPS028	499
CMP30	4543
CMP30	4544
CMP30	4549
CMP30	4551
CMP30	4552
CMP30	4553
CMP30	4554
CMP30	4555
CMP30	4556
CMP30	4557
CMP30	4560
CMP30	4561
CMP30	4562
CMP30	4563
CMP30	4564
CMP30	4565
CMP30	4566
CMP30	4571
CMP30	4573
CMP30	4574
CMP30	4575
CPS028	502
CPS028	503
CMP30	4578
CMP30	4579
CMP30	4580
CMP30	4581
CMP30	4582
CMP30	4583
CPS028	504
CPS028	505
CPS028	506
CPS028	507
CPS028	508
CPS028	509
CPS028	510
CPS028	511
CPS028	512
CPS028	513
CPS028	514
CPS028	515
CPS028	516

```
*      RNC7 - READ COMPRESSED CARD IMAGE.
*      ENTRY  (A0) = FIT ADDRESS.
*              (B7) = WORD COUNT.
*              (X7) = HEADER WORD COUNT FOR NEXT CARD.
*              (T6RM2) = FWA CARD IMAGE.
*      EXIT TO RNCX IF PREMATURE END OF DATA.
```

```
      RNC7      PS      RETURN EXIT
```

```
      SX6      B7
      SA7      RNCC      SAVE NEXT HEADER WORD COUNT
      SA6      A7+B1      SAVE TOTAL WORD COUNT
```

```
      SX2      A0
      FETCH    X2,FP,X4
      SX0      EOD
```

```
      SA5      T6RM2
      BX6      X0*X4
      SX4      B7
```

```
      NZ      X6,RNCX      IF END OF DATA
      SX1      B7+B7
      LX4      3
```

```
      RNC7A    IX7      X4+X1      X7 = (B7) * 10
      BX6      X5
```

```
      SA6      RNCA
```

```
      SA7      A6+B1
      GETP     X2,X6,X7      GET CARD IMAGE
      SX2      A0
```

```
      FETCH    X2,FP,X4
      FETCH    X2,PTL,X3
      SX0      EOD
```

```
      SA5      RNCB
      BX6      X0*X4
      IX7      X5-X3
```

```
      NZ      X6,RNC7B      IF END OF DATA
      ZR      X7,RNC7C      IF END OF CARD IMAGE
      SX0      1S20/10+1
```

```
      SA5      A5-B1
      IX3      X3*X0
      AX3      20
```

```
      X3 = NUMBER OF WORDS READ
```

```
      IX5      X5+X3      UPDATE RECORD ADDRESS
      EQ      RNC7A      LOOP
```

```
      RNC7B    SA1      RNCC
```

```
      IX3      X1+X1
      LX1      3
      IX4      X1+X3
```

```
      IX5      X7-X4
      NZ      X5,RNCX      IF END OF DATA BEFORE HEADER WORDS
```

```
      RNC7C    SA1      RNCC
```

```
      SA3      A1+B1
      SA4      T6RM2
      IX5      X3-X1
```

```
      IX3      X4+X5
      ZR      X1,RNC7D      IF NO HEADER WORDS
      SA1      X3
```

			SA5	X3+B1		CPS028	517
			BX6	X1	MOVE HEADER WORDS TO END	CPS028	518
			LX7	X5	OF CARD IMAGE BUFFER	CPS028	519
1			SA6	X4+12		CPS028	520
2			SA7	A6+B1		CPS028	521
3		RNC7D	BX6	X6-X6	CLEAR WORD FOLLOWING CARD IMAGE	CPS028	522
4			SA6	X3		CPS028	523
5			EQ	RNC7	RETURN	CPS028	524
6						CMP30	4584
7		RNCA	DATA	0	TEMPORARY STORAGE	CMP30	4585
8		RNCB	DATA	0		CMP30	4586
9		RNCC	DATA	0		CPS028	525
10		RNCD	DATA	0		CPS028	526
11						CMP30	4587
12		RM	ENDIF			CMP30	4588
13							
14							
15							
16							
17		**	RNS	- READ NEXT STATEMENT.		CMP24	261
18		*	ENTRY	(X2) = FET/FIT ADDRESS.		CMP30	4589
19		*		(A0) = FWA OF CARD BUFFER.		CMP24	263
20		*	EXIT	(CARD) = STRING BUFFER BLANK FILLED.		CMP24	264
21		*		(CCT) = CARD COUNT.		CMP24	265
22		*		(EDITFG) = MICRO/CONCATENATION FLAG.		CMP24	266
23		*		(LASTCOL) = INDEX OF LAST CHARACTER.		CMP24	267
24		*		(SQLGN) = 0.		CMP24	268
25		*		(STYPE) = BLANK OR ASTERISK.		CMP24	269
26		*	A0 AND	X2 ARE PRESERVED.		CMP24	270
27						CMP24	271
28						CMP24	272
29	22211	0000000000	RNS	PS	RETURN EXIT	CMP24	273
30						CMP30	4590
31			IFNE	CP#RM,0,2		CMP30	4591
32			FETCH	X2,RL,X1	RECORD LENGTH IN CHARACTERS	CMP30	4592
33			SB5	X1		CMP30	4593
34						CMP30	4594
35	22212	5130000130	SA3	CP.IFORM		CMP30	4595
36		54500	SA5	A0		CMP24	275
37		43700	MX7	0		CMP24	276
38	22213	6120026437	SB2	CARD		CMP24	277
39		5170003306	SA7	CCT	CLEAR CCT AND SQLGN	CMP24	278
40	22214	6170000012	SB7	10		CMP24	279
41		5170003263	SA7	SQLGN		CMP24	280
42	22215	0303022216	ZR	X3,RNS1	IF NOT COMPRESSED INPUT	CMP24	281
43		5050000002	SA5	A0+2		CMP24	282
44	22216	43006	MX0	6		CMP24	283
45		7160000055	SX6	1R		CMP24	284
46		11005	BX0	X0*X5	EXTRACT FIRST CHARACTER	CMP24	285
47	22217	20006	LX0	6		CMP24	286
48		6260777730	SB6	X0-1R*		CMP24	287
49	22220	0560022221	NZ	B6,RNS2	IF NOT ASTERISK	CMP24	288
50		7160000047	SX6	1R*		CMP24	289
51	22221	5110020316	SA1	EDITM		CMP24	290
52		6130000012	SB3	10		CMP24	291
53	22222	43066	MX0	-6		CMP24	292
54		0303022247	ZR	X3,RNS5	IF UNCOMPRESSED SOURCE INPUT	CMP24	293
55							
56							
57							
58							
59							
60							

22223	57621	RNS3	SA6 BSS	B2-B1 0	STORE STYPE	CMP24 CMP30 CMP30	294 4596 4597
		DM	IFNE	CP#RM,7		CPS028	527
22223	20372		LX3	-2		CMP30	4600
	0333022235		MI	X3,RNS4	IF UPDATE OR MODIFY (64)	CP114	49
		*		UNPACK MODIFY (63 CHAR SET) COMPRESSED CARD.		CP114	50
						CMP24	297
						CP114	51
	43373		MX3	59		CMP24	299
22224	67401		SB4	-B1		CMP24	300
	6150000055		SB5	1R		CMP24	301
22225	0400022231		EQ	RNS3C		CMP24	302
22226	20506	RNS3A	LX5	6	EXTRACT NEXT CHARACTER	CMP24	303
	15350		BX3	-X0*X5		CMP24	304
	0303022256		ZR	X3,RNS6	IF 0000 (END OF LINE)	CMP24	305
22227	73334	RNS3B	SX3	X3+B4		CMP24	306
	54661		SA6	A6+B1	STORE CHARACTER	CMP24	307
	0323022227		PL	X3,RNS3B	IF FILLING BLANKS, LOOP	CMP24	308
22230	0570022231		NZ	B7,RNS3C	IF SOURCE WORD NOT EXHAUSTED	CMP24	309
	54551		SA5	A5+B1		CMP24	310
	66730		SB7	B3		CMP24	311
22231	20506	RNS3C	LX5	6		CMP24	312
	63660		SB6	X6		CMP24	313
	15650		BX6	-X0*X5	EXTRACT NEXT CHARACTER	CMP24	314
	22461		LX4	X1,B6		CMP24	315
22232	67771		SB7	B7-B1		CMP24	316
	12774		BX7	X7+X4		CMP24	317
	0316022227		NZ	X6,RNS3B	IF NOT 00	CMP24	318
22233	67771		SB7	B7-B1		CMP24	319
	76650		SX6	B5		CMP24	320
	0670022226		PL	B7,RNS3A	IF SOURCE WORD NOT EXHAUSTED	CMP24	321
22234	54551		SA5	A5+B1		CMP24	322
	67731		SB7	B3-B1		CMP24	323
	0400022226		EQ	RNS3A		CMP24	324
		DM	ENDIF			CMP24	325
		*		UNPACK UPDATE OR MODIFY (64 CHAR SET) COMPRESSED CARD.		CMP30	4602
						CMP30	4603
						CMP24	326
		RNS4	SB4	B0		CP114	52
22235	66400		SB5	1R		CMP24	328
	6150000055		SB6	B5		CMP24	329
	66650		EQ	RNS4B		CMP24	330
22236	0400022240		SA4	B4-B1	STORE CHARACTER	CMP24	331
22237	67441	RNS4A	SA6	A6+B1		CMP24	332
	54661		PL	B4,RNS4A	LOOP IF FILLING BLANKS	CMP24	333
	0640022237		LX5	6		CMP24	334
22240	20506	RNS4B	SB7	B7-B1		CMP24	335
	67771		BX6	-X0*X5	EXTRACT NEXT CHARACTER	CMP24	336
	15650		LX4	X1,B6		CMP24	337
	22461		NZ	B7,RNS4C	IF SOURCE WORD NOT EXHAUSTED	CMP24	338
22241	0570022242		SB7	B3		CMP041	34
	66730		SA5	A5+B1		CMP24	341
	54551		ZR	B6,RNS4D	IF 00XX CODE	CMP24	343
22242	0460022244	RNS4C	SB6	X6		CMP24	344
	63660						

12774			BX7	X7+X4		CMP24	345
22243	0560022237		NZ	B6,RNS4A	IF NOT 00 CHARACTER, GO STORE IT	CMP24	346
	0400022240		EQ	RNS4B	GO GET XX	CMP24	347
22244	63460		SB4	X6		CMP24	348
	76650		SX6	B5		CMP24	349
	46000		NO			CMP041	35
		66650	SB6	B5		CMP24	350
22245	0714022237		GT	B4,B1,RNS4A	IF 0002-0077 CODE, GO STORE BLANKS	CMP24	351
	67441		SB4	B4-B1		CMP24	352
		43600	MX6	0		CMP24	353
22246	0440022237		ZR	B4,RNS4A	IF 0001 CODE, GO STORE 00 CHARACTER	CMP24	354
	0400022256		EQ	RNS6	0000 CODE, END OF LINE	CMP24	355
						CMP24	356
		*		UNPACK UNCOMPRESSED CARD IMAGE.		CMP24	357
						CMP24	358
22247	5130026435		SA3	STYPE-1	SETUP A6 AND X6	CMP24	359
	10466		BX4	X6		CMP24	360
	66600		SB6	B0	SCOPE 2 INITIAL CARD OF STATEMENT.	CPS168	5
22250	22603		LX6	X3	CONTINUATION CARDS RE-ENTER HERE	CMP24	361
		RM	IFEQ	CP#RM,0		CMP30	4604
						CMP30	4605
						CMP30	4606
	46000		NO			CMP24	362
	54630		SA6	A3		CMP24	363
		10644	BX6	X4		CMP24	364
22251	20506		LX5	6		CMP24	365
	54661		SA6	A6+B1	STORE CHARACTER	CMP041	36
	63660		SB6	X6		CMP041	37
	15650		BX6	-X0*X5	EXTRACT NEXT CHARACTER	CMP24	368
22252	22461		LX4	X1,B6		CMP24	369
	67771		SB7	B7-B1		CMP24	370
	37556		IX5	X5-X6	REMOVE CHARACTER FROM SOURCE WORD	CMP24	371
	12774		BX7	X7+X4		CMP24	372
22253	0570022254		NZ	B7,RNS5C	IF SOURCE WORD NOT EXHAUSTED	CMP24	373
	66730		SB7	B3		CMP041	38
	54551		SA5	A5+B1		CMP24	374
22254	0316022251		NZ	X6,RNS5B	IF NOT 00 CHARACTER, GO STORE IT	CMP24	376
	0315022251		NZ	X5,RNS5B	IF 00 FOLLOWED BY ANYTHING OTHER	CMP24	377
22255	0335022251		MI	X5,RNS5B	THAN 00, GO STORE THE 00 CHARACTER	CMP24	378
						CMP30	4607
		RM	ELSE			CMP30	4608
						CMP30	4609
			SA6	A3		CMP30	4610
		+	BX6	X4		CMP30	4611
			SA6	A6+B1		CMP30	4612
			ZR	B5,RNS6	IF EMPTY LINE	CMP30	4613
			GE	B5,B3,RNS5B	IF AT LEAST TEN CHARACTERS	CMP30	4614
			SB7	B5-B6	ALLOW FOR LEADING COMMA ON CONTINUATION.	CPS168	6
			ZR	B7,RNS6		CPSA158	5
		RNS5B	LX5	6		CMP30	4616
			BX6	-X0*X5	EXTRACT NEXT CHARACTER	CMP30	4617
			SB6	X6		CMP30	4618
			NO			CMP30	4619
			LX4	X1,B6	TEST FOR EDITING CHARACTERS	CMP30	4620
			SB7	B7-B1		CMP30	4621
			BX7	X7+X4		CMP30	4622
			SA6	A6+B1	STORE CHARACTER	CMP30	4623

			NZ	B7,RNS5B	IF SOURCE WORD NOT EXHAUSTED	CMP30	4624	
			SB5	B5-B3		CMP30	4625	
			SA5	A5+B1	GET NEXT WORD	CMP30	4626	
1			SB7	B3		CMP30	4627	
2			GE	B5,B3,RNS5B	IF AT LEAST TEN CHARACTERS REMAIN	CMP30	4628	
3			SB7	B5		CMP30	4629	
4			GT	B5,B0,RNS5B	IF NOT END OF LINE	CMP30	4630	
5						CMP30	4631	
6		RM	ENDIF			CMP30	4632	
7						CMP24	379	
8		*		FILL WITH BLANKS IF LESS THAN 90 CHARACTERS READ.		CMP24	380	
9						CMP24	381	
10	22256	5170003267	RNS6	SA7	EDITFG	CMP24	382	
11		7172000110		SX7	B2+72	CMP24	383	
12	22257	6172000131		SB7	B2+89	CMP24	384	
13		5170022322		SA7	RNSA	CMP24	385	
14	22260	65767		SB7	A6-B7	CMP24	386	
15		7160000055		SX6	1R	CMP24	387	
16	22261	66771	+	SB7	B7+B1	CMP24	388	
17		54661		SA6	A6+B1	CMP24	389	
18		0770022261	MI	B7,*	LOOP	CMP24	390	
19						CMP24	391	
20		*		COLLECT SEQUENCE FIELD.		CMP24	392	
21						CMP24	393	
22	22262	5130000130		SA3	CP.IFORM	CMP30	4633	
23		5110003306		SA1	CCT	CMP24	395	
24	22263	0303022273		ZR	X3,RNS7	IF UNCOMPRESSED INPUT	CMP24	396
25		43022		MX0	18		CMP041	39
26		54401		SA4	A0+B1		CMP24	397
27	22264	0333022301		MI	X3,RNS8A	IF COMMON DECK	CMP24	399
28		20373		LX3	59		CMP24	400
29	22265	0333022271		MI	X3,RNS6A	IF MODIFY COMPRESSED COMPILE FILE	CMP24	401
30							CMP24	402
31		54300		SA3	A0	COLUMNS 74-83	CMP041	40
32		20452		LX4	-18		CMP041	41
33	22266	15740		BX7	-X0*X4	COLUMNS 84-90	CMP041	42
34		7150000055		SX5	1R		CMP041	43
35		20352		LX3	-18		CMP041	44
36	22267	15630		BX6	-X0*X3	COLUMNS 74-80	CMP041	45
37		37436		IX4	X3-X6	COLUMNS 81-83	CMP041	46
38		20552		LX5	42		CMP041	47
39		12747		BX7	X4+X7	COLUMNS 81-90	CMP041	48
40	22270	36656		IX6	X5+X6	COLUMNS 73-80	CMP041	49
41		0400022300		EQ	RNS8		CMP24	413
42							CMP24	414
43	22271	10644	RNS6A	BX6	X4	STORE IDENTIFIER AND	CMP24	415
44		5261030003		SA6	SEQ+X1	BINARY SEQUENCE NUMBER	CMP24	416
45	22272	0400022301		EQ	RNS8A		CMP24	417
46							CMP24	418
47	22273	53370	RNS7	SA3	X7	COLLECT COLUMNS 73-80	CMP24	419
48		43600		MX6	0		CMP24	420
49		6170000010		SB7	8		CMP24	421
50	22274	20606	RNS7B	LX6	6		CMP24	422
51		67771		SB7	B7-B1		CMP24	423
52		12663		BX6	X6+X3		CMP24	424
53		54331		SA3	A3+B1		CMP24	425
54	22275	0570022274		NZ	B7,RNS7B		CMP24	426
55								
56								
57								
58								
59								
60								

		43700		MX7	0	COLLECT COLUMNS 81-90	CMP24	427
		66730		SB7	B3		CMP24	428
	22276	20706	RNS7C	LX7	6		CMP24	429
		67771		SB7	B7-B1		CMP24	430
		12773		BX7	X7+X3		CMP24	431
		54331		SA3	A3+B1		CMP24	432
	22277	0570022276		NZ	B7,RNS7C		CMP24	433
							CMP24	434
	22300	22011	RNS8	LX0	X1,B1	STORE SEQUENCE FIELD	CMP24	435
		5260030003		SA6	SEQ+X0		CMP24	436
		54761		SA7	A6+B1		CMP24	437
	22301	73611	RNS8A	SX6	X1+B1	INCREMENT CCT	CMP24	438
		54610		SA6	A1		CMP24	439
							CMP24	440
			*		READ NEXT CARD AND LOOP IF CONTINUATION CARD.		CMP24	441
							CMP24	442
		0100022141		RJ	RNC	READ NEXT CARD	CMP24	443
							CMP30	4634
				IFNE	CP#RM,0,2		CMP30	4635
				FETCH	X2,RL,X3		CMP30	4636
				SB5	X3		CMP30	4637
							CMP30	4638
	22302	53500		SA5	X0		CMP24	444
		43006		MX0	6		CMP24	445
		5140003306		SA4	CCT		CMP24	446
	22303	5110022322		SA1	RNSA		CMP24	447
		11605		BX6	X0*X5	EXTRACT FIRST CHARACTER	CMP24	448
		20606		LX6	6		CMP24	449
	22304	6264777765		SB6	X4-NCARDS		CMP24	450
		6276777721		SB7	X6-1R,		CMP24	451
	22305	0460022314		ZR	B6,RNS9	IF TOO MANY CONTINUATION CARDS	CMP24	452
		0570022314		NZ	B7,RNS9	IF FIRST CHARACTER NOT COMMA	CMP24	453
	22306	5130003267		SA3	EDITFG		CMP24	454
		6130000012		SB3	10		CMP24	455
	22307	20506		LX5	6		CMP24	456
		5241777776		SA4	X1-1		CMP24	457
		67731		SB7	B3-B1	PREPARE TO UNPACK CONTINUATION CARD	CMP24	458
	22310	13556		BX5	X5-X6	SO THAT ITS COLUMN 2 CHARACTER	CMP24	459
		22703		LX7	X3	FOLLOWS COLUMN 72 OF PREVIOUS CARD	CMP24	460
		5130000130		SA3	CP.IFORM		CMP30	4639
	22311	5110020316		SA1	EDITM		CMP24	462
		43066		MX0	-6		CMP24	463
		10644		BX6	X4		CMP24	464
	22312	64240		SB2	A4		CMP24	465
		54640		SA6	A4		CMP24	466
		0313022223		NZ	X3,RNS3	IF COMPRESSED SOURCE INPUT	CMP24	467
	22313	55341		SA3	A4-B1		CMP24	468
		66610		SB6	B1	SCOPE 2 COMPENSATE FOR COMMA.	CPS168	7
		0400022250		EQ	RNS5A	IF UNCOMPRESSED SOURCE INPUT	CMP24	469
							CMP24	470
			*		END OF STATEMENT.		CMP24	471
							CMP24	472
	22314	5140003261	RNS9	SA4	LASTCOL	CLEAR FROM END OF THIS STATEMENT	CMP24	473
		7271751340		SX7	X1-CARD	TO END OF PREVIOUS STATEMENT	CMP24	474
	22315	6231000022		SB3	X1+18		CMP24	475
		6244026437		SB4	X4+CARD		CMP24	476
	22316	7160000055		SX6	1R		CMP24	477

63210	SB2	X1		CMP24	478
54740	SA7	A4	STORE NEW LASTCOL	CMP24	479
22317 53610	SA6	X1		CMP24	480
0634022320	GE	B3,B4,RNS9A		CMP24	481
66340	SB3	B4		CMP24	482
22320 66221 RNS9A	SB2	B2+B1		CMP24	483
54661	SA6	A6+B1		CMP24	484
0723022320	LT	B2,B3,RNS9A LOOP		CMP24	485
22321 0400022211	EQ	RNS		CMP24	486
22322 00000000000000000000 RNSA	DATA	0		CMP24	487
				CMP24	488
** RSL - RECORD SEGMENT LENGTH.					
				COMPASS	14204
				COMPASS	14205
				COMPASS	14206
22323 0000000000 RSL	PS	RETURN EXIT		COMPASS	14207
22324 5120003420	SA2	0.SEGTAB		COMPASS	14208
5130003457	SA3	L.SEGTAB		COMPASS	14209
22325 5110003104	SA1	ORGCTR		COMPASS	14210
36323	IX3	X2+X3		COMPASS	14211
54211	SA2	A1+B1		COMPASS	14212
22326 0312022327	NZ	X2,RSL1 CHANGE ABSOLUTE ORIGIN TO 1		COMPASS	14213
5120003154	SA2	UI+1		COMPASS	14214
22327 20225 RSL1	LX2	21		COMPASS	14215
12612	BX6	X1+X2		COMPASS	14216
5263777773	SA6	X3-4		COMPASS	14217
22330 0400022323	EQ	RSL		COMPASS	14218
** RSG - RELOCATE SEGMENT TABLE.					
				COMPASS	14220
				COMPASS	14221
				COMPASS	14222
22331 0000000000 RSG	PS	RETURN EXIT		COMPASS	14223
22332 5110003420	SA1	0.SEGTAB		COMPASS	14224
5120003457	SA2	L.SEGTAB		COMPASS	14225
22333 63610	SB6	X1		COMPASS	14226
63726	SB7	B6+X2		COMPASS	14227
5130003411	SA3	0.USETAB		COMPASS	14228
22334 6140000023	SB4	21-2		CMP30	4640
6253777775	SB5	X3-2		CMP30	4641
22335 6177777773	SB7	B7-4		COMPASS	14230
7130003774	SX3	3774B MASK FOR RELOCATION		CPS227	5
22336 43047	MX0	-21 FETCH SEGMENT LWA AND RELOCATION		CMP30	4643
56170	SA1	B7		CMP30	4644
56271	SA2	B7+B1 USETAB/IDTAB INDEX		CPS012	4
54521	SA5	A2+B1 SLITS/EPTAB/LITAB INDEX		CPS012	5
22337 22402 RSG1	LX4	X2		CPS012	6
10755	BX7	X5		COMPASS	14234
5052000001	SA5	A2+1		CPS012	7
22340 23241 RSG2	AX2	X1,B4 RELOCATION * 4		CPS012	8
11632	BX6	X3*X2		CPS012	9
10244	BX2	X4		RSM4159	31

76

```

**      RUT - RELOCATE USE TABLE.
*      ENTRY  (X1) = USE TABLE INDEX.

```

* EXIT (X0) = PROGRAM LENGTH.

COMPASS 14329
COMPASS 14330
COMPASS 14331
COMPASS 14332
COMPASS 14333
COMPASS 14334
COMPASS 14335
RSM4159 37
CMP30 4682
RSM4159 38
CMP30 4683
CMP30 4684
COMPASS 14341
COMPASS 14342
COMPASS 14343
COMPASS 14344
COMPASS 14345
COMPASS 14346
COMPASS 14347
COMPASS 14348
COMPASS 14349
CMP30 4685
COMPASS 14351
COMPASS 14352
CMP30 4686
COMPASS 14354
COMPASS 14355
COMPASS 14356
COMPASS 14357
COMPASS 14358
COMPASS 14359
COMPASS 14360
COMPASS 14361
COMPASS 14362
COMPASS 14363
COMPASS 14364
COMPASS 14365
COMPASS 14366
COMPASS 14367
COMPASS 14368
COMPASS 14370
CMP30 4687
CMP30 4688
CMP30 4689
CMP30 4690
CMP30 4691
CMP30 4692
CMP30 4693
COMPASS 14378
COMPASS 14379
COMPASS 14380
COMPASS 14381
COMPASS 14382
COMPASS 14383
COMPASS 14384
CMP30 4694
COMPASS 14386

1	22403	0000000000	RUT	PS	RETURN EXIT	
2	22404	5150003130		SA5	ABSFG	
3		5130003411		SA3	O.USETAB	
4	22405	5120003450		SA2	L.USETAB	
5		5140003153		SA4	UI	
6	22406	20102		LX1	2	
7		36114		IX1	X1+X4	
8		36631		IX6	X3+X1	
9	22407	6266777773		SB6	X6-4	
10		36223		IX2	X2+X3	
11		63720		SB7	X2	
12	22410	63451		SB4	X5+B1	ABSOLUTE FLAG + 1
13		43247		MX2	-21	
14		66300		SB3	B0	
15	22411	5130012230		SA3	=R/PROGRAM*/	SET UP REAL BLOCK NAMES
16		5140012207		SA4	=R/ABSOLUTE*/	
17	22412	10633		BX6	X3	
18		22704		LX7	X4	
19		5166000004		SA6	B6+4	
20	22413	56760		SA7	B6	
21		13000		BX0	X0-X0	PROGRAM LENGTH
22		6150000041		SB5	33	
23	22414	0441022415		EQ	B4,B1,RUT1	IF RELOCATABLE
24		54670		SA6	A7	
25	22415	56161	RUT1	SA1	B6+B1	FETCH BLOCK LENGTH
26		54311		SA3	A1+B1	TYPE FLAG
27		56460		SA4	B6	CHECK NAME
28		66234		SB2	B3+B4	ABSFG + 1 + INDEX
29	22416	15112		BX1	-X2*X1	
30	22417	0541022420	+	NE	B4,B1,*+1	IF ABSOLUTE ASSEMBLY
31		0313022426		NZ	X3,RUT3	IF COMMON BLOCK
32	22420	0334022433		NG	X4,RUT5	IF LCM BLOCK IN ABSOLUTE ASSEMBLY
33		0412022431		EQ	B1,B2,RUT4	IF ABSOLUTE BLOCK IN RELOCATABLE ASSEMBLY
34	22421	66211		SB2	B1+B1	
35		77524		SX5	B2-B4	CALCULATE BLOCK ORIGIN
36		20530		LX5	24	
37		12650		BX6	X5+X0	
38	22422	36010		IX0	X1+X0	AUGMENT PROGRAM LENGTH
39		22750		LX7	X0,B5	
40		12667		BX6	X6+X7	
41		54630		SA6	A3	STORE BLOCK ORIGIN, RELOCATION, MAXIMUM
42	22423	43600	RUT2	MX6	0	
43		6133000004		SB3	B3+4	INCREMENT BLOCK INDEX
44		54661		SA6	A6+B1	CLEAR BINWORD WORD
45	22424	6166000004		SB6	B6+4	INCREMENT LOAD ADDRESS
46		0567022415		NE	B6,B7,RUT1	LOOP
47	22425	0400022403		EQ	RUT	RETURN
48						
49			*	COMMON	BLOCK.	
50						
51	22426	5140003167	RUT3	SA4	NBLOCKS	INCREMENT BLOCK COUNT
52		73641		SX6	X4+B1	
53		22751		LX7	X1,B5	BLOCK LENGTH
54	22427	54640		SA6	A4	
55						
56						
57						
58						
59						
60						

73561
20530
12675SX5
LX5
BX6
SA6
EQ
X6+B1
24
X7+X5
A3
RUT2

STORE BLOCK ORIGIN, RELOCATION, MAXIMUM

CMP30 4695
CMP30 4696
CMP30 469722430 54630
0400022423

* ABSOLUTE BLOCK IN REL ASSEMBLY.

COMPASS 14390
COMPASS 14391
COMPASS 14392

22431 7160377777

RUT4

SX6 1S17-1

COMPASS 14393
COMPASS 14394
CMP30 4698

20641

LX6

33

CMP30 4699

54630

SA6

A3

COMPASS 14397

22432 0400022423

EQ

RUT2

LOOP

COMPASS 14399

* LOCAL LCM BLOCK.

COMPASS 14400
CMP30 4700
COMPASS 14402

22433 5140003165

RUT5

SA4

LCM

INCREMENT LCM LENGTH

COMPASS 14403

36741

IX7

X4+X1

COMPASS 14404

54740

SA7

A4

COMPASS 14405

22434 22557

LX5

X7,B5

CMP30 4701

12645

BX6

X4+X5

STORE BLOCK ORIGIN, RELOCATION, MAXIMUM

CMP30 4702

0441022436

EQ

B4,B1,RUT6

IF REL ASSEMBLY

CMP30 4703

22435 54630

SA6

A3

COMPASS 14407

0400022423

EQ

RUT2

CMP30 4704

22436 5110003166

RUT6

SA1

LLB

CMP30 4705

5150003167

SA5

NBLOCKS

CMP30 4706

22437 0311022441

NZ

X1,RUT7

IF NOT FIRST LOCAL LCM BLOCK IN REL ASMBLY

CMP30 4707

73651

SX6

X5+B1

CMP30 4708

73161

SX1

X6+B1

CMP30 4709

22440 54650

SA6

A5

INCREMENT BLOCK COUNT

CMP30 4710

20130

LX1

24

CMP30 4711

10611

BX6

X1

SAVE LCM LOCAL BLOCK RELOCATION

CMP30 4712

54610

SA6

A1

CMP30 4713

22441 12614

RUT7

BX6

X1+X4

CMP30 4714

22557

LX5

X7,B5

CMP30 4715

12665

BX6

X6+X5

STORE BLOCK ORIGIN, RELOCATION, MAXIMUM

CMP30 4716

54630

SA6

A3

CMP30 4717

22442 0400022423

EQ

RUT2

LOOP

COMPASS 14409

** SIA - SKIP ITERATIVE ARGUMENT.

COMPASS 14411

* ENTRY (A7) = STACK ADDRESS.

COMPASS 14412

* (X4) = MARDIS INDEX.

COMPASS 14413

* EXIT (A7) = STACK ADDRESS.

COMPASS 14414

* (X6) = 0 IF END OF LIST.

COMPASS 14415

COMPASS 14416

COMPASS 14417

22443 0000000000

SIA

PS

RETURN EXIT

COMPASS 14418

22444 5110003433

SA1

0.MARDIS

COMPASS 14419

5150003434

SA5

0.MARGS

COMPASS 14420

22445 5100000074

SA0

60

(A0) = 60

CMP165 135

63240

SB2

X4

CMP165 136

53212

SA2

X1+B2

(X2) = ARGUMENT DESCRIPTOR WORD

CMP165 137

22446 63350

SB3

X5

COMPASS 14423

26342

UX3,B4

X2

CMP165 138

63323

SB3

B3+X2

(B3) = FWA OF ARGUMENT

CMP165 139

		20322	LX3	59-41		CMP165	140
22447	67404		SB4	-B4	(B4) = ARGUMENT CHARACTER COUNT	CMP165	141
	63630		SB6	X3	(B6) = SHIFT COUNT FOR NEXT CHARACTER	CMP165	142
		26353	UX3,B5		(B5) = COUNT OF CHARS PRECEDING CURRENT CH	CMP165	143
		20314	LX3	41-29		CMP165	144
22450	26323		UX3,B2			CMP165	145
		56332	SA3	B3+B2	(X3) = CURRENT WORD OF ARGUMENT	CMP165	146
		6166000006	SB6	B6+6		CMP165	147
22451	66551		SB5	B5+B1		CMP165	148
		22463	LX4	X3,B6	GET NEXT CHARACTER	CMP165	149
		65706	SB7	A0-B6		CMP165	150
22452	0745022477		GT	B5,B4,SIA7	IF PAST END OF ARGUMENT	CMP165	151
		15640	BX6	-X0*X4		CMP165	152
22453	0570022454		NZ	B7,SIA1	IF NOT END OF WORD	CMP165	153
		54331	SA3	A3+B1		COMPASS	14438
		66600	SB6	B0		CMP165	154
22454	6276777726		SB7	X6-1R(		COMPASS	14440
		43500	MX5	0		COMPASS	14441
22455	0470022470		ZR	B7,SIA4	IF FIRST CHARACTER IS *(	CMP165	155
		0400022461	EQ	SIA3		COMPASS	14443
						COMPASS	14444
22456	6166000006		SB6	B6+6	SKIP ONE SUBARGUMENT	CMP165	156
		66551	SB5	B5+B1		CMP165	157
		22463	LX4	X3,B6	GET NEXT CHARACTER	CMP165	158
22457	65706		SB7	A0-B6		CMP165	159
		0745022477	GT	B5,B4,SIA7	IF PAST END OF ARGUMENT	CMP165	160
		15640	BX6	-X0*X4		CMP165	161
22460	0570022461		NZ	B7,SIA3	IF NOT END OF WORD	CMP165	162
		54331	SA3	A3+B1		COMPASS	14449
		66600	SB6	B0		CMP165	163
22461	7256777721		SX5	X6-1R,		COMPASS	14451
		0315022456	NZ	X5,SIA2	IF NOT *,*	COMPASS	14453
22462	73220		SX2	X2	UPDATE ARGUMENT POINTER	COMPASS	14454
		76660	SX6	B6		CMP165	164
		20222	LX2	59-41		CMP165	165
		12226	BX2	X2+X6		CMP165	166
22463	27252		PX2	B5		CMP165	167
		65233	SB2	A3-B3		CMP165	168
		20214	LX2	41-29		CMP165	169
		27222	PX2	B2		CMP165	170
22464	67404		SB4	-B4		CMP165	171
		20236	LX2	29-59		CMP165	172
		27642	PX6	X2,B4		CMP165	173
		54620	SA6	A2		COMPASS	14461
22465	5047000002		SA4	A7+2		COMPASS	14462
		73670	SX6	X7		CMP24	489
		21422	AX4	18	RESET MACRO DEFINITION POINTER	COMPASS	14463
22466	13776		BX7	X7-X6		CMP24	490
		12774	BX7	X7+X4		CMP24	491
		76610	SX6	B1		COMPASS	14466
		54770	SA7	A7		CMP24	492
22467	0400022443		EQ	SIA	RETURN	COMPASS	14467
						COMPASS	14468
		*		SKIP PARAMETER IN PARENS.		COMPASS	14469
						COMPASS	14470
22470	6166000006		SB6	B6+6	SKIP EMBEDDED SUBARGUMENT	CMP165	174
		66551	SB5	B5+B1		CMP165	175

22471	65706	22463	LX4	X3,B6	GET NEXT CHARACTER	CMP165	176
			SB7	A0-B6		CMP165	177
	0745022477		GT	B5,B4,SIA7	IF PAST END OF ARGUMENT	CMP165	178
22472	0570022473	15640	BX6	-X0*X4		CMP165	179
	54331		NZ	B7,SIA5	IF NOT END OF WORD	CMP165	180
			SA3	A3+B1		CMP165	181
		66600	SB6	B0		CMP165	182
22473	6276777726		SB7	X6-1R(		CMP165	183
	0470022475	SIA5	ZR	B7,SIA6	IF *(	CMP165	184
22474	0571022470		NE	B7,B1,SIA4	IF NOT *)*	CMP165	185
22475	66777		SB7	B7+B7		CMP165	186
	77417	SIA6	SX4	B1-B7		CPS063	1
		36554	IX5	X5+X4		CPS063	2
22476	0325022470		PL	X5,SIA4	IF STILL WITHIN PARENS	CMP165	187
	0400022456		EQ	SIA2		CMP165	188
						COMPASS	14485
		*		TERMINATE CURRENT IRP.		COMPASS	14486
						COMPASS	14487
22477	73620		SX6	X2		COMPASS	14488
	27646	SIA7	PX6	B4		CMP165	189
	54620		SA6	A2		COMPASS	14489
		43600	MX6	0		COMPASS	14490
22500	0400022443		EQ	SIA	RETURN	COMPASS	14491
		**		SOS - SCAN OPERATION SYNTAX.		COMPASS	14493
		*		ENTRY SYNTAX IN LOCATION FIELD.		COMPASS	14494
		*		EXIT (X6) = 0 IF ERROR.		COMPASS	14495
		*		(X6) " 0 IF NO ERROR.		COMPASS	14496
		*		(P1TEMP) = CONVERTED SYNTAX.		COMPASS	14497
		*		(P1TEMPD) = NUMBER OF PARAMETERS REQUIRED.		COMPASS	14498
						COMPASS	14499
						COMPASS	14500
22501	0000000000	SOS	PS		RETURN EXIT	COMPASS	14501
22502	43700		MX7	0	CLEAR ACCUMULATION CELLS	COMPASS	14502
	5170003274		SA7	OPADS+1		COMPASS	14503
	54771		SA7	A7+B1		COMPASS	14504
22503	54771		SA7	A7+B1		COMPASS	14505
	6271777722		SB7	X1-1R		COMPASS	14506
	66300		SB3	B0		CMP9	52
22504	66200	+	SB2	B0		COMPASS	14507
	0570022505		NZ	B7,*+1	IF 1ST COLUMN IS NOT BLANK	COMPASS	14508
	54111		SA1	A1+B1		COMPASS	14509
22505	10611		BX6	X1		COMPASS	14510
	6271777722		SB7	X1-1R		COMPASS	14511
	54111		SA1	A1+B1	SECOND LETTER OF OP CODE	COMPASS	14512
22506	0470022555		ZR	B7,SOSER	IF FIRST LETTER WAS BLANK	COMPASS	14513
	6271777722		SB7	X1-1R		COMPASS	14514
22507	0470022555		ZR	B7,SOSER	IF SECOND LETTER WAS BLANK	COMPASS	14515
	20606		LX6	6		COMPASS	14516
	12616		BX6	X1+X6		COMPASS	14517
22510	6271777774		SB7	X1-3	TEST FOR OP-CODE REGISTER	COMPASS	14518
	6261777747		SB6	X1-1RX		COMPASS	14519
22511	5160003273		SA6	OPADS		COMPASS	14520
	66300		SB3	B0		COMPASS	14521

22512	0770022513	+	NG	B7,*+1		COMPASS 14522
	0560022514		NZ	B6,S0S1		COMPASS 14523
22513	66310		SB3	B1	SET PARAMETER COUNT TO 1	COMPASS 14524
* ENTRY ON NEW FIELD.						COMPASS 14525
22514	43600	S0S1	MX6	0	SYNTAX MASK FOR SUBFIELD	COMPASS 14528
	76700		SX7	B0	INTERLOCK FLAG FOR REGISTERS	COMPASS 14529
	10566		BX5	X6	INTERLOCK FLAG FOR ADDRESSES	COMPASS 14530
22515	54111	S0S2	SA1	A1+B1		COMPASS 14531
22516	6271777722	S0S3	SB7	X1-1R		COMPASS 14532
	0470022542		ZR	B7,S0S9	IF END OF FIELD	COMPASS 14533
22517	0471022542		EQ	B7,B1,S0S9	IF END OF SUBFIELD	COMPASS 14534
	0315022555		NZ	X5,S0SER	IF SECOND Q FIELD	COMPASS 14535
22520	6271777756		SB7	X1-1RQ		COMPASS 14536
	0470022540		ZR	B7,S0S8		COMPASS 14537
22521	0317022555		NZ	X7,S0SER	IF WE HAVE ALREADY WRITTEN REGISTERS	COMPASS 14538
	6271777732		SB7	X1-1R+	CHECK LEADING OPERATOR	COMPASS 14539
22522	0470022523		ZR	B7,S0S4	IF PLUS	COMPASS 14540
	0571022524		NE	B7,B1,S0S5	IF NOT MINUS	COMPASS 14541
22523	76070	S0S4	SX0	B7		COMPASS 14542
	54111		SA1	A1+B1		COMPASS 14543
	20007		LX0	7		COMPASS 14544
	12606		BX6	X0+X6		COMPASS 14545
22524	6271777774	S0S5	SB7	X1-3		COMPASS 14546
	6261777747		SB6	X1-1RX		COMPASS 14547
22525	0770022527		NG	B7,S0S6		COMPASS 14548
	7110000003		SX1	3		COMPASS 14549
22526	0560022555		NZ	B6,S0SER	ERROR IF NOT ABX	COMPASS 14550
22527	20105	S0S6	LX1	5		COMPASS 14551
	12616		BX6	X1+X6		COMPASS 14552
	54111		SA1	A1+B1		COMPASS 14553
	66331		SB3	B3+B1	INCREMENT PARAMETER COUNT	COMPASS 14554
22530	43701		MX7	1	SET REGISTER INTERLOCK	COMPASS 14555
	6271777732		SB7	X1-1R+	TEST INTERMEDIATE OPERATOR	COMPASS 14556
22531	6261777726		SB6	X1-1R/-1		COMPASS 14557
	0770022516		NG	B7,S0S3		COMPASS 14558
22532	0660022516		PL	B6,S0S3		COMPASS 14559
	76070		SX0	B7		COMPASS 14560
	54111		SA1	A1+B1		COMPASS 14561
22533	66331		SB3	B3+B1	INCREMENT PARAMETER COUNT	COMPASS 14562
	20003		LX0	3		COMPASS 14563
	12606		BX6	X0+X6		COMPASS 14564
22534	6271777774		SB7	X1-3		COMPASS 14565
	6261777747		SB6	X1-1RX		COMPASS 14566
22535	0770022537		NG	B7,S0S7		COMPASS 14567
	7110000003		SX1	3		COMPASS 14568
22536	0560022555		NZ	B6,S0SER		COMPASS 14569
22537	20101	S0S7	LX1	1		COMPASS 14570
	12616		BX6	X1+X6		COMPASS 14571
	0400022515		EQ	S0S2		COMPASS 14572
* Q SUBFIELD.						COMPASS 14573
						COMPASS 14574
						COMPASS 14575
22540	73661	S0S8	SX6	X6+B1	SET ADDRESS FLAG	COMPASS 14576
	43501		MX5	1	SET ADDRESS INTERLOCK	COMPASS 14577
	66331		SB3	B3+B1	INCREMENT PARAMETER COUNT	COMPASS 14578

22541	0400022515		EQ	SOS2		COMPASS 14579
						COMPASS 14580
		*		END OF SUBFIELD.		COMPASS 14581
22542	0306022546	SOS9	ZR	X6,SOS9A	IF EMPTY SUBFIELD	COMPASS 14582
	54661		SA6	A6+B1	STORE MASK	CMP27 24
22543	0470022547		ZR	B7,SOS10	JUMP IF TERMINATOR WAS BLANK	COMPASS 14584
	66221		SB2	B2+B1	INCREMENT SUBFIELD COUNT	COMPASS 14585
22544	6172777774		SB7	B2-3		COMPASS 14586
	0770022514		NG	B7,SOS1	IF NOT TOO MANY COMMAS YET	COMPASS 14587
22545	0400022555		EQ	SOSER		COMPASS 14588
22546	0570022514	SOS9A	NZ	B7,SOS1	IF NOT END OF SYNTAX SPECIFICATION	CMP27 26
		*		END OF SYNTAX.		COMPASS 14589
						COMPASS 14590
						COMPASS 14591
22547	5110003273	SOS10	SA1	OPADS	CONSTRUCT MASK	COMPASS 14592
	54211		SA2	A1+B1		COMPASS 14593
	20144		LX1	36		COMPASS 14594
22550	54321		SA3	A2+B1		COMPASS 14595
	20234		LX2	28		COMPASS 14596
	54431		SA4	A3+B1		COMPASS 14597
	12612		BX6	X1+X2		COMPASS 14598
22551	20324		LX3	20		COMPASS 14599
	7100000055		SX0	1R		COMPASS 14600
	12636		BX6	X3+X6		COMPASS 14601
22552	36706		IX7	X0+X6		COMPASS 14602
	20414		LX4	12		COMPASS 14603
	12647		BX6	X4+X7		COMPASS 14604
	76730		SX7	B3	PARAMETER COUNT	COMPASS 14605
22553	5160003561		SA6	P1TEMP		COMPASS 14606
	5170003565		SA7	P1TEMPD		COMPASS 14607
22554	0400022501		EQ	SOS	RETURN	COMPASS 14608
						COMPASS 14609
		*		ERROR IN SYNTAX.		COMPASS 14610
						COMPASS 14611
22555	76610	SOSER	SX6	B1	NOTE ARGUMENT COUNT ERROR	COMPASS 14612
	5160003337		SA6	W5ERR		COMPASS 14613
22556	5160003345		SA6	EFLG		COMPASS 14614
	43600		MX6	0		COMPASS 14615
22557	0400022501		EQ	SOS	RETURN	COMPASS 14616
		**		SQUEEZE - COMPRESS CARD.		COMPASS 14618
		*		ENTRY IF (SQLGN) " 0 SQUEEZE IS NULL.		COMPASS 14619
		*		EXIT (SQLGN) = LENGTH OF SQUEEZED IMAGE.		COMPASS 14620
						COMPASS 14621
						COMPASS 14622
22560	0000000000	SQUEEZE	PS		RETURN EXIT	COMPASS 14623
22561	5110003263		SA1	SQLGN		CMP64G 362
	0311022560		NZ	X1,SQUEEZE	IF CARD ALREADY SQUEEZED	CMP64G 363
22562	5130003261		SA3	LASTCOL		CMP64G 364
	5150026436		SA5	STYPE		CMP64G 365
22563	6120777722		SB2	-1R		CMP64G 366
	6130777775		SB3	-2		CMP64G 367
22564	6140000077		SB4	77B		CMP64G 368

22565	6170007312	6160000012	SB6	10		CMP64G	369	
			SB7	STCA		CMP64G	370	
		13666	BX6	X6-X6		CMP64G	371	
		43774	MX7	60		CMP64G	372	
22566	5160030616		SA6	SQIMAGE-1		CMP64G	373	
		5273026437	SA7	CARD+X3	STORE -0 IN LAST COLUMN + 1	CMP64G	374	
22567	27066		PX0	X6,B6		CMP64G	375	
						CMP64G	376	
22570	67661		SQU1	SB6	B6-B1	PACK CHARACTER	CMP64G	377
		12665	BX6	X6+X5		CMP64G	378	
		54551	SA5	A5+B1	FETCH NEXT CHARACTER	CMP64G	379	
		53257	SA2	X5+B7		CMP64G	380	
22571	0560022572		SQU2	NZ	B6,SQU3	IF WORD NOT FULL	CMP64G	381
		54661	SA6	A6+B1		CMP64G	382	
		26660	UX6,B6	X0		CMP64G	383	
22572	20606		SQU3	LX6	6		CMP64G	384
		0322022570	PL	X2,SQU1	IF NOT -0 NOR 00 NOR 55 NOR 77	CMP64G	385	
		66530	SB5	B3		CMP64G	386	
22573	73252		SQU4	SX2	X5+B2	COUNT BLANKS	CMP64G	387
		66551	SB5	B5+B1	(B5) = BLANK COUNT - 1	CMP64G	388	
		46000	NO			CMP64G	389	
		54551	SA5	A5+B1		CMP64G	390	
22574	0302022573		SQU5	ZR	X2,SQU4		CMP64G	391
		0615022577	LE	B5,B1,SQU6	IF 0, 1, OR 2 BLANKS	CMP64G	392	
22575	0745022605		GT	B5,B4,SQU8	IF MORE THAN 64 BLANKS	CMP64G	393	
		67661	SB6	B6-B1	PACK 0002-0077 FOR 3 TO 64 BLANKS	CMP64G	394	
		54553	SA5	A5+B3	RESET CHARACTER POINTER	CMP64G	395	
22576	76550		SQU5A	SX5	B5		CMP64G	396
		13222	BX2	X2-X2	GO PACK 00NN	CMP64G	397	
		0400022571	EQ	SQU2		CMP64G	398	
						CMP64G	399	
22577	67553		SQU6	SB5	B5-B3	0, 1, OR 2 BLANKS	CMP64G	400
		55555	SA5	A5-B5	RESET CHARACTER POINTER	CMP64G	401	
		0715022570	GT	B5,B1,SQU1	IF 1 OR 2 BLANKS	CMP64G	402	
22600	0335022613		MI	X5,SQU9	IF -0 (END OF STATEMENT)	CMP64G	403	
		0305022604	ZR	X5,SQU7	IF 00 (COLON)	CMP64G	404	
22601	54251		SA2	A5+B1	77 (SEMICOLON OR PARAMETER MARK)	CMP64G	405	
		73222	SX2	X2+B2	SEE IF NEXT CHARACTER IS 55 (BLANK)	CMP64G	406	
		0312022570	NZ	X2,SQU1	IF 77 NOT FOLLOWED BY 55	CMP64G	407	
22602	67661		SB6	B6-B1		CMP64G	408	
		12665	BX6	X6+X5	PACK 77 (SEMICOLON OR PARAMETER MARK)	CMP64G	409	
		46000	NO			CMP64G	410	
		54551	SA5	A5+B1		CMP64G	411	
22603	0400022571		EQ	SQU2	GO PACK 55 (BLANK)	CMP64G	412	
						CMP64G	413	
22604	67661		SQU7	SB6	B6-B1	00 (COLON), PACK 0001	CMP64G	414
		0400022576	EQ	SQU5A		CMP64G	415	
						CMP64G	416	
22605	67661		SQU8	SB6	B6-B1	MORE THAN 64 BLANKS, PACK 0077	CMP64G	417
		67551	SB5	B5-B1	PACK 00	CMP64G	418	
		46000	NO			CMP64G	419	
		76540	SX5	B4		CMP64G	420	
22606	0560022607		NZ	B6,SQU8A	IF WORD NOT FULL	CMP64G	421	
		54661	SA6	A6+B1		CMP64G	422	
		26660	UX6,B6	X0		CMP64G	423	
22607	20606		SQU8A	LX6	6	PACK 77	CMP64G	424
		67661	SB6	B6-B1		CMP64G	425	

		67554		SB5	B5-B4	REDUCE BLANK COUNT	CMP64G	426
		12665		BX6	X6+X5		CMP64G	427
22610	0560022611			NZ	B6,SQU8B	IF WORD NOT FULL	CMP64G	428
		54661		SA6	A6+B1		CMP64G	429
		26660		UX6,B6	X0		CMP64G	430
22611	20606		SQU8B	LX6	6		CMP64G	431
		0650022574		PL	B5,SQU5	IF AT LEAST ONE MORE BLANK	CMP64G	432
		55551		SA5	A5-B1		CMP64G	433
22612	20666			LX6	-6		CMP64G	434
		53257		SA2	X5+B7		CMP64G	435
		0400022572		EQ	SQU3	GO PROCESS NEXT CHARACTER	CMP64G	436
							CMP64G	437
22613	76166		SQU9	SX1	B6+B6	END OF STATEMENT	CMP64G	438
		22211		LX2	X1,B1		CMP64G	439
		36312		IX3	X1+X2		CMP64G	440
		77702		SX7	-B2		CMP64G	441
22614	6263777771			SB6	X3-6	LEFT-JUSTIFY WORD IN X6	CMP64G	442
		22666		LX6	X6,B6		CMP64G	443
		54770		SA7	A7	RESTORE BLANK AFTER LAST COLUMN	CMP64G	444
22615	6176777771			SB7	B6-6		CMP64G	445
		54661		SA6	A6+B1		CMP64G	446
22616	0670022617			PL	B7,SQU9A	IF AT LEAST 12 ZERO BITS	CMP64G	447
		13666		BX6	X6-X6		CMP64G	448
		54661		SA6	A6+B1		CMP64G	449
22617	7066747161		SQU9A	SX6	A6-SQIMAGE+1		CMP64G	450
		5160003263		SA6	SQLGN		COMPASS	14704
22620	0400022560			EQ	SQUEEZE	RETURN	COMPASS	14705

**	TLUMIC	- LOOK UP ENTRY IN MICRO TABLE.	CMP30	4719
*	ENTRY	(X7) = MICRO NAME.	CMP30	4720
*	EXIT	(B4) = WORD COUNT OF ENTRY INCLUDING HEADER WORD.	CMP30	4721
*		(B4) = 0 IF MICRO NOT FOUND.	CMP30	4722
*		(A2) = FWA-1 OF ENTRY.	CMP30	4723
*	USES	A2,A5,A7,X0,X2,X3,X5,X6,X7,B4,B6.	CPS192	7
*	CALLS	NONE.	CMP30	4725

22621	0000000000		TLUMIC	PS		RETURN EXIT	CMP30	4727
22622	5120003474			SA2	L.MICTAB		CMP30	4728
		5150003435		SA5	O.MICTAB		CMP30	4729
22623	6262777776			SB6	X2-1		CMP30	4730
		53256		SA2	X5+B6		CMP30	4731
		27717		PX7	X7,B1	STORE NAME TO STOP SEARCH	CMP30	4732
22624	53750			SA7	X5		CMP30	4733
		26607		UX6	X7		CMP30	4734
22625	26542		MLU1	UX5,B4	X2	SEARCH MICRO TABLE	CMP30	4735
		13765		BX7	X6-X5		CMP30	4736
		67664		SB6	B6-B4		CMP30	4737
		55224		SA2	A2-B4		CMP30	4738
22626	0317022625			NZ	X7,MLU1	LOOP	CMP30	4739
		0660022621		PL	B6,TLUMIC	IF FOUND, RETURN	CMP30	4740
22627	10766			BX7	X6		CMP30	4741
		66400		SB4	B0	NOT FOUND, TRY BUILT-IN MICROS	CMP30	4742
		5120022671		SA2	MLUB-1		CMP30	4743

22630	6160000004		SB6	MLUB-MLUA-1	CMP30	4745
	5170022665		SA7	MLUA	CMP30	4746
22631	13672	MLU2	BX6	X7-X2	SEARCH BUILT-IN MICRO NAMES	CMP30 4747
	67661		SB6	B6-B1		CMP30 4748
	5022777776		SA2	A2-1		CMP30 4749
22632	0316022631		NZ	X6,MLU2	LOOP	CMP30 4750
	0760022621		MI	B6,TLUMIC	IF NOT FOUND, RETURN	CMP30 4751
22633	6140000002		SB4	2		CMP30 4752
	5126022672		SA2	MLUB+B6		CMP30 4753
22634	0560022621		NZ	B6,TLUMIC	IF NOT *SEQUENCE*, RETURN	CMP30 4754
	5150000130		SA5	CP.IFORM		CMP30 4755
22635	20573		LX5	-1		CP114 53
	0335022643		MI	X5,MLU4	IF MODIFY COMPRESSED INPUT	CP114 54
	54521		SA5	A2+B1		CMP30 4757
22636	43614		MX6	12		CMP30 4758
	11765		BX7	X6*X5	COLUMNS 81-82	CMP30 4759
	12672		BX6	X7+X2		CMP30 4760
	13757		BX7	X5-X7	COLUMNS 83-90	CMP30 4761
22637	20614		LX6	12	COLUMNS 73-82	CMP30 4762
	7150000010		SX5	8		CMP30 4763
	20714		LX7	12		CMP30 4764
22640	36775		IX7	X7+X5	APPEND CHARACTER COUNT	CMP30 4765
	5170003566		SA7	P1TEMPE		CMP30 4766
	10766		BX7	X6	STORE MICRO VALUE	CMP30 4767
22641	55771		SA7	A7-B1		CMP30 4768
	55271		SA2	A7-B1		CMP30 4769
	66441		SB4	B4+B1	WORD COUNT = 3	CMP30 4770
22642	0400022621		EQ	TLUMIC	RETURN	CMP30 4771
						CPS010 78
22643	10733	MLU4	BX7	X3	MODIFY	CMP30 4792
	43652		MX6	-18		CMP30 4793
	5170003564		SA7	P1TEMPC	SAVE (X3)	CMP30 4794
22644	66400		SB4	B0		CMP30 4795
	15026		BX0	-X6*X2	SEQUENCE NUMBER	CMP30 4796
	5150012171		SA5	=1H		CMP30 4797
22645	5120012231		SA2	=0.1000000001P48		CMP30 4798
	10655		BX6	X5		CMP30 4799
22646	5150012232		SA5	=10.0P0		CMP30 4800
	27000		PX0	X0		CMP30 4801
	10355		BX3	X5		CMP30 4802
22647	42502	MLU5	DX5	X0*X2	CONVERT TO DECIMAL	CMP30 4803
	40002		FX0	X0*X2		CMP30 4804
	63600		SB6	X0		CMP30 4805
	20666		LX6	-6		CMP30 4806
22650	6144000006		SB4	B4+6		CMP30 4807
	40753		FX7	X5*X3		CMP30 4808
22651	7257777755		SX5	X7+1R0-1R		CMP30 4809
	36656		IX6	X5+X6		CMP30 4810
22652	0560022647		NZ	B6,MLU5	LOOP	CMP30 4811
	20666		LX6	-6		CMP30 4812
	22646		LX6	X6,B4		CMP30 4813
22653	5120022672		SA2	SEQMIC		CMP30 4814
	5150012157		SA5	=4L		CMP30 4815
22654	43730		MX7	24		CMP30 4816
	20644		LX6	-24		CMP30 4817
	11776		BX7	X7*X6		CMP30 4818
	13667		BX6	X6-X7		CMP30 4819

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22702	0317022677	54111	UCARD2	SA1	A1+B1		CMP64G	461
				NZ	X7,UCARD0	IF NOT 00 NOR 77	CMP64G	462
		0337022726		MI	X7,UCARDS	IF 77 (SEMICOLON OR PARAMETER MARK)	CMP64G	463
22703	67661			SB6	B6-B1		CMP64G	464
	20106			LX1	6	00, EXTRACT NEXT CHARACTER	CMP64G	465
		15610		BX6	-X0*X1		CMP64G	466
		63561		SB5	X6+B1		CMP64G	467
22704	0560022705			NZ	B6,UCARD3	IF NOT END OF WORD	CMP64G	468
		64600		SB6	A0		CMP64G	469
		54111		SA1	A1+B1		CMP64G	470
22705	21601		UCARD3	AX6	1		CMP64G	471
	66225			SB2	B2+B5		CMP64G	472
		0316022700		NZ	X6,UCARD1	IF 0002-0077 (3 TO 64 BLANKS)	CMP64G	473
22706	67225			SB2	B2-B5		CMP64G	474
	13666			BX6	X6-X6		CMP64G	475
		0551022677		NE	B5,B1,UCARD0	IF 0001, GO STORE 00 (COLON)	CMP64G	476
							CMP64G	477
22707	65606			SB6	A0-B6	0000, END OF STATEMENT	CMP64G	478
		0720022710		NG	B2,UCARD4	IF STATEMENT NOT TOO LONG	CMP64G	479
		66200		SB2	B0		CMP64G	480
22710	6122001307		UCARD4	SB2	B2+71*NCARDS+1	CALCULATE NUMBER OF COLUMNS	CMP64G	481
		6130000107		SB3	71		CMP64G	482
22711	76720			SX7	B2		CPSA175	6
	0317022712			NZ	X7,UCARD5	IF NOT EMPTY STATEMENT	CMP64G	484
		76710		SX7	B1		CMP64G	485
22712	67223		UCARD5	SB2	B2-B3	CALCULATE NUMBER OF CARDS IN STATEMENT	CMP64G	486
		73661		SX6	X6+B1		CMP64G	487
		0732022712		GT	B2,B3,UCARD5		CMP64G	488
22713	5160003306			SA6	CCT		CMP64G	489
		5170003261		SA7	LASTCOL		CMP64G	490
22714	74611			SX6	A1+B1	(X6) = FWA NEXT STATEMENT	CMP64G	491
	0560022715			NZ	B6,UCARD	IF NOT END OF WORD	CMP64G	492
		74610		SX6	A1		CMP64G	493
							CMP64G	494
22715	0000000000		UCARD	PS		RETURN EXIT	CMP64G	495
22716	7160000055			SX6	1R		CMP64G	496
		10766		BX7	X6		CMP64G	497
		53110		SA1	X1		CMP64G	498
22717	5140003261			SA4	LASTCOL		CMP64G	499
		6274777776		SB7	X4-1		CMP64G	500
22720	5160026436			SA6	STYPE		CMP64G	501
		43573		MX5	59		CMP64G	502
		66611		SB6	B1+B1		CMP64G	503
22721	6120776467			SB2	-71*NCARDS-2		CMP64G	504
		65362		SB3	A6-B2		CMP64G	505
		43066		MX0	-6		CMP64G	506
22722	54761		UCARD7	SA7	A6+B1	STORE BLANKS IN CARD AREA	CMP64G	507
		6177777775		SB7	B7-2		CMP165	190
		54671		SA6	A7+B1		CMP64G	510
22723	0670022722			PL	B7,UCARD7		CMP64G	511
		5100000012		SA0	10		CMP64G	512
22724	6140000066			SB4	54		CMP64G	513
		64600		SB6	A0		CMP64G	514
22725	0400022700			EQ	UCARD1		CMP64G	515
							COMPASS	14807
			*		SUSTITUTE PARAMETER.		COMPASS	14808
							COMPASS	14809

22726	23741	UCARDS	AX7	X1,B4	77, EXTRACT NEXT CHARACTER	CMP64G	516
	15770		BX7	-X0*X7		CMP64G	517
	0307022677		ZR	X7,UCARD0	IF 00 (END-OF-LINE OR COLON)	CMP64G	518
22727	5130003423		SA3	0.STACK		COMPASS	14813
	5140003462		SA4	L.STACK		COMPASS	14814
22730	36334		IX3	X3+X4		COMPASS	14815
	0304022677		ZR	X4,UCARD0	IF NO STACK ENTRY EXISTS	CPS0257	7
22731	6277777776		SB7	X7-1	PARAMETER NUMBER	CMP64G	519
	64500		SB5	A0		COMPASS	14817
22732	5243777774		SA4	X3-3	FETCH SECOND WORD OF STACK ENTRY	COMPASS	14818
	5120003472		SA2	L.MARDIS		COMPASS	14819
22733	73347		SX3	X4+B7		COMPASS	14820
	37232		IX2	X3-X2		COMPASS	14821
	0322022677		PL	X2,UCARD0	IF PARAMETER NUMBER TOO LARGE	CMP64G	520
22734	5120003433		SA2	0.MARDIS		COMPASS	14823
	67661		SB6	B6-B1	UPDATE SOURCE POINTERS	CMP64G	521
	20106		LX1	6		CMP64G	522
22735	0560022736		NZ	B6,UCD1	IF NOT END OF WORD	CMP64G	523
	64600		SB6	A0		CMP64G	524
	54111		SA1	A1+B1		CMP64G	525
22736	36423	UCD1	IX4	X2+X3		CMP64G	526
	53340		SA3	X4		COMPASS	14825
	5140003434		SA4	0.MARGS		COMPASS	14826
22737	63730		SB7	X3		COMPASS	14827
	53247		SA2	B7+X4		COMPASS	14828
	26373		UX3,B7			CMP165	191
22740	0670022770		PL	B7,UCARDS1	IF NOT IRP PARAMETER	CMP165	192
						COMPASS	14830
		*		UNPACK IRP PARAMETER.		COMPASS	14831
						COMPASS	14832
	20322		LX3	59-41		CMP165	193
	63430		SB4	X3	(B4) = SHIFT COUNT FOR CURRENT CHARACTER	CMP165	194
22741	26353		UX3,B5			CMP165	195
	5100000074		SA0	60	(A0) = 60	CMP165	196
	20314		LX3	41-29		CMP165	197
22742	66557		SB5	B5+B7	(B5) = - REMAINING CHARACTER COUNT	CMP165	198
	26373		UX3,B7			CMP165	199
	54227		SA2	A2+B7	(X2) = CURRENT WORD OF ARGUMENT	CMP165	200
22743	6144000006		SB4	B4+6		CMP165	201
	66551		SB5	B5+B1		CMP165	202
	22342		LX3	X2,B4	GET NEXT CHARACTER	CMP165	203
22744	65704		SB7	A0-B4		CMP165	204
	0705022755		GT	B5,UCD6	IF PAST END OF ARGUMENT	CMP165	205
	15630		BX6	-X0*X3		CMP165	206
22745	0570022746		NZ	B7,UCD2	IF NOT END OF WORD	CMP165	207
	54221		SA2	A2+B1		COMPASS	14846
	66400		SB4	B0		CMP165	208
22746	6276777726	UCD2	SB7	X6-1R(		COMPASS	14848
	43400		MX4	0		COMPASS	14849
22747	0470022760		ZR	B7,UCD7A	IF FIRST CHARACTER IS *(	CMP165	209
	0400022754		EQ	UCD5		COMPASS	14851
						COMPASS	14852
22750	0620022751	UCD3	PL	B2,UCD4	IF END OF CARD BUFFER	COMPASS	14853
	56623		SA6	B2+B3		COMPASS	14854
	66221		SB2	B2+B1		COMPASS	14855
22751	6144000006	UCD4	SB4	B4+6		CMP165	210
	66551		SB5	B5+B1		CMP165	211

*

* INTERMEDIATE TABLE.
* INTERMEDIATE FILE FORMAT:
*

COMPASS 14956
COMPASS 14957
COMPASS 14958

* OPTYPE 3/TYPE,10/,1/TW,1/SF,1/FF,1/IF,2/,7/L,4/CCT,30/BIN
* IND 22/,8/FLAGS,12/,18/EFLAGS
* FLAG 60/FLAG
* SEQUENCE 12/,48/NAME
* 60/NUMBER
* CARD 60/CARD

CMP24 493
COMPASS 14960
COMPASS 14961
COMPASS 14962
COMPASS 14963
COMPASS 14964

* TYPE = OPERATION TYPE.
* TW = TWO-WORD SEQUENCE FIELD(S) PRESENT.
* SF = SEQUENCE FIELD PRESENT FOR EACH CARD.
* FF = FLAG PRESENT.
* IF = IND PRESENT.
* L = LENGTH OF COMPRESSED RECORD.
* CCT = NUMBER OF CARDS.
* BIN = INFORMATION FROM PASS 1 PROCESSOR.

COMPASS 14965
COMPASS 14966
CMP24 494
CMP24 495
COMPASS 14968
COMPASS 14969
CMP24 496
COMPASS 14971
CMP24 497

* FLAGS = 200 NOAS
* 100 TXTFLG
* 040 MICFLG
* 020 SYSFLG
* 010 MACFLG
* 004 ECHFLG
* 002 RMTFLG
* 001 LIMFLG

COMPASS 14973
COMPASS 14974
COMPASS 14975
COMPASS 14976
COMPASS 14977
COMPASS 14978
COMPASS 14979
COMPASS 14980
COMPASS 14981

* TABLE JUST OVERFLOWED.

COMPASS 14982
COMPASS 14983
COMPASS 14984

22773 76600 WIN7 SX6 B0 CLEAR INTERMEDIATE FILE TABLE
5160003441 SA6 L.INTER

COMPASS 14985
COMPASS 14986
COMPASS 14987

* WRITE INFORMATION ON SCRATCH FILE.

COMPASS 14988
COMPASS 14989
CMP30 4855

22774 67776 RM IFEQ CP#RM,0
WIN8 WRITEW S,B6,B7-B6
RM ELSE

CMP30 4856
COMPASS 14990
CMP30 4857

WIN8 SX3 B7-B6
IX4 X3+X3
LX3 3
IX2 X3+X4
SX1 B6
PUT S,X1,X2

CMP30 4858
CMP30 4859
CMP30 4860
CMP30 4861
CMP30 4862
CMP30 4863

RM ENDIF

CMP30 4864
CMP30 4865

22776 5110003263 SA1 SQLGN

COMPASS 14991

6160030617 RM IFEQ CP#RM,0
WRITEW S,SQIMAGE,X1

CMP30 4866
CMP30 4867
COMPASS 14992

RM ELSE
IX2 X1+X1
LX1 3

CMP30 4868
CMP30 4869
CMP30 4870

IX1 X1+X2
PUT S,SQIMAGE,X1

CMP30 4871
CMP30 4872

RM ENDIF

CMP30 4873

	23001	0000000000	WINTER	PS		RETURN EXIT	COMPASS	14993
	23002	5110003170		SA1	STCNT	INCREMENT STATEMENT COUNT	COMPASS	14994
							COMPASS	14995
1		76610		SX6	B1		COMPASS	14996
2		36661		IX6	X6+X1		COMPASS	14997
3	23003	54610		SA6	A1		COMPASS	14998
4		5120003556		SA2	IFCNT	SET NOAS (NO ASSEMBLY FLAG) IF IFCNT .NE. 0	COMPASS	14999
5		76600		SX6	B0		COMPASS	15000
6	23004	0302023006		ZR	X2,WIN1	IF NOT IF SKIPPING	COMPASS	15001
7		5120003361		SA2	LF+1		COMPASS	15002
8	23005	0302023001		ZR	X2,WINTER	IF NOT LISTING IF-SKIPPED LINES	COMPASS	15003
9		76610		SX6	B1		COMPASS	15004
10	23006	5160003307	WIN1	SA6	NOAS		COMPASS	15005
11		0100022560		RJ	SQUEEZE	COMPRESS LINE	COMPASS	15006
12	23007	6160030002		SB6	SEQ-1		COMPASS	15007
13		6170030003		SB7	SEQ		COMPASS	15008
14	23010	5120003304		SA2	FLAG	CHECK FLAG WORD	COMPASS	15009
15		76510		SX5	B1		COMPASS	15010
16		20554		LX5	44		COMPASS	15011
17	23011	5110003303		SA1	OPTYPE		COMPASS	15012
18		43022		MX0	18		COMPASS	15013
19		10722		BX7	X2		COMPASS	15014
20	23012	56760		SA7	B6		COMPASS	15015
21		20060		LX0	48		COMPASS	15016
22		15010		BX0	-X0*X1	(X0) = OPTYPE	COMPASS	15017
23	23013	0302023014	+	ZR	X2,*+1	IF NO FLAG	COMPASS	15018
24		12005		BX0	X0+X5		COMPASS	15019
25		67661		SB6	B6-B1		COMPASS	15020
26	23014	43600		MX6	0	FETCH CONTROL FLAGS	COMPASS	15021
27		6150000010		SB5	LIBFLG-NOAS		COMPASS	15022
28	23015	5110003307		SA1	NOAS		COMPASS	15023
29	23016	67551	WIN2	SB5	B5-B1		COMPASS	15024
30		36466		IX4	X6+X6		COMPASS	15025
31		12641		BX6	X4+X1		COMPASS	15026
32		54111		SA1	A1+B1		COMPASS	15027
33	23017	0650023016		PL	B5,WIN2	LOOP	COMPASS	15028
34		5110003345		SA1	EFLG		COMPASS	15029
35	23020	20636		LX6	30		COMPASS	15030
36		0301023024		ZR	X1,WIN4	IF NO ERROR FLAGS	COMPASS	15031
37	23021	6150000024		SB5	LEFLG-1		COMPASS	15032
38		5110003320		SA1	ERFLAGS		COMPASS	15033
39	23022	22451	WIN3	LX4	X1,B5		COMPASS	15034
40		67551		SB5	B5-B1		COMPASS	15035
41		54111		SA1	A1+B1		COMPASS	15036
42		12664		BX6	X6+X4		COMPASS	15037
43	23023	0650023022		PL	B5,WIN3	LOOP	COMPASS	15038
44	23024	21501	WIN4	AX5	-43+44		COMPASS	15039
45		56660		SA6	B6		COMPASS	15040
46		5110003306		SA1	CCT	CHECK SEQUENCE FIELDS	COMPASS	15041
47	23025	0306023026	+	ZR	X6,*+1	IF NO IND	COMPASS	15042
48		12005		BX0	X0+X5		COMPASS	15043
49		67661		SB6	B6-B1		COMPASS	15044
50	23026	5130003462		SA3	L.STACK		CMP24	498
51		5120000130		SA2	CP.IFORM		CMP30	4874
52	23027	10611		BX6	X1		CMP24	500
53		66411		SB4	B1+B1		CMP24	501
54		76511		SX5	B1+B1		CMP24	502
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57								
58								
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		20636		LX6	30		CMP24	503
	23030	12006		BX0	X0+X6		CMP24	505
		20273		LX2	59		CMP24	506
		0313023041		NZ	X3,WIN6	IF GENERATED STATEMENT	CMP24	508
	23031	63410		SB4	X1		CPS004	78
		76510		SX5	B1		CMP24	514
		0332023041		MI	X2,WIN6	IF MODIFY COMPRESSED INPUT	CMP24	515
							CMP24	516
	23032	63510		SB5	X1	CHECK FOR SEQUENCE FIELDS ALL BLANK	CMP24	517
		43100		MX1	0		COMPASS	15052
		5120012233		SA2	=8R		COMPASS	15053
	23033	66455		SB4	B5+B5		COMPASS	15054
		5130012171		SA3	=10R		COMPASS	15055
	23034	5140030003		SA4	SEQ		COMPASS	15056
		54541		SA5	A4+B1		COMPASS	15057
	23035	13624	WIN5	BX6	X2-X4		COMPASS	15059
		54451		SA4	A5+B1		COMPASS	15060
		13735		BX7	X3-X5		COMPASS	15061
		54541		SA5	A4+B1		COMPASS	15062
	23036	67551		SB5	B5-B1		COMPASS	15063
		12667		BX6	X6+X7		COMPASS	15064
		12116		BX1	X1+X6		COMPASS	15065
	23037	0550023035		NZ	B5,WIN5	LOOP TO CHECK ALL CARDS	COMPASS	15066
		0301023042		ZR	X1,WIN6A	IF SEQUENCE FIELDS ALL BLANK	CMP24	518
	23040	7150000003		SX5	3		CMP24	519
	23041	20555	WIN6	LX5	45		CMP24	520
		66774		SB7	B7+B4		CMP24	521
		12005		BX0	X0+X5		CMP24	522
	23042	5110003263	WIN6A	SA1	SQLGN	SET RECORD LENGTH IN OPTYPE	CMP24	523
		67576		SB5	B7-B6		COMPASS	15073
		73715		SX7	X1+B5		COMPASS	15074
	23043	20742		LX7	34		COMPASS	15075
		12607		BX6	X0+X7		COMPASS	15076
		5120003146		SA2	INTERIO	CHECK INTERMEDIATE	COMPASS	15077
	23044	56660		SA6	B6	STORE OPTYPE	COMPASS	15078
		0312022774		NZ	X2,WIN8	IF INTERMEDIATE ON DISK	COMPASS	15079
		76660		SX6	B6		COMPASS	15080
	23045	76750		SX7	B5		COMPASS	15081
		5160023057		SA6	WINA		COMPASS	15082
		54761		SA7	A6+B1		COMPASS	15083
	23046	73115		MANAGE	INTER,X1+B5	AUGMENT INTERMEDIATE	COMPASS	15084
	23047	5110003146		SA1	INTERIO		COMPASS	15085
		5140023057		SA4	WINA		COMPASS	15086
	23050	54541		SA5	A4+B1		COMPASS	15087
		63640		SB6	X4		COMPASS	15088
		63756		SB7	X5+B6		COMPASS	15089
		36632		IX6	X3+X2		COMPASS	15090
	23051	0311022773		NZ	X1,WIN7	IF TABLE JUST OVERFLOWED	COMPASS	15091
		5110003263		SA1	SQLGN		COMPASS	15092
	23052	37361		IX3	X6-X1		COMPASS	15093
		37235		IX2	X3-X5		COMPASS	15094
	23053	56460	+	SA4	B6	MOVE FLAGS AND SEQUENCE FIELDS	COMPASS	15095
		66661		SB6	B6+B1		COMPASS	15096
		10644		BX6	X4		COMPASS	15097
		53620		SA6	X2		COMPASS	15098
	23054	73221		SX2	X2+B1		COMPASS	15099
		0567023053		NE	B6,B7,*-1	LOOP	COMPASS	15100

COMPASS	15101
COMPASS	15102
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COMPASS 15105

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CMP041	50

COMPASS 15135

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	43006		MX0	6		COMPASS	15151	
	54761		SA7	A6+B1	SAVE EQUIVALENT	COMPASS	15152	
23075	20106		YDEFSYM1	LX1	6	COMPASS	15153	
	11210		BX2	X1*X0	LEFT JUSTIFY SYMBOL	COMPASS	15154	
	0302023075		ZR	X2,YDEFSYM1		COMPASS	15155	
23076	43366		MX3	54	CHECK FOR INVALID SYMBOLS	COMPASS	15156	
	6170000011		SB7	9		COMPASS	15157	
	76600		SX6	B0		COMPASS	15158	
23077	5150012234		SA5	=77776360020B	MASK FOR NUMBERS + - * / BL , &	COMPASS	15159	
23100	20106		YDEFSYM8	LX1	6	COMPASS	15160	
	15413		BX4	-X3*X1		COMPASS	15161	
	63640		SB6	X4		COMPASS	15162	
	67771		SB7	B7-B1		COMPASS	15163	
23101	22765		LX7	X5,B6		COMPASS	15164	
	12667		BX6	X6+X7		COMPASS	15165	
	5150012235		SA5	=36060020B	MASK FOR + - * / BL , &	COMPASS	15166	
23102	0670023100		PL	B7,YDEFSYM8		COMPASS	15167	
	0336023141		NG	X6,YDEFSYM2	JUMP IF ANY BAD CHARACTERS PRESENT	COMPASS	15168	
23103	20214		LX2	12	CHECK FIRST CHARACTER FOR A B OR X	COMPASS	15169	
	5130003114		SA3	MACHINE		COMPASS	15170	
23104	5140003121		SA4	SYNAME		CMP27	29	
	6272777477		SB7	X2-1RC*64		COMPASS	15171	
23105	6262774777		SB6	X2-1RX*64		COMPASS	15173	
	0313023116		NZ	X3,YDEFSYM4	DONT BOTHER IF PP CODE OR	CMP27	30	
23106	0314023116		NZ	X4,YDEFSYM4	IF ASSEMBLING SYSTEM TEXT	CMP27	31	
23107	0770023110	+	NG	B7,*+1	IF FIRST LETTER IS A OR B	COMPASS	15174	
	0560023116		NZ	B6,YDEFSYM4	IF FIRST LETTER IS NOT X	COMPASS	15175	
23110	21160		AX1	48	CHECK ON SECOND LETTER	COMPASS	15176	
	37212		IX2	X1-X2		COMPASS	15177	
	6272777744		SB7	X2-1R0		COMPASS	15178	
23111	6262777734		SB6	X2-1R8		CMP22	3	
	7252777720		SX5	X2-1R.		CMP22	4	
23112	54160		SA1	A6	RECLAIM RIGHT-JUSTIFIED SYMBOL	CMP22	5	
	43060		MX0	48		CMP22	6	
	0770023116		NG	B7,YDEFSYM4		COMPASS	15179	
23113	0660023114		PL	B6,YDEFSYM3	IF 2ND CHAR NOT 0-7	CMP22	7	
	11501		BX5	X0*X1		CMP22	8	
23114	0315023116		YDEFSYM3	NZ	X5,YDEFSYM4 IF MORE THAN 2 CHARS OR 2ND CHAR NOT *.*	CMP22	9	
	76610		SX6	B1		CMP22	10	
23115	5160003345		SA6	EFLG	COMPLAIN ABOUT REGISTER SYMBOL	CMP22	11	
	5160003333		SA6	W1ERR		CMP22	12	
23116	5110023143		YDEFSYM4	SA1	YDEFSYMT	COMPASS	15185	
	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL	COMPASS	15186	
23117	0313023122		NZ	X3,YDEFSYM5	IF FOUND	CMP19	334	
23120	5120023144		YDS4	SA2	YDEFSYMT+1	COMPASS	15188	
	0100005407		RJ	ENTSYMT	ENTER SYMBOL	COMPASS	15189	
23121	43600		MX6	0		CMP25	78	
	0400023067		EQ	YDEFSYM		COMPASS	15190	
23122	7203777776		YDEFSYM5	SX0	X3-1	CHECK QUALIFIER VALUE	CP096A	507
	53400		RX4	X0		CP096A	508	
	13645		BX6	X4-X5		COMPASS	15192	
23123	0316023120		NZ	X6,YDS4	IF NOT SAME QUALIFIER	COMPASS	15193	
	20235		LX2	59-30		CMP19	335	
23124	0332023130		NG	X2,YDS5	IF DEFINED	CMP19	336	
	20237		LX2	30-59		CMP19	337	
23125	5140023144		SA4	YDEFSYMT+1		CMP041	51	
	43534		MX5	28		CMP19	339	

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23151	10611		BX6	X1		COMPASS	15245
	5160023313		SA6	YEVITEMS		COMPASS	15246
23152	5110003145		SA1	CHAR		COMPASS	15247
	5120003114		SA2	MACHINE		COMPASS	15248
23153	6271777774		SB7	X1-3		COMPASS	15249
	0312023156		NZ	X2,YEVIT10	JUMP IF PP TO IGNORE REGISTER CHECKS	COMPASS	15250
23154	0770023315		NG	B7,YEVIT500	IF FIRST LETTER IS A OR B	COMPASS	15251
	6271777747		SB7	X1-1RX		COMPASS	15252
23155	0470023315		EQ	B7,YEVIT500	IF FIRST LETTER IS X	COMPASS	15253
23156	6271777744	YEVIT10	SB7	X1-1RZ-1		COMPASS	15254
	0770023164		NG	B7,YEVIT21	JUMP IF LETTER	COMPASS	15255
23157	6271777732		SB7	X1-1R9-1		COMPASS	15256
	0770023311		NG	B7,YEVIT100	IF DIGIT	COMPASS	15257
23160	6271777727		SB7	X1-1R/		COMPASS	15258
	0470023221		ZR	B7,YEVIT300	IF SLASH	COMPASS	15259
23161	6271777723		SB7	X1-1R=		COMPASS	15260
	0470023250		ZR	B7,YEVIT400	IF EQUALS SIGN	COMPASS	15261
23162	6271777730		SB7	X1-1R*		COMPASS	15262
	0470023170		ZR	B7,YEVIT200	IF ASTERISK	COMPASS	15263
23163	6271777724		SB7	X1-1R\$		COMPASS	15264
	0470023211		EQ	B7,YEVIT250	IF DOLLAR SIGN	COMPASS	15265
						COMPASS	15266
		*		ALPHABETIC CHARACTER LEADS THE ELEMENT.		COMPASS	15267
						COMPASS	15268
23164	0100006025	YEVIT21	RJ	SCITEM		COMPASS	15269
23165	10166	YEVIT22	BX1	X6		COMPASS	15270
	0301023176		ZR	X1,YEVITER	COMPLAIN ABOUT EMPTY SYMBOL	COMPASS	15271
23166	0100023466		RJ	YTLUSYM	LOOK UP SYMBOL	COMPASS	15272
23167	0400023313		EQ	YEVITEMS	AND GO TO EXIT SWITCH	COMPASS	15273
						COMPASS	15274
		*		ASTERISK.		COMPASS	15275
						COMPASS	15276
23170	0100006025	YEVIT200	RJ	SCITEM		COMPASS	15277
23171	6276777730		SB7	X6-1R*		COMPASS	15278
	6266773063		SB6	X6-2R*L		COMPASS	15279
23172	6256773060		SB5	X6-2R*0		COMPASS	15280
	0470023201		ZR	B7,YEVIT210	IF ASTERISK	COMPASS	15281
23173	0460023201		ZR	B6,YEVIT210	IF *L	COMPASS	15282
	0450023205		ZR	B5,YEVIT220	IF *0	COMPASS	15283
23174	6276773057		SB7	X6-2R*P		COMPASS	15284
	6266773071		SB6	X6-2R*F		COMPASS	15285
23175	0470023206		ZR	B7,YEVIT230	IF *P	COMPASS	15286
	0460023210		ZR	B6,YEVIT240	IF *F	COMPASS	15287
						COMPASS	15288
		*		ERROR IN ITEM.		COMPASS	15289
						COMPASS	15290
23176	76610	YEVITER	SX6	B1	NOTE ERROR	COMPASS	15291
	5160003322		SA6	AERR		COMPASS	15292
23177	5160003345		SA6	EFLG		COMPASS	15293
	5160006302		SA6	EXERR		COMPASS	15294
23200	0400023313		EQ	YEVITEMS		COMPASS	15295
						COMPASS	15296
		*		* OR *L ELEMENT.		COMPASS	15297
						COMPASS	15298
23201	5120003106	YEVIT210	SA2	LOCCTR		COMPASS	15299
23202	54321	YEVIT211	SA3	A2+B1		COMPASS	15300
	10622		BX6	X2		COMPASS	15301

		22703		LX7	X3		COMPASS	15302
23203	5160006275		YEVIT212	SA6	ELVAL		COMPASS	15303
	54761			SA7	A6+B1		COMPASS	15304
23204	0400023313			EQ	YEVITEMS		COMPASS	15305
			*		*O ELEMENT.		COMPASS	15306
							COMPASS	15307
							COMPASS	15308
23205	5120003104		YEVIT220	SA2	ORGCTR		COMPASS	15309
	0400023202			EQ	YEVIT211		COMPASS	15310
			*		*P ELEMENT.		COMPASS	15311
							COMPASS	15312
							COMPASS	15313
23206	5120003110		YEVIT230	SA2	POSCTR		COMPASS	15314
23207	10622		YEVIT231	BX6	X2		COMPASS	15315
	43700			MX7	0		COMPASS	15316
	0400023203			EQ	YEVIT212		COMPASS	15317
			*		*F ELEMENT.		COMPASS	15318
							COMPASS	15319
							COMPASS	15320
23210	5120003061		YEVIT240	SA2	FMODE		COMPASS	15321
	0400023207			EQ	YEVIT231		COMPASS	15322
			*		DOLLAR SIGN.		COMPASS	15323
							COMPASS	15324
							COMPASS	15325
23211	0100006025		YEVIT250	RJ	SCITEM	CHECK THAT ELEMENT IS ONLY DOLLAR SIGN	COMPASS	15326
23212	5110003116			SA1	PPTYPE		F4820	735
	73111			SX1	X1+B1		F4820	736
23213	0301023201			ZR	X1,YEVIT210	IF BCU ASSEMBLY	F4820	737
	6276777724			SB7	X6-1R\$		COMPASS	15327
23214	5120003110			SA2	POSCTR		COMPASS	15328
	0312023217			NZ	X2,YEVITOK	EXIT IF STILL IN THIS WORD	COMPASS	15329
23215	0100023346			RJ	YFOUP	RESET POSCTR	COMPASS	15330
23216	5120003110			SA2	POSCTR		COMPASS	15331
23217	7262777776		YEVITOK	SX6	X2-1		COMPASS	15332
	43700			MX7	0		COMPASS	15333
23220	0470023203			ZR	B7,YEVIT212		COMPASS	15334
	0400023176			EQ	YEVITER		COMPASS	15335
			*		SLASH ELEMENT.		COMPASS	15336
							COMPASS	15337
							COMPASS	15338
23221	0100005444		YEVIT300	RJ	GETCH		COMPASS	15339
23222	5120003145			SA2	CHAR	CHECK NEXT CHARACTER	COMPASS	15340
	7212777727			SX1	X2-1R/		COMPASS	15341
23223	0301023226			ZR	X1,YEVIT303	IF */*	COMPASS	15342
	0100006025			RJ	SCITEM	SCAN OFF NAME OF ATTRIBUTE	COMPASS	15343
23224	6271777727			SB7	X1-1R/	MAKE SURE IT ENDED ON A SLASH	COMPASS	15344
	0570023245			NZ	B7,YEVIT301		COMPASS	15345
23225	10166			BX1	X6		COMPASS	15346
23226	0100006151		YEVIT303	RJ	SQV	SET QUAL VALUE	COMPASS	15347
23227	0100005444			RJ	GETCH	THROW AWAY TERMINAL /	COMPASS	15348
23230	0100006025			RJ	SCITEM		COMPASS	15349
23231	10166			BX1	X6		COMPASS	15350
	0306023244			ZR	X6,YEVIT302	IF NO SYMBOL	COMPASS	15351
23232	0100023466			RJ	YTLUSYM		COMPASS	15352
23233	5110003113			SA1	QVAL+1	RESET QVAL	COMPASS	15353
	10611			BX6	X1		COMPASS	15354
	55611			SA6	A1-B1		COMPASS	15355

23234	0303023313		ZR	X3,YEVITEMS IF NOT DEFINED	CMP1	5
	7203777776		SX0	X3-1	CP096A	512
23235	53100		RX1	X0	CP096A	513
	13651		BX6	X5-X1	CMP1	7
	0306023313		ZR	X6,YEVITEMS IF THE SAME QUALIFIER	CMP1	8
23236	76610		SX6	B1 SET UNDEFINED ERROR	CMP1	9
	43700		MX7	0	CMP1	10
	5170006275		SA7	ELVAL	CMP1	12
23237	54771		SA7	A7+B1 ELREL	CMP1	14
	54771		SA7	A7+B1 ELEFT	CMP1	15
	5110003200		SA1	IFDF	CMP146	21
23240	0311023243		NZ	X1,YEVIT304 IF IF DEF/EXT/REG	CMP146	22
	5160003327		SA6	UERR	CMP146	23
23241	5160003345		SA6	EFLG SET UNDEFINED ERROR	CMP146	24
	5160006302		SA6	EXERR	CMP1	16
23242	0400023313		EQ	YEVITEMS	COMPASS	15356
23243	76611	YEVIT304	SX6	B1+B1 IFDF = 2	CMP146	25
	54610		SA6	A1	CMP146	26
	0400023313		EQ	YEVITEMS	CMP146	27
23244	5110003113	YEVIT302	SA1	QVAL+1	COMPASS	15357
	10611		BX6	X1	COMPASS	15358
	55611		SA6	A1-B1	COMPASS	15359
23245	76610	YEVIT301	SX6	B1 COMPLAIN	COMPASS	15360
	5160003322		SA6	AERR	COMPASS	15361
23246	5160003345		SA6	EFLG	COMPASS	15362
	5160006302		SA6	EXERR	COMPASS	15363
23247	0400023313		EQ	YEVITEMS	COMPASS	15364
					COMPASS	15365
		*		EQUALS SIGN.	COMPASS	15366
					COMPASS	15367
23250	0100005444	YEVIT400	RJ	GETCH	COMPASS	15368
23251	6271777754		SB7	X1-1RS CHECK FOR SYMBOL LITERAL	COMPASS	15369
	6261777747		SB6	X1-1RX	COMPASS	15370
23252	0470023263		ZR	B7,YEVIT420	COMPASS	15371
	0460023303		ZR	B6,YEVIT430 IF =X FORMAT	COMPASS	15372
23253	7120030053		SX2	VALUES SCAN NUMERIC (CHARACTER) LITERAL	COMPASS	15373
	0461023306		EQ	B6,B1,YEVIT435 IF =Y FORMAT	CP154	24
23254	7130000144		SX3	NLITS	COMPASS	15374
	77401		SX4	-B1	COMPASS	15375
23255	5150003123		SA5	LWORD	COMPASS	15376
	0100006565		RJ	SCD SCAN DATA ITEM	COMPASS	15377
23256	0303023176		ZR	X3,YEVITER ERROR IF 0-LENGTH DATA	COMPASS	15378
	7120030053		SX2	VALUES	COMPASS	15379
23257	0100023430		RJ	YTLULIT LOOK UP LITERAL	COMPASS	15380
23260	43047		MX0	39	COMPASS	15381
	15630		BX6	-X0*X3	COMPASS	15382
	21330		AX3	24	COMPASS	15383
	10733		BX7	X3	COMPASS	15384
23261	5160006275		SA6	ELVAL	COMPASS	15385
	5170006276		SA7	ELREL	COMPASS	15386
23262	0400023313		EQ	YEVITEMS	COMPASS	15387
					COMPASS	15388
		*		SYMBOL LITERAL.	COMPASS	15389
					COMPASS	15390
23263	0100005444	YEVIT420	RJ	GETCH THROW AWAY S	COMPASS	15391
23264	76710		SX7	B1	COMPASS	15392
23265	20771	YEVIT423	LX7	-3	CMP19	352

1

* SUSPECTED REGISTER NAME.

COMPASS 15443

COMPASS 15444

COMPASS 15445

23315 5110003144

YEVI500

SA1

COLUMN

COMPASS 15446

23316 54211

SA2

A1+B1

FETCH NEXT COLUMN

COMPASS 15447

6272777720

SB7

X2-1R.

COMPASS 15448

23317 0470023331

ZR

B7,YEVI530 JUMP IF PERIOD

COMPASS 15449

6272777744

SB7

X2-1R0

COMPASS 15450

23320 0770023164

NG

B7,YEVI21

COMPASS 15451

6272777734

SB7

X2-1R8

COMPASS 15452

23321 0670023164

PL

B7,YEVI21

COMPASS 15453

54321

SA3

A2+B1

COMPASS 15454

23322 7140003036

SX4

3036B

COMPASS 15455

20444

LX4

36

COMPASS 15456

63730

SB7

X3

COMPASS 15457

23323 23574

AX5

X4,B7

COMPASS 15458

20573

LX5

59

COMPASS 15459

0325023164

PL

X5,YEVI21

COMPASS 15460

23324 73410

SX4

X1

COMPASS 15461

20403

LX4

3

COMPASS 15462

0100005444

RJ

GETCH

COMPASS 15463

23325 7256777744

SX5

X6-1R0

COMPASS 15464

12654

BX6

X5+X4

COMPASS 15465

23326 5160006300

SA6

ELREG

STORE REGISTER VALUE AND TYPE

COMPASS 15466

43774

MX7

60

COMPASS 15467

23327 5170006275

SA7

ELVAL

MAKE ELEMENT VALUE MINUS VERO

COMPASS 15468

0100005444

RJ

GETCH

COMPASS 15469

23330 0400023145

EQ

YEVITEM

COMPASS 15470

23331 20103

YEVI530

LX1

3

COMPASS 15471

10611

BX6

X1

COMPASS 15472

5160006300

SA6

ELREG

COMPASS 15473

23332 0100005444

RJ

GETCH

COMPASS 15474

23333 0100005444

RJ

GETCH

COMPASS 15475

23334 0100023313

RJ

YEVITEMS

SET EXIT SWITCH TO EVALUATE REG. NO.

COMPASS 15476

23335 5120006275

SA2

ELVAL

COMPASS 15477

54321

SA3

A2+B1

ELREL

COMPASS 15478

54431

SA4

A3+B1

ELEXT

COMPASS 15479

23336 12534

BX5

X3+X4

COMPASS 15480

5130006302

SA3

EXERR

COMPASS 15481

36553

IX5

X5+X3

COMPASS 15482

23337 0315023342

NZ

X5,YEVI550 COMPLAIN IF NOT ABSOLUTE

COMPASS 15483

7170000007

SX7

7

COMPASS 15484

23340 11672

BX6

X7*X2

COMPASS 15485

43774

MX7

60

COMPASS 15486

54720

SA7

A2

COMPASS 15487

54241

SA2

A4+B1

ELREG

COMPASS 15488

23341 36626

IX6

X2+X6

COMPASS 15489

54620

SA6

A2

COMPASS 15490

0400023344

EQ

YEVITEMN

COMPASS 15491

23342 76610

YEVI550

SX6

B1

COMPASS 15492

54630

SA6

A3

COMPASS 15493

5160003322

SA6

AERR

COMPASS 15494

23343 5160003345

SA6

EFLG

COMPASS 15495

23344 5110003145

YEVITEMN

SA1

CHAR

COMPASS 15496

0400023145

EQ

YEVITEM

COMPASS 15497

COMPASS 15498

23345 00000000000000000000

YEVITFL

DATA

0

COMPASS 15499

** YFOUP - FORCE UPPER.

COMPASS 15501

COMPASS 15502

COMPASS 15503

COMPASS 15504

COMPASS 15505

COMPASS 15506

COMPASS 15507

COMPASS 15508

COMPASS 15509

COMPASS 15510

COMPASS 15511

COMPASS 15512

CPSA288 216

COMPASS 15514

COMPASS 15515

COMPASS 15516

COMPASS 15517

COMPASS 15518

COMPASS 15519

COMPASS 15520

** YFUALL - FORCE UPPER ON ALL BLOCKS.

COMPASS 15522

* ALSO CREATES FLAG TO HAVE CURRENT BLOCK NUMBER IN HIGH
* 36 BITS, AND THE BASE USE IN THE LOW 24.

COMPASS 15523

COMPASS 15524

COMPASS 15525

COMPASS 15526

COMPASS 15527

COMPASS 15528

COMPASS 15529

COMPASS 15530

COMPASS 15531

COMPASS 15532

COMPASS 15533

COMPASS 15534

COMPASS 15535

COMPASS 15536

COMPASS 15537

COMPASS 15538

COMPASS 15539

COMPASS 15540

COMPASS 15541

COMPASS 15542

COMPASS 15543

COMPASS 15544

COMPASS 15545

COMPASS 15546

COMPASS 15547

COMPASS 15548

COMPASS 15549

COMPASS 15550

COMPASS 15551

COMPASS 15552

COMPASS 15553

COMPASS 15554

1	23346	0000000000	YFOUP	PS		RETURN EXIT	
2	23347	43600		MX6	0		
3		5110003110		SA1	POSCTR	TEST FOR BEING IN UPPER POSITION	
4	23350	5120003123		SA2	LWORD		
5		37312		IX3	X1-X2		
6	23351	5160003136		SA6	NFOUP	CLEAR FORCE-NEXT-UPPER FLAG	
7		0303023346		ZR	X3,YFOUP	JUMP IF IN UPPER	
8	23352	10622		BX6	X2		
9		76010		SX0	B1		
10		54610		SA6	A1	SET POSCTR TO WORD SIZE (12, 16, OR 60)	
11	23353	5110003104		SA1	ORGCTR	SET ORIGIN AND POSITION COUNTERS	
12		36610		IX6	X1+X0		
13	23354	5120003106		SA2	LOCCTR		
14		36720		IX7	X2+X0		
15		54610		SA6	A1		
16	23355	54720		SA7	A2		
17		0400023346		EQ	YFOUP		
18							
19							
20							
21							
22			**				COMPASS 15522
23			*				COMPASS 15523
24			*				COMPASS 15524
25							COMPASS 15525
26							COMPASS 15526
27	23356	53521	YFU1	SA5	X2+B1		COMPASS 15527
28		11475		BX4	X7*X5		COMPASS 15528
29		37634		IX6	X3-X4		COMPASS 15529
30		73225		SX2	X2+B5		COMPASS 15530
31	23357	67665	+	SB6	B6-B5		COMPASS 15531
32		0306023360		ZR	X6,*+1		COMPASS 15532
33		36551		IX5	X5+X1		COMPASS 15533
34	23360	15450	+	BX4	-X0*X5		COMPASS 15534
35		36643		IX6	X4+X3		COMPASS 15535
36		54650		SA6	A5		COMPASS 15536
37	23361	0560023356		NZ	B6,YFU1		COMPASS 15537
38		5110003105		SA1	ORGCTR+1	CONSTRUCT FLAG FOR INTERMEDIATE	
39	23362	0311023363	+	NZ	X1,*+1		COMPASS 15539
40		5110003154		SA1	UI+1		COMPASS 15540
41	23363	5120003154		SA2	UI+1		COMPASS 15541
42		20130		LX1	24		COMPASS 15542
43		12612		BX6	X1+X2		COMPASS 15543
44	23364	5160003304		SA6	FLAG		COMPASS 15544
45							COMPASS 15545
46	23365	0000000000	YFUALL	PS		RETURN EXIT	COMPASS 15546
47	23366	0100023346		RJ	YFOUP	BIND OFF CURRENT BLOCK	COMPASS 15547
48	23367	5110003104		SA1	ORGCTR		COMPASS 15548
49		54211		SA2	A1+B1		COMPASS 15549
50		10611		BX6	X1		COMPASS 15550
51	23370	22702		LX7	X2		COMPASS 15551
52		5160003106		SA6	LOCCTR		COMPASS 15552
53		54761		SA7	A6+B1		COMPASS 15553
54	23371	5120003411		SA2	0.USETAB		COMPASS 15554
55							
56							
57							
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60							

23372	5130003153	5110003450	SA1	L.USETAB	COMPASS	15555
		36223	SA3	UI	COMPASS	15556
		37113	IX2	X2+X3	COMPASS	15557
23373	5130003123		IX1	X1-X3	COMPASS	15558
	43047		SA3	LWORD	COMPASS	15559
		63610	MX0	39	COMPASS	15560
23374	43706		SB6	X1	COMPASS	15561
	6150000004		MX7	6	CMP30	4875
		20330	SB5	4	CMP30	4876
23375	76110		LX3	24	CMP30	4877
	20736		SX1	B1	COMPASS	15563
		0400023356	LX7	30	CMP30	4878
			EQ	YFU1	COMPASS	15566
	**	YPRLOC	- PROCESS LOCATION TERM AND MAKE ROOM FOR INSTRUCTION.			COMPASS 15568
	*	ENTRY	(X1) = LENGTH OF INSTRUCTION.			COMPASS 15569
23376	43600	YPRLOC4	MX6	0	CLEAR FORCE UPPER	COMPASS 15572
	5160003136		SA6	NFOUP		COMPASS 15573
						COMPASS 15574
23377	0000000000	YPRLOC	PS		RETURN EXIT	COMPASS 15575
23400	5120003110		SA2	POSCTR	ROUND TO NEAREST QUARTER WORD	COMPASS 15576
	5130003114		SA3	MACHINE	OR TO PP WORD BOUNDARY	COMPASS 15577
23401	5140003123		SA4	LWORD		F4820 738
	27002		PX0	X2		COMPASS 15578
23402	0313023405		NZ	X3,YPRLOC1	JUMP IF PP	COMPASS 15579
	5140012237		SA4	=0.067P48		COMPASS 15580
23403	5150012240		SA5	=15.0P0		COMPASS 15581
	40004		FX0	X0*X4		COMPASS 15582
	42405		DX4	X0*X5		COMPASS 15583
23404	26674		UX6	X4,B7		COMPASS 15584
	0400023407		EQ	YPRLOC2		COMPASS 15585
23405	37424	YPRLOC1	IX4	X2-X4		F4820 739
	63740		SB7	X4		F4820 740
	10622		BX6	X2		COMPASS 15587
23406	0470023407		ZR	B7,YPRLOC2		COMPASS 15588
	43600		MX6	0		COMPASS 15589
23407	54620	YPRLOC2	SA6	A2	RESET POSITION COUNTER	COMPASS 15590
	10711		BX7	X1	INCREMENT COUNT	COMPASS 15591
	5170023427		SA7	YPRLOCT	SAVE IT	COMPASS 15592
23410	0316023411	+	NZ	X6,*+1	FORCE UPPER IF AT BOTTOM OF WORD	COMPASS 15593
	0100023346		RJ	YFOUP		COMPASS 15594
23411	5110023427		SA1	YPRLOCT		COMPASS 15595
	5120003110		SA2	POSCTR		COMPASS 15596
23412	37621		IX6	X2-X1		COMPASS 15597
23413	0326023414	+	PL	X6,*+1		COMPASS 15598
	0100023346		RJ	YFOUP	IF INSTRUCTION LENGTH DEMANDS IT	COMPASS 15599
23414	5110003102		SA1	LOCSYM		COMPASS 15600
	6271777731		SB7	X1-1R-		COMPASS 15601
23415	0470023376		ZR	B7,YPRLOC4	IF LOCSYM MINUS	COMPASS 15602
	5120003136		SA2	NFOUP	CHECK NOMINAL FORCING	COMPASS 15603
23416	12121		BX1	X2+X1		COMPASS 15604
23417	0301023420	+	ZR	X1,*+1		COMPASS 15605

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76670
20122
36616SX6 B7
LX1 18
IX6 X1+X6COMPASS 15660
COMPASS 15661
COMPASS 15662

23447 5160023463

SA6 YTLITT

COMPASS 15663

76160

MANAGE LITAB,B6 AUGMENT LITERAL TABLE

COMPASS 15664

23451 5110023463

SA1 YTLITT

MOVE DATA

COMPASS 15665

36323

IX3 X2+X3

COMPASS 15666

63710

SB7 X1

COMPASS 15667

23452 21122

AX1 18

COMPASS 15668

63610

SB6 X1

COMPASS 15669

37331

IX3 X3-X1

COMPASS 15670

76270

SX2 B7

COMPASS 15671

23453 0100005515

RJ MOVE

COMPASS 15672

23454 5110003453

SA1 L.LITAB

COMPASS 15673

5120003123

SA2 LWORD

COMPASS 15674

23455 5130003411

SA3 O.USETAB

COMPASS 15675

5140003153

SA4 UI

USE INDEX

COMPASS 15676

23456 5150003156

SA5 LI

LITERAL INDEX

COMPASS 15677

36334

IX3 X3+X4

COMPASS 15678

37115

IX1 X1-X5

COMPASS 15679

23457 20230

LX2 24

COMPASS 15680

12621

BX6 X2+X1

COMPASS 15681

5263000011

SA6 X3+2*4+1

STORE LWORD, LENGTH IN LITS BLOCK

CMP30 4879

23460 76060

SX0 B6

COMPASS 15683

37310

IX3 X1-X0

COMPASS 15684

23461 5140003154

YTLIT6

SA4 UI+1

USE INDEX

COMPASS 15685

7244000002

SX4 X4+2

COMPASS 15688

23462 20430

LX4 24

COMPASS 15689

12343

BX3 X4+X3

COMPASS 15690

0400023430

EQ YTLULIT

COMPASS 15691

23463 00000000000000000000

YTLITT

DATA 0

TEMPORARY STORAGE

COMPASS 15695

COMPASS 15696

** YTLUSYM - EVALUATE SYMBOL.

COMPASS 15698

* UERR SET IF NOT IN TABLE.

COMPASS 15699

* ENTRY (X1) = SYMBOL.

COMPASS 15700

* EXIT ELVAL = VALUE.

COMPASS 15701

* ELREL = RELOCATION.

COMPASS 15702

* ELEXT = EXTERNAL NUMBER.

COMPASS 15703

* (X3) = LOCATION OF EQUIVALENT.

CMP1 17

* (X5) = SYMBOL WITH QUALIFIER.

CMP1 18

COMPASS 15704

23464 20202

YTLUSYM2

LX2 2

COMPASS 15705

0322023466

PL

X2,YTLUSYM IF + RELOC OR ABS

COMPASS 15706

23465 5120006275

SA2 ELVAL

COMPLEMENT VALUE

COMPASS 15708

14622

BX6 -X2

COMPASS 15709

54620

SA6 A2

COMPASS 15710

23466 0000000000

YTLUSYM

PS

RETURN EXIT

COMPASS 15711

23467 0100006200

RJ

TLUSYMT

COMPASS 15712

23470 20235

LX2 29

COMPASS 15714

0332023477

NG

X2,YTLUSYM1 JUMP IF DEFINED

COMPASS 15715

76710

SX7 B1

COMPASS 15716

CMP146	28
CMP146	29
CMP146	30

CMP146 30

CMP146	33
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COMPASS 15718

COMPASS 15719

CMP146

34

COMPASS 15721

COMPASS 15722

COMPASS 15723

COMPASS 15724

COMPASS 15725

COMPASS 15726

COMPASS 15727

COMPASS 15728

CP096A	514
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COMPASS 15730

COMPASS 15731

COMPASS 15732

COMPASS 15733

COMPASS 15734

COMPASS 15735

COMPASS 15736

COMPASS 15737

COMPASS 15738

COMPASS 15739

COMPASS 15740

COMPASS 15741

COMPASS 15743
COMPASS 15744

COMPASS 15747

COMPASS 15748

COMPASS 15749

COMPASS 15750

COMPASS 15751

COMPASS 15752

COMPASS 15753

COMPASS 15754

**	AEI - ADVANCE ENTRY INDEX.	COMPASS 15756
*	ENTRY (SI) = SEGTAB INDEX.	COMPASS 15757
*	EXIT (UI) = USETAB INDEX.	COMPASS 15758
*	(UI+1) = FIRST BLOCK NUMBER WITHIN BLOCK GROUP.	RSM4159 39
*	(EI) = EPTAB INDEX.	COMPASS 15759
*	(EI+1) = LWA EPTAB.	COMPASS 15760
*	(LI) = LITAB INDEX.	COMPASS 15761
*	(LI+1) = LWA LITAB.	COMPASS 15762
*	(DI) = SLITS INDEX.	CMP17 35
*	(DI+1) = LWA SLITS.	CMP17 36
		COMPASS 15763
		COMPASS 15764
	SEG PASS 2 SUBROUTINES.	COMPASS 15765
	QUAL PASS2	COMPASS 15766
23510 0000000000 AEI PS	RETURN EXIT	COMPASS 15767
23511 5110003420	SA1 0.SEGTAB	COMPASS 15768
5120003164	SA2 SI	COMPASS 15769
23512 36112	IX1 X1+X2	COMPASS 15770
53111	SA1 X1+B1 SEGTAB(2)	COMPASS 15771
21122	AX1 18	COMPASS 15772
10611	BX6 X1	COMPASS 15773
23513 21102	AX1 2	CMP30 4881
73711	SX7 X1+B1	CMP30 4882
5160003153	SA6 UI	COMPASS 15774
23514 54761	SA7 A6+B1	COMPASS 15779
54111	SA1 A1+B1 SEGTAB(3)	COMPASS 15780
54211	SA2 A1+B1 SEGTAB(4)	COMPASS 15781
73610	SX6 X1	COMPASS 15782
23515 73720	SX7 X2	COMPASS 15783
5160003156	SA6 LI	COMPASS 15784
54761	SA7 A6+B1	COMPASS 15785
23516 21122	AX1 18	COMPASS 15786
21222	AX2 18	COMPASS 15787
73610	SX6 X1	CMP17 37
73720	SX7 X2	CMP17 38
23517 5160003160	SA6 EI	COMPASS 15790
54761	SA7 A6+B1	COMPASS 15791
21122	AX1 18	CMP17 39
23520 21222	AX2 18	CMP17 40
73610	SX6 X1	CMP17 41
73720	SX7 X2	CMP17 42
23521 5160003162	SA6 DI	CMP17 43
54761	SA7 A6+B1	CMP17 44
23522 0400023510	EQ AEI RETURN	COMPASS 15792

**	BKS - BACKSPACE SECTIONS.	CMP30 4884
*	BACKSPACE N SECTIONS ON BINARY OUTPUT FILE.	CMP30 4885
*	ENTRY (X4) = NUMBER OF SECTIONS.	CMP30 4886

23523 0000000000 BKS PS	RETURN EXIT	CMP30 4887
		CMP30 4888
		CMP30 4889
		CMP30 4890
RM IFEQ CP#RM,0		CMP30 4891
		CMP30 4892

23524 7120000241
23527 0400023523SKIPB B,X4
EQ BKS RETURNCMP30 4893
CMP30 4894
CMP30 4895

1	RM	ELSE				CMP30	4896	1
2						CMP30	4897	2
3		SA1	B-1			CMP30	4898	3
4		ZR	X1,BKS1	IF *W* RECORDS		CMP30	4899	4
5		SKIPBL	B,X4			CMP30	4900	5
6		EQ	BKS	RETURN		CMP30	4901	6
7	BKS1	BX6	X4	SAVE SECTION COUNT		CMP30	4902	7
8		SA6	BKSA			CMP30	4903	8
9		STORE	B,DX=BKS3	SET END OF DATA EXIT		CMP30	4904	9
10	BKS2	SKIPBL	B,377777B	BACKSPACE MANY RECORDS		CMP30	4905	10
11		EQ	BKS2			CMP30	4906	11
12	BKS3	PS		END OF DATA EXIT		CMP30	4907	12
13		SA1	BKSA			CMP30	4908	13
14		SX6	X1-1	REDUCE SECTION COUNT		CMP30	4909	14
15		SA6	A1			CMP30	4910	15
16		PL	X6,BKS2	IF NOT DONE		CMP30	4911	16
17		STORE	B,DX=0			CMP30	4912	17
18		FETCH	B,FP,X1	CHECK TERMINATOR		CMP30	4913	18
19		SX6	X1-#EOS#			CMP30	4914	19
20		NZ	X6,BKS4	IF NOT END OF SECTION		CMP30	4915	20
21		WEOR	B			CMP30	4916	21
22		EQ	BKS	RETURN		CMP30	4917	22
23	BKS4	SX6	X1-#EOP#			CMP30	4918	23
24		NZ	X6,BKS	IF NOT END OF PARTITION		CMP30	4920	24
25		ENDFILE	B			CPS028	528	25
26		EQ	BKS	RETURN		CMP30	4921	26
27						CMP30	4922	27
28	BKSA	DATA	0			CMP30	4923	28
29						CMP30	4924	29
30	RM	ENDIF				CMP30	4925	30
31								31
32								32
33								33
34								34
35	**	CRL	- CHECK RECURSION LIMIT.			CPS004	80	35
36						CPS004	81	36
37						CPS004	82	37
38	23530 0000000000	CRL	PS	RETURN EXIT		CPS004	83	38
39	23531 5110003177		SA1	CRLF		CPS004	84	39
40			ZR	X1,CRL	IF FLAG NOT SET IN PASS 1	CPS004	85	40
41	23532 5120003226		SA2	ASMM+1		CPS004	86	41
42			BX6	X2		CPS004	87	42
43	23533 5160023541		SA6	CRLB		CPS004	88	43
44			JOBMSG	CRLA	ISSUE DAYFILE MESSAGE	CPS004	89	44
45	23535 0200023530		JP	CRL		CPS004	90	45
46						CPS004	91	46
47	23536 55552205032522231117	CRLA	DATA	H* RECURSION DEPTH .GT. "LIMRECUR" IN *		CPS004	92	47
48	23541 00000000000000000000	CRLB	DATA	0		CPS004	93	48
49								49
50								50
51								51
52								52
53	**	ENTREF	- PLACE ENTRY IN CROSS REFERENCE TABLE.			COMPASS	15831	53
54	*	ENTRY	(X4) = SYMBOL TABLE ADDRESS.			COMPASS	15832	54
55								55
56								56
57								57
58								58
59								59
60								60

*
*(X1) = SYMBOL USAGE LETTER.
(X2) = SYMBOL EQUIVALENT.COMPASS 15833
COMPASS 15834
COMPASS 1583523542 76600 ENTREF1 SX6 B0 JUST OVERFLOWED
5160003475 SA6 L.REFTABCOMPASS 15836
COMPASS 15837
COMPASS 1583823543 6160007420 ENTREF2 IFEQ CP#RM,0,2
WRITEW R,CONREF,1
ENTREF2 ELSE 1
PUTP R,CONREF,10CMP30 4926
CMP30 4927
COMPASS 15839
CMP30 4928
CPS028 529
COMPASS 1584023545 0000000000 ENTREF PS 0 RETURN EXIT
23546 20230 LX2 -35+59
0332023545 NG X2,ENTREF IF NOREF SYMBOLCOMPASS 15841
COMPASS 15842
COMPASS 1584323547 5120003607 43053 MX0 -17
SA2 SUPREF
0312023545 NZ X2,ENTREF RETURN IF NO REFERENCECMP19 356
COMPASS 15844
COMPASS 1584523550 5120003603 SA2 LPCX LINE NUMBER
54321 SA3 A2+B1
20206 LX2 6 LETTER TO BITS 0 - 5CPS234 5
CPSA186 8
COMPASS 1584823551 5150003106 SA5 LOCCTR LOCATION COUNTER
12612 BX6 X1+X2 LINE TO BITS 6 - 12
20315 LX3 13COMPASS 15849
COMPASS 15850
COMPASS 1585123552 15550 BX5 -X0*X5
12663 BX6 X6+X3 PAGE TO BITS 13 - 24
20531 LX5 25CMP19 357
COMPASS 15852
COMPASS 1585323553 20452 12665 BX6 X6+X5 LOCATION TO BITS 25 - 41
12664 LX4 42COMPASS 15854
COMPASS 15855

BX6 X6+X4 SYMBOL TABLE ADDRESS TO BITS 42 - 59

COMPASS 15856

23554 5110004053 5160007420 SA6 CONREF
76610 SA1 LOSTREF ACCUMULATE REFERENCES
36661 SX6 B1COMPASS 15857
COMPASS 15858
COMPASS 1585923555 54610 5120004054 IX6 X6+X1
SA6 A1
SA2 REFIOCOMPASS 15860
COMPASS 15861
COMPASS 1586223556 0312023543 76110 NZ X2,ENTREF2 IF ON DISK
MANAGE REFTAB,B1COMPASS 15863
COMPASS 1586423560 5110004054 SA1 REFIO
0311023542 NZ X1,ENTREF1 IF JUST OVERFLOWEDCOMPASS 15865
COMPASS 15866

23561 5140007420 SA4 CONREF

COMPASS 15867

36223 IX2 X2+X3

COMPASS 15868

23562 5262777776 10644 BX6 X4
0400023545 SA6 X2-1
EQ ENTREF RETURNCOMPASS 15869
COMPASS 15870
COMPASS 15871

**

LLA - LIST LOCATION ADDRESS.

COMPASS 15873

COMPASS 15874

23563 0000000000 LLA PS RETURN EXIT
23564 5110003106 SA1 LOCCTR CALL PACK0(LOCCTR,14 OR 12,6 OR 4)COMPASS 15875
COMPASS 15876
COMPASS 1587723565 5130003114 7120000016 SX2 14
22513 SA3 MACHINE
LX5 X3,B1COMPASS 15878
COMPASS 15879
COMPASS 15880

23566	43300	37225	IX2	X2-X5		COMPASS 15881
			MX3	0		COMPASS 15882
		0100007773	RJ	PACK0		COMPASS 15883
23567	5110003106		SA1	LOCCTR	CHECK IF LOCCTR " ORGCTR	COMPASS 15884
		5120003104	SA2	ORGCTR		COMPASS 15885
23570	13312		BX3	X1-X2		COMPASS 15886
		0303023563	ZR	X3,LLA	IF COUNTERS ARE EQUAL	COMPASS 15887
23571	7160000014		SX6	1RL	LIST AN L	COMPASS 15888
		5160003631	SA6	OCTAL+6		COMPASS 15889
23572	0400023563		EQ	LLA	RETURN	COMPASS 15890
		**	PACKOR - PACK OCTAL DIGITS AND RELOCATION INDICATION.			COMPASS 15918
		*	PACKS RELOCATION INFORMATION IN COLUMN (X2) + 2.			COMPASS 15919
		*	ENTRY (X1) = VALUE.			COMPASS 15920
		*	(X2) = LOW-ORDER COLUMN NUMBER.			COMPASS 15921
		*	(X3) = COLUMN COUNT.			COMPASS 15922
		*	(EXREL) = RELOCATION INFORMATION.			COMPASS 15923
		*	(EXEXT) = RELOCATION INFORMATION.			COMPASS 15924
23573	5262003624		PACKOR1	SA6	X2+OCTAL+1 STORE RELOCATION INDICATOR	COMPASS 15925
		0100007773	RJ	PACK0	AND GO TO PACK OCTAL DIGTIS	COMPASS 15926
						COMPASS 15927
23574	0000000000		PACKOR	PS	RETURN EXIT	COMPASS 15928
23575	5150003256		SA5	EXEXT	CHECK TYPE OF RELOCATION	COMPASS 15929
		5140003255	SA4	EXREL		COMPASS 15930
23576	7160000030		SX6	1RX		COMPASS 15931
		0315023573	NZ	X5,PACKOR1	IF EXTERNAL	COMPASS 15932
23577	6274777776		SB7	X4-1		COMPASS 15933
		7160000055	SX6	1R		COMPASS 15934
23600	0304023573		ZR	X4,PACKOR1	IF ABSLUTE	COMPASS 15935
		7160000045	SX6	1R+		COMPASS 15936
23601	0470023573		ZR	B7,PACKOR1	IF PROGRAM	COMPASS 15937
		6274777376	SB7	X4-401B		COMPASS 15938
23602	7160000003		SX6	1RC		COMPASS 15939
		0570023573	NZ	B7,PACKOR1	IF COMMON	COMPASS 15940
23603	7160000046		SX6	1R-		COMPASS 15941
		0400023573	EQ	PACKOR1	IF NEGATIVE PROGRAM	COMPASS 15942
		**	PBN - PRINT BLOCK NAMES.			COMPASS 15943
		*	ENTRY (SI) = SEGTab INDEX.			COMPASS 15944
		*	USES P2TEMP, P2TEMPA, P2TEMPB.			COMPASS 15945
23604	0000000000		PBN	PS	RETURN EXIT	COMPASS 15946
23605	5110003420		SA1	0.SEGTAB	SET UP USE INDEX	COMPASS 15947
		5120003164	SA2	SI		COMPASS 15948
23606	5130003457		SA3	L.SEGTAB		COMPASS 15949
		13632	BX6	X3-X2		COMPASS 15950
		36212	IX2	X1+X2		COMPASS 15951
23607	5212777774		SA1	X2-3	SEGTAB(2)	COMPASS 15952

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	12171			BX1	X7+X1		COMPASS	16015
23635	0304023634			ZR	X4,PBN5		COMPASS	16016
	10611			BX6	X1		COMPASS	16017
	43063			MX0	-9		CMP30	4933
23636	0325023643			PL	X5,PBN6	IF NOT LCM	COMPASS	16019
	7110777767			SX1	1R+-1R		CMP30	4934
23637	5140003130			SA4	ABSFG		CMP30	4935
	5150003166			SA5	LLB		CMP30	4936
23640	36661			IX6	X6+X1	APPEND + BEFORE BLOCK TYPE	CMP30	4937
	20430			LX4	24		CMP30	4938
	12545			BX5	X4+X5		CMP30	4939
	13453			BX4	X5-X3		CMP30	4940
23641	21430			AX4	24		CMP30	4941
	15440			BX4	-X0*X4		CMP30	4942
	0314023643			NZ	X4,PBN6	IF NOT LOCAL LCM BLOCK IN REL ASSEMBLY	CMP30	4943
23642	5150012245			SA5	=10HLOCAL		CMP30	4944
	0400023646			EQ	PBN7		COMPASS	16021
23643	10533		PBN6	BX5	X3		COMPASS	16022
	21530			AX5	24		COMPASS	16023
	15250			BX2	-X0*X5		CMP30	4945
	63720			SB7	X2		CMP30	4946
23644	5150012246			SA5	=10HCOMMON		COMPASS	16025
	0717023646			GT	B7,B1,PBN7		COMPASS	16026
23645	5157012247			SA5	B7+=20HABSOLUTE	LOCAL	COMPASS	16027
23646	5160003673		PBN7	SA6	LINE	STORE BLOCK NAME	CMP30	4947
	10655			BX6	X5		CMP30	4948
	54661			SA6	A6+B1	STORE BLOCK TYPE	COMPASS	16029
23647	43047			MX0	-21	PACK AWAY BLOCK LENGTHS AND ORIGINS	COMPASS	16030
	15130			BX1	-X0*X3		COMPASS	16031
	54211			SA2	A1+B1		COMPASS	16032
	15520			BX5	-X0*X2		COMPASS	16033
23650	0100005302			RJ	CONOCT	LIST FIRST WORD ADDRESS	COMPASS	16034
23651	20622			LX6	18		CMP042	280
	10155			BX1	X5	LIST LENGTH	COMPASS	16036
	5160003675			SA6	LINE+2		COMPASS	16037
23652	0100005302			RJ	CONOCT		COMPASS	16038
23653	20622			LX6	18		CMP042	281
	5160003676			SA6	LINE+3		COMPASS	16040
23654	5140004067			SA4	P2TEMPA	LIST LINE IF LENGTH IS NON-ZERO	COMPASS	16041
	55141			SA1	A4-B1		COMPASS	16042
	37441			IX4	X4-X1		COMPASS	16043
23655	6274777766			SB7	X4-2*4-1	OR BEYOND OUR 3 BLOCKS	CMP30	4949
	0670023657			PL	B7,PBN8		COMPASS	16045
23656	0305023660			ZR	X5,PBN9	IF LENGTH = 0	COMPASS	16046
23657	0100007732		PBN8	RJ	LISTL		COMPASS	16047
23660	5120004067		PBN9	SA2	P2TEMPA	INCREMENT INDEX	COMPASS	16048
	54321			SA3	A2+B1		COMPASS	16049
23661	7262000004			SX6	X2+4		CMP30	4950
	54620			SA6	A2		COMPASS	16051
	13363			BX3	X6-X3		COMPASS	16052
23662	0313023627			NZ	X3,PBN3	LOOP	COMPASS	16053
	5110012171			SA1	=1H		COMPASS	16054
23663	10611			BX6	X1		COMPASS	16055
	5160003673			SA6	LINE		COMPASS	16056
	54661			SA6	A6+B1		COMPASS	16057
23664	54661			SA6	A6+B1		COMPASS	16058
	54661			SA6	A6+B1		COMPASS	16059

COMPASS 16060

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23714	43600		MX6	0		COMPASS	16108
		5160003327	SA6	UERR		COMPASS	16109
23715	5110006275		SA1	ELVAL	ERROR IF EXTERNAL OR NEGATIVE	COMPASS	16110
		5130012253	SA3	=20H *****		CMP30	4962
23716	54431		SA4	A3+B1		CMP30	4963
		10633	BX6	X3		COMPASS	16112
		5120006277	SA2	ELEXT		COMPASS	16113
23717	5130006302		SA3	EXERR	CHECK EXPRESSION ERROR	COMPASS	16114
		5150006276	SA5	ELREL		CPS010	91
23720	12232		BX2	X3+X2		COMPASS	16115
		0312023750	NZ	X2,PEP4	IF BAD ENTRY POINT	COMPASS	16116
23721	7275777376		SX7	X5-401B		CPS010	92
		0337023723	MI	X7,PEP2B	IF +RELOCATION	CPS251	7
23722	0317023750		NZ	X7,PEP4	IF -COMMON RELOCATION	CPS251	8
		14111	BX1	-X1		CPS251	9
						CPS251	10
23723	0100005302	PEP2B	RJ	CONOCT	CONVERT TO OCTAL	CPS251	11
23724	5140012171		SA4	=10R		F4820	741
		5110006276	SA1	ELREL		CMP30	4968
23725	20614		LX6	12		CMP30	4969
		0301023750	ZR	X1,PEP4	IF ABSOLUTE	CMP30	4970
23726	5130003166		SA3	LLB		CMP30	4971
		7271777376	SX7	X1-401B		CPS010	99
23727	7100777767		SX0	1R+-1R		CMP30	4972
		7221777776	SX2	X1-1		CMP30	4973
23730	0317023732		NZ	X7,PEP2C	IF NOT NEGATIVE PROGRAM RELOCATION	CPS010	100
		7100777770	SX0	1R--1R		CPS010	101
23731	76200		SX2	B0		CPS010	102
23732	20006	PEP2C	LX0	6		CPS010	103
		36660	IX6	X6+X0	APPEND + OR - AFTER VALUE	CPS010	104
		20130	LX1	24		CMP30	4976
		13331	BX3	X3-X1		CMP30	4977
23733	0302023750		ZR	X2,PEP4	IF LOCAL SCM	CMP30	4978
		0313023735	NZ	X3,PEP3	IF NOT LOCAL LCM	CMP30	4979
23734	20060		LX0	60-12		CMP30	4980
		36660	IX6	X6+X0	APPEND + BEFORE VALUE	CMP30	4981
		0400023750	EQ	PEP4		CMP30	4982
23735	5130003411	PEP3	SA3	0.USETAB	COMMON, GET BLOCK NAME AND TYPE	CMP30	4983
		5120003153	SA2	UI		RSM4159	40
23736	36323		IX3	X2+X3	BASE ADDRESS OF BLOCK GROUP	RSM4159	41
		5223000002	SA2	X3+2		CMP30	4984
23737	7140777772		SX4	1R/-1R	APPEND / AFTER + AFTER VALUE	CMP30	4985
		43563	MX5	-9		CMP30	4986
		36664	IX6	X6+X4		CMP30	4987
23740	20530		LX5	24		CMP30	4988
23741	15325	PEP3A	BX3	-X5*X2	SEARCH USE TABLE FOR BLOCK WITH MATCHING RELOCATION	CMP30	4989
		37731	IX7	X3-X1		CMP30	4990
		5022000004	SA2	A2+4		CMP30	4991
23742	0317023741		NZ	X7,PEP3A		CMP30	4992
		5012777771	SA1	A2-6	GET BLOCK NAME	CMP30	4993
23743	20060		LX0	60-12		CMP30	4994
		10711	BX7	X1		CMP30	4995
		7140000050	SX4	1R/		CMP30	4996
23744	21773		AX7	59		CMP30	4997
		13117	BX1	X1-X7	UNCOMPLEMENT BLOCK NAME IF LCM	CMP30	4998
		11007	BX0	X0*X7		CMP30	4999
		20106	LX1	6		CMP30	5000

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Address	Label	Op	Op2	Op3	Op4	Op5	Op6	Op7	Op8
24051	11523	11416	BX4	X1*X6	THEN SET PERMANENT REFERENCE			CPS010	109
			BX5	X2*X3	SUPPRESSION FLAG = 0			CPS010	110
		11645	BX6	X4*X5				CPS010	111
24052	6170000016	5160003606	SA6	LXRF				CPS010	112
		5110003346	SB7	LLISTOPS/2	INITIALIZE LIST OPTIONS			COMPASS	16239
24053	73610		SA1	LISTOPS				COMPASS	16240
			SX6	X1				COMPASS	16241
		54611	SA6	A1+B1				COMPASS	16242
		67771	SB7	B7-B1				COMPASS	16243
24054	0570024053	54161	SA1	A6+B1				COMPASS	16244
		0400024046	NZ	B7,PL01	LOOP			COMPASS	16245
			EQ	PLO	RETURN			COMPASS	16252
** PLT - PRINT LITERAL TABLE.									
								CMP17	46
								CMP17	47
24055	0000000000		PLT	PS	RETURN EXIT			CMP17	48
24056	5110012171		SA1	=1H				CMP17	49
		5120003355	SA2	LD+1				CPS010	113
24057	5130003365		SA3	LL+1				CMP17A	1
		5140000116	SA4	CP.LISTF				CMP17A	2
24060	11323		BX3	X2*X3				CMP30	5030
		22601	LX6	X1	CLEAR UNAME			CMP17A	4
		5110003411	SA1	O.USETAB				CPS010	114
24061	5120003153		SA2	UI				CPS069	1
		36112	IX1	X1+X2				CPS069	2
		11334	BX3	X3*X4				CPS069	3
24062	5211000012		SA1	X1+2*4+2				CPS069	4
		5120003265	SA2	LPGM				CPS069	5
24063	21141		AX1	33	LWA OF LITERALS BLOCK			CPS069	6
		37221	IX2	X2-X1				CPS069	7
		5160003620	SA6	UNAME				CPS069	8
24064	0322024065		PL	X2,*+1	IF LITERALS BLOCK INSIDE SEGMENT			CPS069	9
		76310	SX3	B1	LIST LITERALS BLOCK IF OUTSIDE SEGMENT			CPS069	10
24065	0303024055		ZR	X3,PLT	IF LIST -D OR LIST -L OR L=0			CPS069	11
		0100007516	RJ	LDL	LIST DEFERRED LINE			CMP17A	6
24066	5110012262		SA1	=0RLITERALS				CMP17	50
		5120003305	SA2	IND				CMP17	60
24067	10711		BX7	X1				CMP17	61
		5160003621	SA6	QNAME	CLEAR QNAME			CMP17	62
24070	5170003622		SA7	SUBNAME	SUBNAME = *LITERALS*			CMP17	63
		0302024076	ZR	X2,PLT1	IF IND = 0			CMP17	64
24071	43600		MX6	0				CMP17	65
		6160003320	SB6	ERFLAGS				CMP17	66
24072	6170000024		SB7	LEFLG-1				CMP17	67
		5160003345	SA6	EFLG				CMP17	68
24073	56667		SA6	B6+B7	CLEAR ERROR FLAGS			CMP17	69
		67771	SB7	B7-B1				CMP17	70
		0670024073	PL	B7,*				CMP17	71
24074	6170000007		SB7	LIBFLG-NOAS-1				CMP17	72
		5160003317	SA6	LIBFLG				CMP17	73
24075	67771		SB7	B7-B1	CLEAR INDICATORS			CMP17	74
		55661	SA6	A6-B1				CMP17	75
		0670024075	PL	B7,*				CMP17	76

24076	7160004025	PLT1	SX6	LINE+9*NCARDS	CMP17	78
	43100		MX1	0	CMP17	79
24077	5160004065		SA6	LLINE	CMP17	80
	0100006151		RJ	SQV SET BLANK QUALIFIER	CMP17	81
24100	0100007473		RJ	CUL CLEAN UP LINE AREA	CMP17	82
24101	76610		SX6	B1	CMP17	83
	5160004062		SA6	PLFLG	CMP17	84
					CMP17	85
		**		LIST SYMBOL LITERALS WHICH COMPASS DEFINED BY DEFAULT.	CMP17	86
					CMP17	87
24102	5110003162		SA1	DI	CMP17	88
	54211		SA2	A1+B1	CMP17	89
24103	5130003413		SA3	0.SLITS	CMP17	90
	37221		IX2	X2-X1	CMP17	91
24104	0302024135		ZR	X2,PLT6 IF NO SYMBOL LITERALS	CMP17	92
	36331		IX3	X3+X1	CMP17	93
	63720		SB7	X2	CMP17	94
24105	53130		SA1	X3	CMP17	95
24106	0331024110	+	NG	X1,PLT2 IF DEFINED BY COMPASS	CMP17	96
	67771		SB7	B7-B1	CMP17	97
	54111		SA1	A1+B1	CMP17	98
24107	0570024106		NZ	B7,*-1	CMP17	99
	0400024135		EQ	PLT6 IF ALL DEFINED BY PROGRAMMER	CMP17	100
24110	0100007611	PLT2	RJ	LISTER	CMP17	101
24111	7110000004		SX1	4	CMP17	102
	7120012263		SX2	=H+DEFAULT SYMBOLS DEFINED BY COMPASS.+	CMP17	103
24112	7130003673		SX3	LINE	CMP17	104
	0100005515		RJ	MOVE	CMP17	105
24113	0100007611		RJ	LISTER	CMP17	106
24114	0100007611		RJ	LISTER	CMP17	107
24115	5110003162	PLT3	SA1	DI GET NEXT SYMBOL	CMP17	110
	54211		SA2	A1+B1	CMP17	111
24116	5130003413		SA3	0.SLITS	CMP17	112
	37221		IX2	X2-X1	CMP17	113
	73611		SX6	X1+B1	CMP17	114
24117	36313		IX3	X1+X3	CMP17	115
	54610		SA6	A1	CMP17	116
	0302024133		ZR	X2,PLT5 IF END OF TABLE	CMP17	117
24120	53130		SA1	X3	CMP17	118
	43014		MX0	12	CMP17	119
	0321024115		PL	X1,PLT3 IF DEFINED BY PROGRAMMER	CMP17	120
24121	15110		BX1	-X0*X1	CMP17	121
	0100006262		RJ	LJUST STORE SYMBOL LEFT JUSTIFIED	CMP17	122
24122	5160003673		SA6	LINE	CMP17	123
	0100006200		RJ	TLUSYMT LOOK UP SYMBOL	CMP17	124
24123	20234		LX2	59-31	CMP17	125
	0322024127		PL	X2,PLT4 IF NOT EXTERNAL	CMP17	126
	20213		LX2	0-21-59+31	CP154	45
24124	5110003417		SA1	0.EXTAB	CP154	46
	43063		MX0	-9 EXTRACT EXTERNAL NUMBER	CP154	47
	15620		BX6	-X0*X2	CP154	48
24125	6271777776		SB7	X1-1	CP154	49
	53167		SA1	B7+X6 FETCH EXTAB ENTRY (WEAK-EXT FLAG IN BIT 0)	CP154	50
	20261		LX2	59-31-0+21	CP154	51
24126	7261000030		SX6	1RX+X1 SET *X* OR *Y*	CP154	52
	5160003642		SA6	OCTAL+15	CMP17	128
24127	20240	PLT4	LX2	32	CMP17	129

13333

43047

15120

BX3

X3-X3

CMP17

130

MX0

-21

CMP17

131

BX1

-X0*X2

VALUE

CMP17

132

SX2

14

CMP17

133

RJ

PACK0

CALL PACK0 (VALUE,14,0)

CMP17

134

RJ

LISTER

CMP17

135

EQ

PLT3

LOOP

CMP17

136

SA1

LI

PLT5

CMP17

137

SA2

A1+B1

CMP17

138

IX2

X2-X1

CMP17

139

ZR

X2,PLT10

IF NO LITERALS

CMP17

140

EQ

PLT7

CMP17

141

**

LIST CONTENT OF LITERALS BLOCK.

CMP17

142

CMP17

143

CMP17

144

SA1

LI

PLT6

CMP17

145

SA2

A1+B1

CMP17

146

IX2

X2-X1

CMP17

147

ZR

X2,PLT11

IF NO LITERALS

CMP17

148

RJ

LISTER

PLT7

CMP17

149

SX1

3

CMP17

150

SX2

=H+CONTENT OF LITERALS BLOCK.+

CMP17

151

SX3

LINE

CMP17

152

RJ

MOVE

CMP17

153

RJ

LISTER

CMP17

154

RJ

LISTER

CMP17

155

SA1

O.USETAB

CMP17

156

SA2

UI

CMP17

157

MX0

-21

CMP17

158

IX1

X1+X2

CMP17

159

SA1

X1+2*4+2

CMP30

5031

BX6

-X0*X1

CMP17

161

SA6

ORGCTR

ORGCTR = FWA OF LITERALS BLOCK

CMP17

162

SA1

LI

PLT8

CMP17

163

SA2

A1+B1

CMP17

164

SA3

O.LITAB

CMP17

165

IX2

X2-X1

CMP17

166

SX6

X1+B1

CMP17

167

IX3

X1+X3

CMP17

168

SA6

A1

CMP17

169

ZR

X2,PLT10

IF END OF TABLE

CMP17

170

SA5

MACHINE

CPS010

116

SA1

X3

CMP17

171

MX0

-6

CMP17

172

SX7

1R

CMP17

173

MX2

0

CPS010

117

ZR

X5,*+1

IF CPU ASSEMBLY

CPS010

118

MX2

-12

CPS010

119

BX6

-X2*X1

CPS010

120

SB7

10

CMP17

175

BX4

-X0*X6

CMP17

176

NZ

X4,*+1

IF NOT 00 CHARACTER

CMP17

177

BX6

X6+X7

CMP17

178

SB7

B7-B1

CMP17

179

LX6

6

CMP17

180

NZ

B7,*-1

LOOP

CMP17

181

SA4

MACHINE

CMP17

182

	24161	7130000024	7120000044	SX2	36		CMP17	183
				SX3	20		CMP17	184
			0304024163	ZR	X4,PLT9	IF CPU ASSEMBLY	CMP17	185
1	24162	7120000031		SX2	25		CMP17	186
2			5130003262	SA3	PPBYT		CPSA281	306
3	24163	5160003673		SA6	LINE		CMP17	188
4			0100007773	RJ	PACK0	PACK VALUE	CMP17	189
5	24164	5110003411		SA1	0.USETAB		CPS069	12
6			5120003153	SA2	UI		CPS069	13
7	24165	36112		IX1	X1+X2		CPS069	14
8			5211000012	SA1	X1+2*4+2		CPS069	15
9			21141	AX1	33	LWA OF LITERALS BLOCK	CPS069	16
10	24166	5120003265		SA2	LPGM		CPS069	17
11			37221	IX2	X2-X1		CPS069	18
12			76610	SX6	B1		CPS069	19
13	24167	5110003104		SA1	ORGCTR		CPS069	20
14			0322024171	PL	X2,PLT9A	IF LITERALS BLOCK WITHIN SEGMENT	CPS069	21
15	24170	5160003325		SA6	RERR	RANGE ERROR IF LIT BLOCK OUTSIDE SEGMENT	CPS069	22
16			5160003345	SA6	EFLG		CPS069	23
17	24171	5140003114		SA4	MACHINE		CPS069	24
18			7120000016	SX2	14		CMP17	192
19	24172	43300		MX3	0		CMP17	193
20			73611	SX6	X1+B1	ADVANCE ORGCTR	CMP17	194
21			22514	LX5	X4,B1		CMP17	195
22			54610	SA6	A1		CMP17	196
23	24173	37225		IX2	X2-X5		CMP17	197
24			0100007773	RJ	PACK0	PACK LOCATION	CMP17	198
25	24174	0100007611		RJ	LISTER		CMP17	199
26	24175	0400024147		EQ	PLT8	LOOP	CMP17	200
27							CMP17	201
28			*		WRAPUP.		CMP17	202
29							CMP17	203
30	24176	0100007611		RJ	LISTER		CMP17	204
31	24177	5110003113		SA1	QVAL+1	RESTORE QUAL VALUE	CMP17	205
32			5120003412	SA2	0.QVTAB		CMP17	206
33	24200	10611		BX6	X1		CMP17	207
34			20114	LX1	12		CMP17	208
35			55611	SA6	A1-B1		CMP17	209
36	24201	6272777776		SB7	X2-1		CMP17	210
37			0301024203	ZR	X1,PLT12	IF BLANK QUALIFIER	CMP17	211
38	24202	53117		SA1	X1+B7	GET QUAL SYMBOL	CMP17	212
39			43614	MX6	-48		CMP17	213
40			15116	BX1	-X6*X1		CMP17	214
41	24203	0100006262		RJ	LJUST	LEFT JUSTIFY AND	CMP17	215
42	24204	5160003621		SA6	QNAME	STORE WITH BLANK FILL	CMP17	216
43			5110003305	SA1	IND		CMP17	217
44	24205	0301024217		ZR	X1,PLT15	IF IND = 0	CMP17	218
45			6170000024	SB7	LEFLG-1		CMP17	219
46	24206	6160003321		SB6	ERFLAGS+1		CMP17	220
47			43047	MX0	60-LEFLG		CMP17	221
48			76610	SX6	B1		CMP17	222
49	24207	15210		BX2	-X0*X1		CMP17	223
50			76510	SX5	B1		CMP17	224
51			0302024211	ZR	X2,PLT13	IF NO ERRORS	CMP17	225
52	24210	5160003345		SA6	EFLG		CMP17	226
53	24211	11651		BX6	X5*X1	RESTORE ERROR FLAGS	CMP17	227
54			67771	SB7	B7-B1		CMP17	228

1
2

24237	64670	5170004066	SA7	P2TEMP		COMPASS	16290
24241	5110000117		WRITEW	0,A7,1		COMPASS	16291
			SA1	CP.PAGE		CPS236	63
		22011	LX0	X1,B1		CPS236	64
24242	0330024247		MI	X0,PRS4	FILE ALREADY WRITTEN TO	CPS236	65
		43001	MX0	1		CPS236	66
		20073	LX0	-1		CPS236	67
24243	12710		BX7	X1+X0		CPS236	68
		5170000117	SA7	CP.PAGE	SET FIRST WRITING FLAG	CPS236	69
24244	5110003074		SA1	FRSTLIN		CPS239	4
		0301024247	ZR	X1,PRS4	IF NO NEED TO RESET PRINTER DENSITY	CPS239	5
24245	6160003074		WRITEH	0,FRSTLIN,1	ELSE RESET PRINTER DENSITY	CPS239	6
						CMP30	5039
		RM	ELSE			CMP30	5040
						CMP30	5041
			SX7	B1+B1		F4810A	349
			SA7	A7	2 INDICATES LINE COUNT AFTER HEADER PRINTED	F4810A	350
			SA1	IDNAM	WRITE HEADER	CPS239	9
			RJ	LJUST		F4810A	357
			MX0	-6		CMP30	5042
			SX1	1R*		CMP30	5043
			BX0	X0*X6		CMP30	5044
			BX7	X0+X1		CMP30	5045
			LX7	-6		CMP30	5046
			SA7	P2TEMP		CMP30	5047
			PUT	0,P2TEMP,10		CMP30	5048
			SA1	CP.PAGE		CPS236	70
			LX0	X1,B1		CPS236	71
			MI	X0,PRS4	FILE ALREADY WRITTEN TO	CPS236	72
			MX0	1		CPS236	73
			LX0	-1		CPS236	74
			BX7	X1+X0		CPS236	75
			SA7	CP.PAGE	SET FIRST WRITING FLAG	CPS236	76
			SA1	FRSTLIN		CPS239	10
			ZR	X1,PRS4	IF NO NEED TO RESET PRINTER DENSITY	CPS239	11
			PUT	0,FRSTLIN,10	ELSE RESET PRINTER DENSITY	CPS239	12
			MX6	60		CPS239	13
			SA6	FRSTLIN	-0 INDICATES PRINTER HAS BEEN SET	CPS239	14
						CMP30	5049
		RM	ENDIF			CMP30	5050
						CMP30	5051
24247	7120003567	PRS4	SX2	CLP2	CLEAR OUT PASS 2 CELLS	CMP30	5052
		7130004065	SX3	CLP2+LCLP2		COMPASS	16294
24250	0100005250		RJ	CLS		CMP30	5053
24251	5110003116		SA1	PPTYPE		CPSA281	307
		7211000003	SX1	X1+3		CPSA281	308
24252	0311024255		NZ	X1,PRS4A	IF NOT 180 PP ASSEMBLY	CPSA281	309
		5120003124	SA2	VWORD		CPSA288	217
24253	0312024255		NZ	X2,PRS4A	IF 12-BIT MODE FOR *CON* AND *VFD*	CPSA288	218
		7160000005	SX6	5		CPSA281	310
24254	7170000055		SX7	45	SET CHARACTER TYPE TO 8-BIT ASCII	CPSA281	311
24255		PRS4A	BSS	0		CPSA281	312
24255	5160003152		SA6	CT+1		CMP30	5054
		5170003151	SA7	CT	CLEAR FLAGS AND CELLS	COMPASS	16296
24256	76600		SX6	B0		CPSA281	313
		43700	MX7	0		CPSA281	314
		5160004061	SA6	DLFLG		COMPASS	16297

24257	5170003140	SA7	TITFG		COMPASS	16298
	5160003136	SA6	NFOUP		COMPASS	16299
24260	5170003112	SA7	QVAL		COMPASS	16300
	5160003111	SA6	CLF		CMP30	5055
24261	5110000123	SA1	CP.PS	PAGE SIZE	F4810A	358
	7271000005	SX7	X1+5	FORCE EJECT	F4810A	359
24262	5160003137	SA6	IFCDGP		COMPASS	16302
	5170004063	SA7	ELCNT		COMPASS	16303
24263	5160003135	SA6	ABASE		CMP30	5056
	5170003602	SA7	LPCNT		COMPASS	16304
24264	0100005312	RJ	CPS	CLEAR PUSH-DOWN STACKS	CMP30	5057
24265	5120003130	SA2	ABSFG		CMP30	5058
	5110003450	SA1	L.USETAB		CMP30	5059
24266	0312024271	NZ	X2,PRS5	IF ABSOLUTE ASSEMBLY	CMP30	5060
	21101	AX1	1		CMP30	5061
24267	5100000026	MANAGE	RELTAB,X1	CREATE RELOCATION TABLE	CMP30	5062
24270	36323	IX3	X2+X3	CLEAR IT	CMP30	5063
	0100005250	RJ	CLS		CMP30	5064
24271	76610	SX6	B1	SET PRINT LINE READY	CMP30	5065
	5160003306	SA6	CCT		COMPASS	16306
24272	5110004067	SA1	P2TEMPA	1 IF HEADER NOT PRINTED, 2 IF PRINTED	F4810A	360
	10711	BX7	X1		F4810A	361
24273	5170004056	SA7	LCCT	1 IF NO HEADER, 2 IF HEADER PRINTED	F4810A	362
	5160004062	SA6	PLFLG		COMPASS	16308
24274	5110012171	SA1	=1H	CLEAR SUBTITLE	COMPASS	16309
	7120003610	SX2	SUBTIT		COMPASS	16310
24275	7130003622	SX3	SUBTIT+SUBL		COMPASS	16311
	0100005600	RJ	PRESET		COMPASS	16312
24276	7160000036	SX6	COMCOL	RESET COMMENT COLUMN	COMPASS	16313
	5160003141	SA6	CCOL		COMPASS	16314
24277	5110003123	SA1	LWORD	RESET POSITION COUNTER	COMPASS	16315
	5120003167	SA2	NBLOCKS		CMP30	5066
24300	10711	BX7	X1		COMPASS	16316
	73621	SX6	X2+B1	SET MAX RELOCATION FOR SCAD	CMP30	5067
	5170003110	SA7	POSCTR		COMPASS	16317
24301	5160003155	SA6	UI+2		CMP30	5068
	7170000012	SX7	10	SET BASE	COMPASS	16318
24302	5170003133	SA7	NBASE		COMPASS	16319
	5170003134	SA7	MBASE		COMPASS	16320
24303	76611	SX6	B1+B1	SET PASS = 2	COMPASS	16321
	5160003260	SA6	PASS		COMPASS	16322
24304	7160000055	SX6	1R	SET USAGE LETTER	COMPASS	16325
	5160004055	SA6	REFLET		COMPASS	16326
24305	5120011157	SA2	RJZ	SET EVALUATE ITEM JUMP	COMPASS	16331
	10622	BX6	X2		COMPASS	16332
24306	5160006332	SA6	SCANEV		COMPASS	16333
	6170000047	SB7	39		COMPASS	16334
24307	7110000055	SX1	1R	CLEAR PRINT AREA	COMPASS	16335
	7120003623	SX2	OCTAL		COMPASS	16336
24310	7130003673	SX3	OCTAL+40		COMPASS	16337
	0100005600	RJ	PRESET		COMPASS	16338
24311	5110012171	SA1	=1H		COMPASS	16339
	7120003673	SX2	LINE		COMPASS	16340
24312	7130004025	SX3	LINE+9*NCARDS		COMPASS	16341
	0100005600	RJ	PRESET		COMPASS	16342
24313	0400024223	EQ	PRS	RETURN	COMPASS	16343

** PSN - PRINT SEGMENT NAMES.
* ENTRY (SI) = SEGTab INDEX.
* USES P2TEMP, P2TEMPA, ORGCTR.

COMPASS 16345
COMPASS 16346
COMPASS 16347
COMPASS 16348
COMPASS 16349
COMPASS 16350
COMPASS 16351
COMPASS 16352
COMPASS 16353
COMPASS 16354
COMPASS 16355
COMPASS 16356
COMPASS 16357
COMPASS 16358
COMPASS 16359
COMPASS 16360
COMPASS 16361
COMPASS 16362
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COMPASS 16371
COMPASS 16372
COMPASS 16373
COMPASS 16374
COMPASS 16375
COMPASS 16376
COMPASS 16377
COMPASS 16378
COMPASS 16379
COMPASS 16380
COMPASS 16381
COMPASS 16382
COMPASS 16383
COMPASS 16384
COMPASS 16385
COMPASS 16386
COMPASS 16387
COMPASS 16388
COMPASS 16389
COMPASS 16390
COMPASS 16391
COMPASS 16392
COMPASS 16393
COMPASS 16394
COMPASS 16395
COMPASS 16396
COMPASS 16397
COMPASS 16398
COMPASS 16399
COMPASS 16400
COMPASS 16401

24314	0000000000	PSN	PS	RETURN EXIT	
24315	5120012272		SA2	=60HADDRESS	LENGTH
	54121		SA1	A2+B1	
	54311		SA3	A1+B1	
24316	54431		SA4	A3+B1	
	10633		BX6	X3	
	22704		LX7	X4	
24317	5160003673		SA6	LINE	
	54761		SA7	A6+B1	
	54341		SA3	A4+B1	
24320	54431		SA4	A3+B1	
	10733		BX7	X3	
	54771		SA7	A7+B1	
	10744		BX7	X4	
24321	54771		SA7	A7+B1	
	43066		MX0	-6	
	6170000012	PSN1	SB7	10	
24322	67771		SB7	B7-B1	
	15610		BX6	-X0*X1	
	20166		LX1	-6	
	55661		SA6	A6-B1	
24323	0570024322		NZ	B7,PSN1	LOOP
	6170000012		SB7	10	
24324	10122		BX1	X2	
	43200		MX2	0	
	0311024322		NZ	X1,PSN1	LOOP
24325	0100007737		RJ	LIST2L	
		*		PRINT SEGMENT NAMES.	
24326	0100024713	PSN2	RJ	UPS	UNPACK SEGMENT CARD
24327	5150003164		SA5	SI	
	5120003420		SA2	0.SEGTAB	
24330	36352		IX3	X5+X2	
	53330		SA3	X3	LWA
	5013777773		SA1	A3-4	LWA OF PREVIOUS SEGMENT
24331	10633		BX6	X3	
	10711		BX7	X1	
	5160004066		SA6	P2TEMP	
24332	54761		SA7	A6+B1	
	5140003103		SA4	IOP	CHECK TYPE
24333	5120012133		SA2	=5RIDENT	
	5130012300		SA3	=7RSEGMENT	
24334	13224		BX2	X2-X4	
	37334		IX3	X3-X4	
	0303024342		ZR	X3,PSN3	IF *SEGMENT*
24335	0312024344		NZ	X2,PSN4	IF NOT *IDENT*
	0100006036		RJ	SCLIST	SKIP IDENT NAME
24336	5110004067		SA1	P2TEMPA	LWA OF PREVIOUS SEGMENT
	0306024344		ZR	X6,PSN4	IF IDENT WITH NO NAME
24337	7110000022		SX1	18	SCAN ENTRY POINT
	0100006305		RJ	SCAD	

24340	5110003254		SA1	EXVAL	SET BASE ADDRESS	COMPASS 16402
	10611		BX6	X1		COMPASS 16403
24341	5160003104		SA6	ORGCTR		COMPASS 16404
	0400024344		EQ	PSN4		COMPASS 16405
24342	7110000022	PSN3	SX1	18	SCAN ENTRY POINT	COMPASS 16406
	0100006305		RJ	SCAD		COMPASS 16407
24343	5110003254		SA1	EXVAL		COMPASS 16408
24344	10611	PSN4	BX6	X1	LIST FWA	COMPASS 16409
	43300		MX3	0		COMPASS 16410
	5160004067		SA6	P2TEMPA		COMPASS 16411
24345	7120000033		SX2	27		COMPASS 16412
	43047		MX0	-21		CMP28 1
	15110		BX1	-X0*X1		CMP28 2
24346	0100007773		RJ	PACK0		COMPASS 16413
24347	5120004066		SA2	P2TEMP	LWA	COMPASS 16414
	54321		SA3	A2+B1	FWA	COMPASS 16415
	37123		IX1	X2-X3	LIST LENGTH	COMPASS 16416
24350	43047		MX0	-21		CMP28 3
	15110		BX1	-X0*X1		CMP28 4
	43300		MX3	0		COMPASS 16417
24351	7120000044		SX2	36		COMPASS 16418
	0100007773		RJ	PACK0		COMPASS 16419
24352	5110003345		SA1	EFLG	TO SUPPRESS FATAL ERROR	CMP28 5
	10611		BX6	X1		CMP28 6
	43700		MX7	0		CMP28 7
24353	5160003334		SA6	W2ERR		CMP28 8
	5170003327		SA7	UERR		CMP28 9
24354	5170003322		SA7	AERR		CMP28 10
	0100007732		RJ	LISTL	LIST LINE	COMPASS 16420
24355	5110003164		SA1	SI		COMPASS 16421
	7261000004		SX6	X1+4	INCREMENT INDEX	COMPASS 16422
24356	5120003457		SA2	L.SEGTAB		COMPASS 16423
	54610		SA6	A1		COMPASS 16424
	37226		IX2	X2-X6		COMPASS 16425
24357	7222777773		SX2	X2-4		COMPASS 16426
	0312024362		NZ	X2,PSN5	IF NEXT SEGMENT IS NOT *END*	COMPASS 16427
24360	0100024713		RJ	UPS	UNPACK END CARD	COMPASS 16428
24361	0400024365		EQ	PSN6		COMPASS 16429
24362	5130003420	PSN5	SA3	0.SEGTAB	CHECK USE INDEX	COMPASS 16430
	36113		IX1	X1+X3		COMPASS 16431
	53211		SA2	X1+B1	OLD SEGTAB(2)	COMPASS 16432
24363	5231000005		SA3	X1+5	NEW SEGTAB(2)	COMPASS 16433
	13723		BX7	X2-X3		COMPASS 16434
	21722		AX7	18		COMPASS 16435
24364	0307024326		ZR	X7,PSN2	IF SAME OVERLAY	COMPASS 16436
24365	5110004066	PSN6	SA1	P2TEMP	LIST PROGRAM LWA	COMPASS 16437
	7120000033		SX2	27		COMPASS 16438
24366	43300		MX3	0		COMPASS 16439
	0100007773		RJ	PACK0		COMPASS 16440
24367	5110003114		SA1	MACHINE		COMPASS 16441
	0301024400		ZR	X1,PSN7	IF CP	COMPASS 16442
24370	5110003104		SA1	ORGCTR	LIST LENGTH IN CM WORDS	COMPASS 16443
	5120004066		SA2	P2TEMP		COMPASS 16444
24371	7150000005		SX5	5		COMPASS 16445
	37421		IX4	X2-X1		COMPASS 16446
24372	7244000011		SX4	X4+9		COMPASS 16447
	27404		IX1	X4/X5		COMPASS 16448

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**
*RINT - READ AND CREATE INTERMEDIATE LINE.
USED TO DO THE READING. IT DOES NOT CREATE THE PRINT LINE.COMPASS 16461
COMPASS 16462
COMPASS 16463
COMPASS 16464
COMPASS 16465
COMPASS 16466
COMPASS 16467
COMPASS 16468
COMPASS 16469
COMPASS 16470
COMPASS 16471
COMPASS 16472
COMPASS 16473
COMPASS 16474
COMPASS 16475
COMPASS 16476
COMPASS 16477
COMPASS 16478
COMPASS 16479
COMPASS 16480
COMPASS 16481
COMPASS 16482
CMP24 524
CMP24 525
CMP24 526
CMP24 527
CMP24 528
CMP24 529
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CMP24 532
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CMP24 549
CMP24 550
CMP24 551
CMP24 552
CMP24 553
CMP24 554
CMP24 555
CMP24 556
CMP24 557
CMP24 5581
2 24422 0000000000 RINT PS
3 24423 0100024575 RJ RINTRD READ INTERMEDIATE FILE
4 24424 5110030217 SA1 RELVEC STORE OPTYPE
5 10611 BX6 X1
6 20120 LX1 59-43 PREPARE TO DECODE REMAINDER OF INT.
7 24425 5160003303 SA6 OPTYPE
8 54211 SA2 A1+B1
9 43600 MX6 0
10 24426 0321024427 PL X1,RINT1 IF NO IND
11 10622 BX6 X2
12 54221 SA2 A2+B1
13 24427 5160003305 RINT1 SA6 IND
14 20173 LX1 59
15 43600 MX6 0
16 24430 0321024431 PL X1,RINT2 IF NO FLAG
17 10622 BX6 X2
18 54221 SA2 A2+B1
19 24431 5160003304 RINT2 SA6 FLAG
20 5150003306 SA5 CCT
21 24432 20172 LX1 59-46+45
22 63750 SB7 X5
23 0331024444 MI X1,RIN2 IF TWO-WORD SEQUENCE FIELDS ARE PRESENT
24 24433 20101 LX1 1
25 0321024441 PL X1,RIN1 IF NO SEQUENCE FIELDS ARE PRESENT
26 43600 MX6 0 STORE ONE-WORD SEQUENCE FIELDS
27 24434 10722 BX7 X2
28 54221 SA2 A2+B1
29 5160030003 SA6 SEQ
30 24435 54761 SA7 A6+B1
31 0471024454 EQ B7,B1,RINT3 IF NO CONTINUATION CARDS
32 24436 10722 RIN1A BX7 X2
33 54221 SA2 A2+B1
34 54671 SA6 A7+B1
35 67771 SB7 B7-B1
36 24437 54761 SA7 A6+B1
37 0717024436 GT B7,B1,RIN1A
38 24440 0400024454 EQ RINT3
39 24441 5130012233 RIN1 SA3 =8R NO SEQUENCE FIELDS - USE BLANKS
40 5140012171 SA4 =10R
41 24442 10633 BX6 X3
42 22704 LX7 X4
43 5160030003 SA6 SEQ
44 24443 54761 SA7 A6+B1
45 0400024446 EQ RIN3 CONTINUE BELOW
46 24444 54321 RIN2 SA3 A2+B1 TWO-WORD SEQUENCE FIELDS
47 20101 LX1 1
48 10622 BX6 X2
49 54231 SA2 A3+B1
50 24445 22703 LX7 X3
51 5160030003 SA6 SEQ
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Address	Label	Operation	Comments	Destination	Value
24446	0471024454	RIN3	SA7 EQ B7,B1,RINT3	CMP24	559
	0331024451	MI	X1,RIN4	CMP24	560
24447	54671	RIN3A	IF NO CONTINUATION CARDS	CMP24	561
	67771	SA6	IF NOT SAME SEQUENCE FIELDS FOR ALL CARDS	CMP24	562
	54761	SB7		CMP24	563
24450	0717024447	SA7		CMP24	564
	0400024454	GT		CMP24	565
		EQ		CMP24	566
				CMP24	567
24451	54321	RIN4	SA3 A2+B1	CMP24	568
	10622	BX6	TWO-WORD SEQUENCE FIELD FOR EACH CARD	CMP24	569
	54231	SA2		CMP24	570
	22703	LX7		CMP24	571
24452	54671	SA6		CMP24	572
	67771	SB7		CMP24	573
	54761	SA7		CMP24	574
24453	0717024451	GT		CMP24	575
				CMP24	576
24454	6150000055	RINT3	SB5 1R	COMPASS	16521
	66650	SB6	B5	CMP64G	530
	43066	MX0	-6	CMP64G	531
24455	6130000012	SB3	10	COMPASS	16524
	66400	SB4	B0	CMP64G	532
	20206	LX2	6	CMP64G	533
24456	67731	SB7	B3-B1	COMPASS	16525
	15620	BX6	-X0*X2	COMPASS	16528
	5160026436	SA6	STYPE	COMPASS	16529
24457	0400024461	EQ	RIN6	CMP64G	534
				COMPASS	16531
24460	67441	RIN5	SB4 B4-B1	CMP64G	535
	54661	SA6	A6+B1	CMP64G	536
	0640024460	PL	B4,RIN5	CMP64G	537
24461	20206	RIN6	LX2 6	CMP64G	538
	67771	SB7	B7-B1	CMP64G	539
	15620	BX6	-X0*X2	CMP64G	540
24462	0570024463	NZ	B7,RIN7	CMP64G	541
	54221	SA2	A2+B1	CMP64G	542
	66730	SB7	B3	CMP64G	543
24463	0460024465	RIN7	ZR B6,RIN8	CMP64G	544
	63660	SB6	X6	CMP64G	545
24464	0560024460	NZ	B6,RIN5	CMP64G	546
	0400024461	EQ	RIN6	CMP64G	547
24465	63460	RIN8	SB4 X6	CMP64G	548
	76650	SX6	B5	CMP64G	549
	66650	SB6	B5	CMP64G	550
24466	0714024460	GT	B4,B1,RIN5	CMP64G	551
	67441	SB4	B4-B1	CMP64G	552
	43600	MX6	0	CMP64G	553
24467	0440024460	ZR	B4,RIN5	CMP64G	554
			IF 0001 CODE, GO STORE 00 CHARACTER	COMPASS	16551
	5150003261	SA5	LASTCOL	CMP64G	555
			0000 CODE, END OF STATEMENT	COMPASS	16553
24470	7076751341	SX7	A6-CARD+1	COMPASS	16553
24471	0317024472	NZ	X7,*+1	CMP27	32
	76710	SX7	B1	CMP27	33
24472	6275026436	SB7	X5+CARD-1	COMPASS	16554
	54750	SA7	A5	COMPASS	16555
	76650	SX6	B5	COMPASS	16556

COMPASS 16557
COMPASS 16558
COMPASS 16559

COMPASS 16562

COMPASS 16564
COMPASS 16565

COMPASS	16566
COMPASS	16567
COMPASS	16568

COMPASS	16569
COMPASS	16570
COMPASS	16571

COMPASS	16572
COMPASS	16573
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COMPASS	16575
COMPASS	16576
COMPASS	16577

COMPASS	16578
COMPASS	16579
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COMPASS	16581
COMPASS	16582
COMPASS	16583

COMPASS	16584
COMPASS	16585
COMPASS	16586

COMPASS	16586
COMPASS	16587
COMPASS	16588
COMPASS	16589

COMPASS	16589
COMPASS	16590
COMPASS	16591
COMPASS	16592

COMPASS	16594
COMPASS	16595
COMPASS	16596

COMPASS	16599
CPS0289	7
CPS0289	8

COMPASS	16600
COMPASS	16601
COMPASS	16602
COMPASS	16603

COMPASS	16603
COMPASS	16604
COMPASS	16605
COMPASS	16606

COMPASS	16606
COMPASS	16607
COMPASS	16608

24516	5120003401		SA2	LX+1		COMPASS	16609
	5130003317		SA3	LIBFLG		COMPASS	16610
24517	5140003606		SA4	LXRF		CPS010	121
	15332		BX3	-X2*X3		COMPASS	16611
	11114		BX1	X1*X4		CPS010	122
24520	76210		SX2	B1		COMPASS	16612
	37621		IX6	X2-X1		COMPASS	16613
	12663		BX6	X6+X3		COMPASS	16614
24521	5160003607		SA6	SUPREF		COMPASS	16615
	5130003345		SA3	EFLG	CHECK ERROR FLAG	COMPASS	16616
24522	5110024550		SA1	RISA		COMPASS	16617
	0313024543		NZ	X3,RIS7	IF ERROR	COMPASS	16618
24523	6170000036		SB7	30		COMPASS	16619
24524	23271	RIS3	AX2	X1,B7		COMPASS	16620
	53310		SA3	X1		COMPASS	16621
	53420		SA4	X2		COMPASS	16622
	54111		SA1	A1+B1		COMPASS	16623
24525	15043		BX0	-X3*X4		COMPASS	16624
	0300024524		ZR	X0,RIS3	IF LINE WILL LIST	COMPASS	16625
24526	7061753216		SX6	A1-RISA-RISAL		COMPASS	16626
	0316024540		NZ	X6,RIS6	IF LIST OPTION FAILS	COMPASS	16627
24527	0100007516	RIS4	RJ	LDL		COMPASS	16628
24530	43600		MX6	0		F4820	783
	5160004062		SA6	PLFLG	CLEAR PRINT LINE READY	F4820	784
24531	5110003602	RIS5	SA1	LPCNT	INCREMENT PRINTED LINE COUNT	CPS234	8
	5120003216		SA2	PGCNT		CPSA186	9
24532	73610		SX6	X1		CPS234	9
	73720		SX7	X2		CPSA186	10
	5160003603		SA6	LPCX		CPS234	10
24533	54761		SA7	A6+B1	SAVE PAGE NUMBER FOR ENTREF	CPSA186	11
	0100007437		RJ	CPL	CREATE PRINT LINE	CPS234	11
24534	5110003311		SA1	MICFLG		COMPASS	16630
	5120003347		SA2	LA+1		COMPASS	16631
24535	0301024511		ZR	X1,RINTER	IF NOT MICRO/CONCATENATION LINE	COMPASS	16632
	0302024507		ZR	X2,RIS1	IF NO *A* OPTION	COMPASS	16633
24536	0100007611		RJ	LISTER		COMPASS	16634
24537	0400024512		EQ	RIS2		COMPASS	16635
24540	5110003311	RIS6	SA1	MICFLG	CHECK FOR MICRO/CONCATENATION LINE	COMPASS	16636
	76610		SX6	B1		COMPASS	16637
24541	5160004060		SA6	NLFLG		COMPASS	16638
	0311024507		NZ	X1,RIS1	IF MICRO/CONCATENATION LINE	COMPASS	16639
24542	0400024511		EQ	RINTER		COMPASS	16640
24543	5110004061	RIS7	SA1	DLFLG		COMPASS	16641
	0301024531		ZR	X1,RIS5	IF NO DEFERRED LINE	COMPASS	16642
24544	76710		SX7	B1		COMPASS	16643
	5170004057		SA7	FLIST		COMPASS	16644
24545	0100007611		RJ	LISTER		COMPASS	16645
24546	43600		MX6	0		COMPASS	16646
	5160004061		SA6	DLFLG		COMPASS	16647
24547	0400024531		EQ	RIS5		COMPASS	16648
						COMPASS	16649
24550	00000123010000003365	RISA	VFD	30/=1,30/LL+1	MASTER LIST	COMPASS	16650
24551	00000123010000000116		VFD	30/=1,30/CP.LISTF	EXTERNAL LIST	CMP30	5069
24552	00000033130000003375		VFD	30/SYSFLG,30/LS+1	SYSTEM MACRO	COMPASS	16652
24553	00000033170000003401		VFD	30/LIBFLG,30/LX+1	XTEXT	COMPASS	16653
24554	00000033140000003367		VFD	30/MACFLG,30/LM+1	MACRO	COMPASS	16654
24555	00000033150000003357		VFD	30/ECHFLG,30/LE+1	DUP	COMPASS	16655

24556	00000033160000003355		VFD	30/RMTFLG,30/LD+1	RMT	COMPASS 16656
24557	00000033070000003361		VFD	30/NOAS,30/LF+1	IF SKIPPED	COMPASS 16657
24560	00000123010000012302		VFD	30/=1,30/=0	END OF TABLE	COMPASS 16658
	11	RISAL	EQU	*-RISA		COMPASS 16659
		**	RINTRD	- READ WORDS FROM INTERMEDIATE FILE INTO RELVEC.		COMPASS 16661
		*	RINTRD	WILL ACCESS EITHER INTERMEDIATE FILE OR TABLE.		COMPASS 16662
		*	EXIT	(CCT) = NUMBER OF CARDS.		COMPASS 16663
						COMPASS 16664
						COMPASS 16665
24561	5110004064	RIF1	SA1	RIFA		COMPASS 16666
	0311024567		NZ	X1,RIF2	IF NOT FIRST READ	COMPASS 16667
			IFEQ	CP#RM,0,3		CMP30 5070
24562	7120003000		READ	S		CMP30 5071
24564	6160004064		READW	S,RIFA,1		COMPASS 16668
			ELSE	1		COMPASS 16669
			GET	S,RIFA,10		CMP30 5072
						CMP30 5073
						CMP30 5074
24566	5110004064		SA1	RIFA		COMPASS 16670
24567	10611	RIF2	BX6	X1		COMPASS 16671
	43070		MX0	60-4		COMPASS 16672
	21136		AX1	30		COMPASS 16673
24570	5160030217		SA6	RELVEC		COMPASS 16674
	15610		BX6	-X0*X1		COMPASS 16675
	43064		MX0	60-8		COMPASS 16676
24571	21104		AX1	34-30		COMPASS 16677
	15210		BX2	-X0*X1		COMPASS 16678
	5160003306		SA6	CCT		COMPASS 16679
						CMP30 5075
		RM	IFEQ	CP#RM,0		CMP30 5076
24572	6160030220		READW	S,RELVEC+1,X2		COMPASS 16680
24574	57161		SA1	B6-B1		COMPASS 16681
		RM	ELSE			CMP30 5077
			BX6	X2		CMP30 5078
			IX3	X2+X2		CMP30 5079
			LX2	3		CMP30 5080
			IX4	X3+X2		CMP30 5081
			SA6	T6RM1		CMP30 5082
			GET	S,RELVEC+1,X4		CMP30 5083
			SA2	T6RM1		CMP30 5084
			SA1	RELVEC+X2	NEXT HEADER WORD	CMP30 5085
		RM	ENDIF			CMP30 5086
						CMP30 5087
	10611		BX6	X1		COMPASS 16682
	5160004064		SA6	RIFA		COMPASS 16683
						COMPASS 16684
24575	0000000000	RINTRD	PS	RETURN EXIT		COMPASS 16685
24576	5120003146		SA2	INTERIO		COMPASS 16686
	0312024561		NZ	X2,RIF1	IF FILE ON DISK	COMPASS 16687
24577	5120003402		SA2	O.INTER		COMPASS 16688
	53320		SA3	X2		COMPASS 16689
	43070		MX0	60-4		COMPASS 16690
24600	21336		AX3	30		COMPASS 16691

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24624	5160004067		SA6	P2TEMPA	SAVE DEFAULT OVERLAY LEVELS	CPS002	59
	0311024633		NZ	X1,SIC1	IF *SEGMENT*	CPS002	60
24625	0100006036		RJ	SCLIST	SCAN IDENT NAME	CPS002	61
24626	5110003130		SA1	ABSFG		CMP1	26
	5160004066		SA6	P2TEMP		CPS002	62
24627	0301024616		ZR	X1,SIC3	IF RELOCATABLE PROGRAM	CMP1	27
	0100006223		RJ	VFYLINK		COMPASS	16734
24630	5160004066		SA6	P2TEMP		CPS002	63
	0307024633		ZR	X7,SIC1	IF NAME GOOD	COMPASS	16735
24631	76610		SX6	B1		COMPASS	16736
	5160003345		SA6	EFLG		COMPASS	16737
24632	5160003322		SA6	AERR		COMPASS	16738
24633	7110000022	SIC1	SX1	18		CPS002	64
	7160000003		SX6	3		COMPASS	16740
24634	0100006440		RJ	SCADCON	SCAN ORIGIN VALUE	COMPASS	16741
24635	5110003254		SA1	EXVAL		COMPASS	16742
	43652		MX6	-18		CPS002	65
	15716		BX7	-X6*X1		COMPASS	16744
24636	5170003572		SA7	ORGBASE		COMPASS	16745
	7110000022		SX1	18		CPS002	66
24637	7160000003		SX6	3		COMPASS	16747
	0100006440		RJ	SCADCON		COMPASS	16748
24640	5110003254		SA1	EXVAL		COMPASS	16749
	43652		MX6	-18		CPS002	67
	15616		BX6	-X6*X1		COMPASS	16751
24641	5160003573		SA6	SEGEPT	ENTRY POINT FOR SEGMENT	COMPASS	16752
	5110003114		SA1	MACHINE		CMP1	29
24642	5120006304		SA2	EXSTOP		CPS002	68
	5130003116		SA3	PPTYPE		CPS127	6
24643	0311024654		NZ	X1,SIC2	IF PP	CMP1	30
	0302024623		ZR	X2,SIC	IF NO LEVEL NUMBERS	CPS002	69
24644	7110000006		SX1	6	LEVEL NUMBER 1	COMPASS	16758
	7160000003		SX6	3		COMPASS	16759
24645	0100006530		RJ	SMC		COMPASS	16760
24646	5120003254		SA2	EXVAL		COMPASS	16761
	7110000006		SX1	6	LEVEL NUMBER 2	COMPASS	16762
24647	10622		BX6	X2		COMPASS	16763
	5160004067		SA6	P2TEMPA		COMPASS	16764
24650	7160000003		SX6	3		COMPASS	16765
	0100006530		RJ	SMC		COMPASS	16766
24651	5110004067		SA1	P2TEMPA	DUMP PRELIMINARY INFORMATION	COMPASS	16767
	5120003254		SA2	EXVAL		COMPASS	16768
24652	43066		MX0	-6		COMPASS	16769
	15610		BX6	-X0*X1		COMPASS	16770
	20606		LX6	6		COMPASS	16771
	15220		BX2	-X0*X2		COMPASS	16772
24653	36626		IX6	X2+X6		COMPASS	16773
	54610		SA6	A1		COMPASS	16774
	0400024623		EQ	SIC	RETURN	COMPASS	16775
24654	0313024656	SIC2	NZ	X3,SIC2A	IF PPU	CPS127	7
	0312024621		NZ	X2,SIC3A	IF COMMA	CPS127	8
24655	0400024623		EQ	SIC	RETURN	CPS127	9
24656	7110000014	SIC2A	SX1	12	PPU NUMBER	CPS127	10
	7160000003		SX6	3		COMPASS	16777
24657	0100006530		RJ	SMC		COMPASS	16778
24660	43460		MX4	-12		COMPASS	16779
	5120003573		SA2	SEGEPT	ENTRY POINT	COMPASS	16780


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COMPASS 16781
COMPASS 16782
COMPASS 16783
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COMPASS	16784
COMPASS	16785
COMPASS	16786

COMPASS 16787
COMPASS 16788

COMPASS 16790
COMPASS 16791
COMPASS 16792

COMPASS	16793
COMPASS	16794
COMPASS	16795

COMPASS	16796
COMPASS	16797
COMPASS	16798

COMPASS	16799
COMPASS	16800
COMPASS	16801

CMP30	5088
COMPASS	16805
COMPASS	16806

CMP30	5089
COMPASS	16808
COMPASS	16809

COMPASS	16811
COMPASS	16812
CMP30	5090

CMP30	5091
COMPASS	16814
COMPASS	16815
COMPASS	16816

COMPASS 16816
COMPASS 16817

COMPASS 16819
COMPASS 16820
COMPASS 16821

COMPASS 16823
COMPASS 16824

COMPASS	16825
COMPASS	16826
COMPASS	16827

COMPASS	16828
COMPASS	16829
CMP30	5092

COMPASS 16831
COMPASS 16832
COMPASS 16833

24703	73226	55336	SA3	A3-B6	ADVANCE TO NEXT ORIGIN	COMPASS 16834
			SX2	X2+B6		COMPASS 16835
	0312024702		NZ	X2,SU01	LOOP	COMPASS 16836
24704	0400024676		EQ	SU0	RETURN	COMPASS 16837
			**	TLIST - TEST FOR LISTING OF TITLE CARDS.		COMPASS 16839
			*	RETURN TO Z100 IF CARD WILL NOT LIST.		COMPASS 16840
						COMPASS 16841
						COMPASS 16842
24705	0000000000	TLIST	PS		RETURN EXIT	COMPASS 16843
24706	5110003102		SA1	LOCSYM		COMPASS 16844
	10611		BX6	X1		COMPASS 16845
24707	5160003622		SA6	SUBNAME		COMPASS 16846
	5110003365		SA1	LL+1		COMPASS 16847
24710	5120000116		SA2	CP.LISTF		CMP30 5093
	11612		BX6	X1*X2		COMPASS 16850
24711	0306011134		ZR	X6,Z100	IF NO LIST	COMPASS 16854
	5160003567		SA6	CTYPE		COMPASS 16856
24712	0400024705		EQ	TLIST	RETURN	COMPASS 16857
			**	UPS - UNPACK SEGMENT CARD.		COMPASS 16859
			*	ENTRY (SI) = SEGMENT TABLE INDEX.		COMPASS 16860
						COMPASS 16861
						COMPASS 16862
24713	0000000000	UPS	PS		RETURN EXIT	COMPASS 16863
24714	5150003164		SA5	SI		COMPASS 16864
	5120003420		SA2	O.SEGTAB		COMPASS 16865
24715	36352		IX3	X5+X2		COMPASS 16866
	5140003421		SA4	O.IDTAB	UNPACK CARD	COMPASS 16867
	53331		SA3	X3+B1		COMPASS 16868
24716	36134		IX1	X3+X4		COMPASS 16869
	53210		SA2	X1	SET CURRENT QUAL	COMPASS 16870
	73111		SX1	X1+B1		COMPASS 16871
	43014		MX0	12		COMPASS 16872
24717	73720		SX7	X2		COMPASS 16873
	11602		BX6	X0*X2		COMPASS 16874
	5160003112		SA6	QVAL		COMPASS 16875
24720	5170003133		SA7	NBASE		COMPASS 16876
	0100022715		RJ	/PASS1/UCARD		COMPASS 16877
24721	0100006066		RJ	SETUP		COMPASS 16878
24722	43600		MX6	0	CREATE PRINT LINE	COMPASS 16879
	76710		SX7	B1		COMPASS 16880
	5160004062		SA6	PLFLG		COMPASS 16881
24723	5160004061		SA6	DLFLG		COMPASS 16882
	5170003306		SA7	CCT		COMPASS 16883
24724	0100007437		RJ	CPL		COMPASS 16884
24725	5110012171		SA1	=1H	CLEAR SEQ FIELD	COMPASS 16885
	10611		BX6	X1		COMPASS 16886
24726	5160003702		SA6	LINE+7		COMPASS 16887
	54661		SA6	A6+B1		COMPASS 16888
24727	0400024713		EQ	UPS	RETURN	COMPASS 16889

** URS - UNDEFINE REDEFINABLE SYMBOLS
*

CPSA246 8
CPSA246 9
CPSA246 10
CPSA246 11
CPSA246 12
CPSA246 13
CPSA246 14
CPSA246 15
CPSA246 16
CPSA246 17
CPSA246 18
CPSA246 19
CPSA246 20
CPSA246 21
CPSA246 22
CPSA246 23
CPSA246 24
CPSA246 25
CPSA246 26
CPSA246 27
CPSA246 28
CPSA246 29

24730	0000000000	URS	PS		
24731	5110003447		SA1	L.SYMTAB	
	5120003410		SA2	O.SYMTAB	
24732	5150012303		SA5	=7777770070BS30	
	63710		SB7	X1	LENGTH OF SYMTAB
	66211		SB2	B1+B1	SYMTAB ENTRY SIZE
24733	6160000032		SB6	59-33	REDEF FLAG POSITION
	7222777776		SX2	X2-1	
24734	67772	URS1	SB7	B7-B2	DECREMENT LENGTH
	73222		SX2	X2+B2	INCREMENT TABLE POSITION
	53120		RX1	X2	FETCH 2ND WORD OF ENTRY
24735	0770024730		NG	B7,URS	IF END OF TABLE, EXIT
	22661		LX6	X1,B6	
24736	0326024734		PL	X6,URS1	IF NOT REDEFINABLE, LOOP
	11651		BX6	X5*X1	
	53620		WX6	X2	REPLACE ENTRY
24737	0400024734		EQ	URS1	LOOP

** ZDEFSYM - DEFINE SYMBOL.
* MAKES TYPE *D* REF TABLE ENTRY AND STORES SYMBOL VALUE
* RIGHT JUSTIFIED IN OCTAL EXPANSION AREA.
* NO ERRORS DETECTED.
* ENTRY (X1) = SYMBOL.
* (X2) = VALUE.
* (X3) = RELOCATION.
* (X4) = EXTERNAL NUMBER.
* (X5) = REDEFINITION FLAG.

CMP19 358
CMP19 359
CMP19 360
COMPASS 16892
COMPASS 16893
COMPASS 16894
COMPASS 16895
COMPASS 16896
CMP19 361
COMPASS 16897
COMPASS 16898
COMPASS 16899
COMPASS 16900
COMPASS 16901
COMPASS 16902
COMPASS 16903
COMPASS 16905
COMPASS 16906
COMPASS 16907
COMPASS 16908
COMPASS 16909
COMPASS 16910
CMP19 362
COMPASS 16912
COMPASS 16913
COMPASS 16914
COMPASS 16915
CP096A 515
CMP19 363
CP096A 516
CMP19 365

24740	0000000000	ZDEFSYM	PS		RETURN EXIT
24741	0301024740		ZR	X1,ZDEFSYM	EXIT IF SYMBOL IS EMPTY
	43047		MX0	39	
	15220		BX2	-X0*X2	TRUNCATE TO 21-BIT VALUE
24742	12343		BX3	X4+X3	OR RELOCATION AND EXTERNAL
	20325		LX3	21	
	36632		IX6	X3+X2	
24743	20502	+	LX5	2	
	0304024744		ZR	X4,*+1	
	73551		SX5	X5+B1	ADD EXT BIT
24744	20501		LX5	1	
	73551		SX5	X5+B1	ADD DEFINED BIT
	20536		LX5	30	
	12665		BX6	X6+X5	SAVE
24745	5160024760		SA6	ZDEFSYMT	EQUIVALENT
	0100006200		RJ	TLUSYMT	FIND SYMBOL
24746	7203777776		SX0	X3-1	
	0303024754		ZR	X3,ZDEFSYM2	IF NOT FOUND
24747	53100		RX1	X0	
	43034		MX0	28	

1

24777	6271777724	0470025004	ZR	B7,ZEVIT200	IF ASTERISK	COMPASS 16958
		0470025025	SB7	X1-1R\$		COMPASS 16959
			EQ	B7,ZEVIT250	IF DOLLAR SIGN	COMPASS 16960
						COMPASS 16961
* ALPHABETIC CHARACTER LEADS THE ELEMENT.						COMPASS 16962
						COMPASS 16963
25000	0100006025	ZEVIT21	RJ	SCITEM	ISOLATE THE SYMBOL	COMPASS 16964
25001	10166	ZEVIT22	BX1	X6		COMPASS 16965
	0306025012		ZR	X6,ZEVITER	COMPLAIN IF EMPTY SYMBOL	COMPASS 16966
25002	0100025263		RJ	ZTLUSYM	EVALUATE SYMBOL	COMPASS 16967
25003	0400025076		EQ	ZEVITEMS		COMPASS 16968
						COMPASS 16969
* ASTERISK ELEMENT.						COMPASS 16970
						COMPASS 16971
25004	0100006025	ZEVIT200	RJ	SCITEM	ISOLATE THE ITEM	COMPASS 16972
25005	6276777730		SB7	X6-1R*	ISOLATE VALURIOS LEGAL COMBINATIONS	COMPASS 16973
	6266773063		SB6	X6-2R*L		COMPASS 16974
25006	6256773060		SB5	X6-2R*0		COMPASS 16975
	0470025015		ZR	B7,ZEVIT210	IF *	COMPASS 16976
25007	0460025015		ZR	B6,ZEVIT210	IF *L	COMPASS 16977
	0450025021		ZR	B5,ZEVIT220	IF *0	COMPASS 16978
25010	6276773057		SB7	X6-2R*P		COMPASS 16979
	6266773071		SB6	X6-2R*F		COMPASS 16980
25011	0470025022		ZR	B7,ZEVIT230	IF *P	COMPASS 16981
	0460025024		ZR	B6,ZEVIT240	IF *F	COMPASS 16982
25012	76610	ZEVITER	SX6	B1	NOTE ERROR	COMPASS 16983
	5160003322		SA6	AERR		COMPASS 16984
25013	5160003345		SA6	EFLG		COMPASS 16985
	5160006302		SA6	EXERR		COMPASS 16986
25014	0400025076		EQ	ZEVITEMS		COMPASS 16987
						COMPASS 16988
* * OR *L ELEMENT.						COMPASS 16989
						COMPASS 16990
25015	5120003106	ZEVIT210	SA2	LOCCTR		COMPASS 16991
25016	54321	ZEVIT211	SA3	A2+B1		COMPASS 16992
	10622		BX6	X2		COMPASS 16993
	22703		LX7	X3		COMPASS 16994
25017	5160006275	ZEVIT212	SA6	ELVAL		COMPASS 16995
	5170006276		SA7	ELREL		COMPASS 16996
25020	0400025076		EQ	ZEVITEMS		COMPASS 16997
						COMPASS 16998
* *0 ELEMENT.						COMPASS 16999
						COMPASS 17000
25021	5120003104	ZEVIT220	SA2	ORGCTR	USE ORIGIN COUNTER	COMPASS 17001
	0400025016		EQ	ZEVIT211		COMPASS 17002
						COMPASS 17003
* *P ELEMENT.						COMPASS 17004
						COMPASS 17005
25022	5120003110	ZEVIT230	SA2	POSCTR		COMPASS 17006
25023	10622	ZEVIT231	BX6	X2		COMPASS 17007
	43700		MX7	0		COMPASS 17008
	0400025017		EQ	ZEVIT212		COMPASS 17009
						COMPASS 17010
* *F ELEMENT.						COMPASS 17011
						COMPASS 17012
25024	5120003061	ZEVIT240	SA2	FMODE		COMPASS 17013
	0400025023		EQ	ZEVIT231		COMPASS 17014

* DOLLAR SIGN.

COMPASS 17015
COMPASS 17016
COMPASS 17017

25025	0100006025	ZEVIT250	RJ	SCITEM	GET ITEM
25026	5110003116		SA1	PPTYPE	
	73111		SX1	X1+B1	
25027	0301025015		ZR	X1,ZEVIT210	IF BCU ASSEMBLY
	6276777724		SB7	X6-1R\$	AND COMPLAIN IF ANYTHING MORE THAN
25030	5110003110		SA1	POSTR	JUST A DOLLAR SIGN
	7261777776		SX6	X1-1	
25031	43700		MX7	0	
	0470025017		ZR	B7,ZEVIT212	
25032	0400025012		EQ	ZEVITER	

COMPASS 17018
F4820 785
F4820 786
F4820 787
COMPASS 17019
COMPASS 17020
COMPASS 17021
COMPASS 17022
COMPASS 17023
COMPASS 17024

* SLASH ELEMENT.

COMPASS 17025
COMPASS 17026

25033	0100005444	ZEVIT300	RJ	GETCH	
25034	5120003145		SA2	CHAR	CHECK NEXT CHARACTER
	7212777727		SX1	X2-1R/	
25035	0301025040		ZR	X1,ZEVIT303	IF */*
	0100006025		RJ	SCITEM	
25036	6271777727		SB7	X1-1R/	
	0570025012		NZ	B7,ZEVITER	IF NOT QUAL SYMBOL
25037	10166		BX1	X6	
25040	0100006151	ZEVIT303	RJ	SQV	SET QUAL VALUE
25041	0100005444		RJ	GETCH	SKIP TERMINAL /
25042	0100006025		RJ	SCITEM	
25043	5160025137		SA6	ZEVA	
	10166		BX1	X6	
25044	0316025047		NZ	X6,ZEVIT301	IF NOT EMPTY SYMBOL
	76610		SX6	B1	
25045	5160003322		SA6	AERR	
	5160003345		SA6	EFLG	
25046	0400025055		EQ	ZEVIT302	
25047	0100025263	ZEVIT301	RJ	ZTLUSYM	
25050	5110025137		SA1	ZEVA	LOOK UP SYMBOL
	0100006200		RJ	TLUSYMT	
25051	7203777776		SX0	X3-1	
	53100		RX1	X0	
	13651		BX6	X5-X1	
25052	0306025055		ZR	X6,ZEVIT302	IF THE SAME QUALIFIER
	76200		SX2	B0	
25053	0100005407		RJ	ENTSYMT	ENTER SYMBOL TABLE
25054	0400025047		EQ	ZEVIT301	AND GO LOOK AGAIN
25055	5110003113	ZEVIT302	SA1	QVAL+1	RESET QUAL VALUE
	10611		BX6	X1	
	55611		SA6	A1-B1	
25056	0400025076		EQ	ZEVITEMS	RETURN

COMPASS 17027
COMPASS 17028
COMPASS 17029
COMPASS 17030
COMPASS 17031
COMPASS 17032
COMPASS 17033
COMPASS 17034
COMPASS 17035
COMPASS 17036
COMPASS 17037
COMPASS 17038
CMP1 31
COMPASS 17039
COMPASS 17040
COMPASS 17041
COMPASS 17042
COMPASS 17043
COMPASS 17044
COMPASS 17045
CMP1 32
CMP1 33
CP096A 518
CP096A 519
CMP1 35
CMP1 36
CMP146 35
CMP146 36
CMP146 37
COMPASS 17046
COMPASS 17047
COMPASS 17048
COMPASS 17049

* EQUALS SIGN.

COMPASS 17050
COMPASS 17051
COMPASS 17052

25057	0100005444	ZEVIT400	RJ	GETCH	
25060	6271777754		SB7	X1-1RS	
	6261777747		SB6	X1-1RX	
25061	0470025063		ZR	B7,ZEVIT402	IF =S TYPE SYMBOL
	0461025063		EQ	B6,B1,ZEVIT402	IF =Y TYPE SYMBOL
25062	0560025065		NZ	B6,ZEVIT401	JUMP IF NUMERIC LITERAL

COMPASS 17053
COMPASS 17054
COMPASS 17055
CP154 53
CP154 54
COMPASS 17057

25063	0100005444	ZEVIT402	RJ	GETCH	THROW AWAY THE *S* OR *X* OR *Y*	CP154	55
25064	0400025000		EQ	ZEVIT21	AND GO EVALUATE NORMAL SYMBOL	COMPASS	17059
25065	7120030053	ZEVIT401	SX2	VALUES	PREPARE TO EVALUATE LITERAL	COMPASS	17060
	7130000144		SX3	NLITS		COMPASS	17061
25066	77401		SX4	-B1		COMPASS	17062
	5150003123		SA5	LWORD		COMPASS	17063
25067	0100006565		RJ	SCD	SCAN DATA ITEM	COMPASS	17064
25070	0303025012		ZR	X3,ZEVITER	COMPLAIN IF ZERO-LENGTH DATA	COMPASS	17065
	7120030053		SX2	VALUES		COMPASS	17066
25071	0100025246		RJ	ZTLULIT	LOOK UP LITERAL	COMPASS	17067
25072	43047		MX0	39		COMPASS	17068
	15630		BX6	-X0*X3		COMPASS	17069
	21330		AX3	24		COMPASS	17070
	43263		MX2	-9		CMP30	5094
25073	15732		BX7	-X2*X3		CMP30	5095
	0400025017		EQ	ZEVIT212		COMPASS	17072
						COMPASS	17073
		*		NUMERIC ELEMENT.		COMPASS	17074
						COMPASS	17075
25074	7120006275	ZEVIT100	SX2	ELVAL		COMPASS	17076
	76310		SX3	B1		COMPASS	17077
	10433		BX4	X3		COMPASS	17078
25075	5150025136		SA5	ZEVITFL		COMPASS	17079
	0100006565		RJ	SCD	SCAN DATA ITEM	COMPASS	17080
25076	0000000000	ZEVITEMS	PS			COMPASS	17081
25077	5110003145		SA1	CHAR		COMPASS	17082
	0400024772		EQ	ZEVIT10		COMPASS	17083
						COMPASS	17084
		*		SUSPECTED REGISTER NAME.		COMPASS	17085
						COMPASS	17086
25100	5110003144	ZEVIT500	SA1	COLUMN		COMPASS	17087
	5211026436		SA1	X1+CARD-1		COMPASS	17088
25101	54211		SA2	A1+B1		COMPASS	17089
	6272777720		SB7	X2-1R.		COMPASS	17090
25102	0470025114		ZR	B7,ZEVIT530	IF LETTER FOLLOWED BY DECIMAL POINT	COMPASS	17091
	6272777744		SB7	X2-1R0	CHECK FOR NUMBER OUTSIDE OF 0-7	COMPASS	17092
25103	0770025000		NG	B7,ZEVIT21		COMPASS	17093
	6272777734		SB7	X2-1R8		COMPASS	17094
25104	0670025000		PL	B7,ZEVIT21		COMPASS	17095
	54321		SA3	A2+B1		COMPASS	17096
25105	7140003036		SX4	3036B		COMPASS	17097
	20444		LX4	36	CHECK FOR EXAACTLY 2-LETTERS	COMPASS	17098
	63730		SB7	X3		COMPASS	17099
25106	23574		AX5	X4,B7		COMPASS	17100
	20573		LX5	59		COMPASS	17101
	0325025000		PL	X5,ZEVIT21		COMPASS	17102
25107	73410		SX4	X1		COMPASS	17103
	20403		LX4	3		COMPASS	17104
	0100005444		RJ	GETCH		COMPASS	17105
25110	7256777744		SX5	X6-1R0	GET REGISTER NUMBER	COMPASS	17106
	12645		BX6	X4+X5		COMPASS	17107
	43774		MX7	60		COMPASS	17108
25111	5160006300		SA6	ELREG		COMPASS	17109
	5170006275		SA7	ELVAL		COMPASS	17110
25112	0100005444		RJ	GETCH		COMPASS	17111
25113	0400024761		EQ	ZEVITEM		COMPASS	17112
						COMPASS	17113

25114	20103		ZEVIT530	LX1	3	ISOLATE REGISTER CLASS	COMPASS	17114
	10611			BX6	X1		COMPASS	17115
		5160006300		SA6	ELREG		COMPASS	17116
25115	0100005444			RJ	GETCH		COMPASS	17117
25116	0100005444			RJ	GETCH	THROW AWAY PERIOD	COMPASS	17118
25117	5120004055			SA2	REFLET	SAVE REFERENCE TYPE LETTER	CPS026	53
		7170000055		SX7	1R		CPS026	54
25120	10622			BX6	X2		CPS026	55
	54720			SA7	A2	MAKE IT BLANK TEMPORARILY	CPS026	56
		5160025140		SA6	ZEVB		CPS026	57
25121	0100025076			RJ	ZEVITEMS	GO BACK TO EVALUATE IT	COMPASS	17119
25122	5120025140			SA2	ZEVB	RESTORE FLAGGING SYMBOL	CPS026	58
		10722		BX7	X2		CPS026	59
25123	5170004055			SA7	REFLET		CPS026	60
		5120006275		SA2	ELVAL		COMPASS	17120
25124	54321			SA3	A2+B1	ELREL	COMPASS	17121
	54431			SA4	A3+B1	ELEXT	COMPASS	17122
	12534			BX5	X3+X4		COMPASS	17123
25125	5130006302			SA3	EXERR		COMPASS	17124
	36553			IX5	X5+X3		COMPASS	17125
25126	0315025133			NZ	X5,ZEVIT550		COMPASS	17126
	43571			MX5	-3		COMPASS	17127
	15625			BX6	-X5*X2		COMPASS	17128
25127	43774			MX7	60		COMPASS	17129
	11552			BX5	X5*X2		COMPASS	17130
	54720			SA7	A2		COMPASS	17131
	54241			SA2	A4+B1	ELREG	COMPASS	17132
25130	36662			IX6	X6+X2		COMPASS	17133
	54620			SA6	A2		COMPASS	17134
	0305024761			ZR	X5,ZEVITEM	IF NO FIELD OVERFLOW	COMPASS	17135
25131	76610			SX6	B1	COMPLAIN	COMPASS	17136
	5160003345			SA6	EFLG		COMPASS	17137
25132	5160003341			SA6	W7ERR		COMPASS	17138
	0400024761			EQ	ZEVITEM		COMPASS	17139
25133	76610		ZEVIT550	SX6	B1	COMPLAIN	COMPASS	17140
	54630			SA6	A3		COMPASS	17141
	5160003322			SA6	AERR		COMPASS	17142
25134	5160003345			SA6	EFLG		COMPASS	17143
25135	5110003145		ZEVITEMN	SA1	CHAR		COMPASS	17144
	0400024761			EQ	ZEVITEM		COMPASS	17145
							COMPASS	17146
25136	00000000000000000000		ZEVITFL	DATA	0		COMPASS	17147
25137	00000000000000000000		ZEVA	DATA	0		CMP1	45
25140	00000000000000000000		ZEVB	DATA	0		CPS026	61

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RSM4159	43
RSM4159	44
RSM4159	45
RSM4159	46
COMPASS	17213
COMPASS	17214
COMPASS	17215
COMPASS	17216
COMPASS	17217
COMPASS	17218
COMPASS	17219

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	25274	5170006302	5170003345	SA7	EFLG		COMPASS 17361
	25275	20212		SA7	EXERR		COMPASS 17362
			ZTLUSYM1	LX2	10		COMPASS 17372
1		21247		AX2	39	SIGN EXTEND VALUE	COMPASS 17373
2		10622		BX6	X2		COMPASS 17374
3		53230		RX2	X3	RECLAIM VALUE OF SYMBOL	CP096A 520
4	25276	7100000777		SX0	777B		COMPASS 17376
5		5160006275		SA6	ELVAL		COMPASS 17377
6	25277	21225		AX2	21		COMPASS 17378
7		11602		BX6	X0*X2		COMPASS 17379
8		20261		LX2	49		COMPASS 17380
9		54661		SA6	A6+B1	ELREL	COMPASS 17381
10	25300	43700		MX7	0		COMPASS 17382
11		54761		SA7	A6+B1	ELECT	COMPASS 17383
12		0322025303		PL	X2,ZTLUSYM6	IF NOT EXTERNAL	COMPASS 17384
13	25301		ZTLU7	BSS	0		CPS164X 4
14	25301	54670		SA6	A7		COMPASS 17385
15		5170006276		SA7	ELREL		COMPASS 17386
16	25302	0400025306		EQ	ZTLUSYM3		COMPASS 17387
17	25303	20202	ZTLUSYM6	LX2	2		COMPASS 17388
18		0322025306		PL	X2,ZTLUSYM3	IF + RELOC OR ABS	COMPASS 17389
19		21001		AX0	1	CHECK IF NEG. RELOCATION WITHIN ABS. BLOCK.	CPS164X 5
20	25304	11606		BX6	X0*X6	GET RELOCATION.	CPS164X 6
21		0306025301		ZR	X6,ZTLU7	IF NEG. RELOCATION IN ABS. BLOCK.	CPS164X 7
22	25305	5120006275		SA2	ELVAL	COMPLEMENT VALUE	COMPASS 17390
23		14622		BX6	-X2		COMPASS 17391
24		54620		SA6	A2		COMPASS 17392
25	25306	53230	ZTLUSYM3	RX2	X3	RECLAIM SYMBOL VALUE	CP096A 521
26		5110004055		SA1	REFLET	USAGE	COMPASS 17406
27	25307	0100023545		RJ	ENTREF	ENTER REFERENCE TABLE	CPS026 62
28	25310	0400025263		EQ	ZTLUSYM		COMPASS 17408
29							
30							
31							
32							
33			**	ZUPLOC	-	UPDATE LOCATION COUNTER.	COMPASS 17410
34			*	ENTRY	(X1)	= INCREMENT.	COMPASS 17411
35							COMPASS 17412
36							COMPASS 17413
37	25311	0000000000	ZUPLOC	PS		RETURN EXIT	COMPASS 17414
38	25312	5120003104		SA2	ORGCTR		COMPASS 17415
39		5130003106		SA3	LOCCTR		COMPASS 17416
40	25313	36612		IX6	X1+X2		COMPASS 17417
41		36713		IX7	X1+X3		COMPASS 17418
42		54620		SA6	A2		COMPASS 17419
43		54730		SA7	A3		COMPASS 17420
44	25314	0100026413		RJ	RESORG	RESET ORIGIN	COMPASS 17421
45	25315	0400025311		EQ	ZUPLOC	RETURN	COMPASS 17422
46							
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** TEMPORARY STORAGE FOR BINARY OUTPUT ROUTINES.

COMPASS 17424

COMPASS 17425

COMPASS 17426

1	25316	00000000000000000000	BTEMP	SEG	BINARY OUTPUT SUBROUTINES.	CMP30	5097
2	25317	00000000000000000000	BTEMPA	DATA	0 GENERAL TEMPORARY	COMPASS	17427
3	25320	00000000000000000000	BTEMPB	DATA	0 GENERAL TEMPORARY	COMPASS	17428
4						COMPASS	17429
5							
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** ALM - ALLOCATE MEMORY.

COMPASS 17431

COMPASS 17432

COMPASS 17433

COMPASS 17434

CMP30 5098

CPS012 11

CMP30 5099

CPS012 12

COMPASS 17435

CPSA281 315

COMPASS 17437

F4820 791

CPSA281 316

CPSA281 317

CPSA281 318

CPSA281 319

CPSA281 320

CPSA281 321

CPSA281 322

CPSA281 323

CPSA281 324

CPSA281 325

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CPSA281 333

CPSA281 334

CPSA281 335

CPSA281 336

CPSA281 337

CPSA281 338

CPSA281 339

CPSA281 340

COMPASS 17444

COMPASS 17445

COMPASS 17446

COMPASS 17447

COMPASS 17448

CMP30 5100

COMPASS 17451

**	BINOUT - OUTPUT BYTE OF INFORMATION.				COMPASS 17453
*	BINOUT RECORDS INFORMATION BY OR-ING INTO BINWORD/BINREL.				COMPASS 17454
*	R-ERRORS AND A-ERRORS POSTED FOR RANGE/ILLEGAL RELOCATION.				COMPASS 17455
*	ENTRY	(X1) = VALUE.			COMPASS 17456
*		(X2) = BIT COUNT.			COMPASS 17457
*		(X3) = RELOCATION.			COMPASS 17458
*		(X4) = EXTERNAL NUMBER.			COMPASS 17459
					COMPASS 17460
					COMPASS 17461
25342	76610	BINOUTR	SX6	B1 DATA OUT OF RANGE - POST R ERROR	COMPASS 17462
	5160003325		SA6	RERR	COMPASS 17463
25343	5160003345		SA6	EFLG	COMPASS 17464
					COMPASS 17465
25344	0000000000	BINOUT	PS	RETURN EXIT	COMPASS 17466
25345	0302025344		ZR	X2,BINOUT QUIT IF ZERO-LENGTH BYTE	COMPASS 17467
	5150003130		SA5	ABSFG	COMPASS 17468
25346	63220		SB2	X2 CHECK FOR IN RANGE	COMPASS 17469
	5120003104		SA2	ORGCTR	COMPASS 17470
25347	0305025352		ZR	X5,BINOUT1	COMPASS 17471
	5150003265		SA5	LPGM MAKE ABSOLUTE CHECK	COMPASS 17472
25350	37725		IX7	X2-X5	COMPASS 17473
	5150003572		SA5	ORGBASE	COMPASS 17474
	37625		IX6	X2-X5	COMPASS 17475
25351	15776		BX7	-X6*X7	COMPASS 17476
	0327025342		PL	X7,BINOUTR IF OUTSIDE RANGE OF PROGRAM	COMPASS 17477
25352	5150003570	BINOUT1	SA5	MAXORG CHECK BLOCK RANGE	COMPASS 17478
	37725		IX7	X2-X5	COMPASS 17479
25353	5150003571		SA5	MINORG	COMPASS 17480
	37625		IX6	X2-X5	COMPASS 17481
	15776		BX7	-X6*X7	COMPASS 17482
25354	54221		SA2	A2+B1	COMPASS 17483
	7262777377		SX6	X2-400B	COMPASS 17484
	11767		BX7	X6*X7	COMPASS 17485
25355	0327025342		PL	X7,BINOUTR IF OUTSIDE VALID RANGES	COMPASS 17486
	6170000074		SB7	60 MASK OUT UNUSED BITS	COMPASS 17487
25356	10611		BX6	X1	COMPASS 17488
	0427025360		EQ	B2,B7,BINOUT2 IF 60-BIT FIELD	COMPASS 17489
	43001		MX0	1	COMPASS 17490
25357	67672		SB6	B7-B2	COMPASS 17491
	67561		SB5	B6-B1	COMPASS 17492
	23050		AX0	X0,B5	COMPASS 17493
	15610		BX6	-X0*X1	COMPASS 17494
25360	5110003110	BINOUT2	SA1	POSCTR	COMPASS 17495
	5120003574		SA2	BINWORD	COMPASS 17496
25361	63410		SB4	X1	COMPASS 17497
	22646		LX6	X6,B4	COMPASS 17498
	12762		BX7	X6+X2	COMPASS 17499
	54720		SA7	A2	COMPASS 17500
25362	7150000001		SX5	1 CONVERT RELOCATION	CMP30 5101
	20521		LX5	17	CMP30 5102
	36654		IX6	X5+X4	CMP30 5103
25363	0314025370		NZ	X4,BINOUT3 IF EXTERNAL	COMPASS 17502
	0303025344		ZR	X3,BINOUT IF ABSOLUTE	CMP30 5104
25364	63730		SB7	X3	COMPASS 17503
	10633		BX6	X3	COMPASS 17504
	0471025370		EQ	B7,B1,BINOUT3 IF + PROGRAM	CMP30 5105
25365	6160000401		SB6	401B	COMPASS 17507

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5120026434	SA2	DBTB	TEXT TABLE HEADER	CMP30	5131
25410 23614 +	AX6	X4,B1		COMPASS	17547
0306025411	ZR	X6,*+1		COMPASS	17548
73441	SX4	X4+B1	CONVERT RELOCATION	COMPASS	17549
25411 55341	SA3	A4-B1		CMP30	5132
20422	LX4	18		COMPASS	17550
10533	BX5	X3		CMP30	5133
21321	AX3	17		CMP30	5134
25412 7170000005	SX7	5		CMP30	5135
0303025414	ZR	X3,DBZ1	IF ORIGIN LESS THAN 2**17	CMP30	5136
25413 54221	SA2	A2+B1	XTEXT TABLE HEADER	CMP30	5137
20406	LX4	6		CMP30	5138
25414 36242 DBZ1	IX2	X4+X2		CMP30	5139
12325	BX3	X2+X5	ADD IN ORIGIN	CMP30	5140
76410	SX4	B1		CMP30	5141
37717	IX7	X1-X7		CMP30	5142
25415 0326025416 +	PL	X6,*+1	IF NOT CONDITIONAL	CMP30	5143
20441	LX4	33	SET CONDITIONAL LOAD FLAG	CMP30	5144
12334	BX3	X3+X4		CMP30	5145
25416 0327025424 +	PL	X7,DBZ3	IF 5 OR MORE WORDS	CMP30	5146
20144	LX1	36		CMP30	5147
36613	IX6	X1+X3	ADD WORD COUNT	COMPASS	17557
25417 43700	MX7	0		CMP30	5148
5160025526	SA6	DBZT		CMP30	5149
25420 5170025531	SA7	DBZT+3		CMP30	5150
54771	SA7	A7+B1		CMP30	5151
54771	SA7	A7+B1		CMP30	5152
				CMP30	5153
25421 20630 RM	IFEQ	CP#RM,0		CMP30	5154
	LX6	-36		CMP30	5155
64660	WRITEW	B,A6,X6+B1		CMP30	5156
	ELSE			CMP30	5157
	LX1	-36		CMP30	5158
	IX4	X1+X1		CMP30	5159
	LX1	3		CMP30	5160
	IX2	X1+X4		CMP30	5161
	SX3	X2+20		CMP30	5162
	SA1	B-1		CMP30	5163
	NZ	X1,DBZ2	IF NOT *W* RECORDS	CMP30	5164
	PUT	B,DBZT,X3		CMP30	5165
	EQ	DBSSZX		CMP30	5166
	DBZ2	PUTP	B,DBZT,X3	CMP30	5167
	RM	ENDIF		CMP30	5168
				CMP30	5169
25423 0400025400	EQ	DBSSZX		COMPASS	17566
25424 43033 DBZ3	MX0	-33		CMP30	5170
76410	SX4	B1	ADD 1 TO TEXT WORD COUNT	CMP30	5171
20444	LX4	36		CMP30	5172
36634	IX6	X3+X4		CMP30	5173
25425 15730	BX7	-X0*X3		CMP30	5174
20430	LX4	-36		CMP30	5175
5160025526	SA6	DBZT	STORE TEXT/XTEXT HEADER	CMP30	5176
25426 5170025532	SA7	DBZT+4		CMP30	5177
37114	IX1	X1-X4	REDUCE WORD COUNT	CMP30	5178
43063	MX0	-9		CMP30	5179
25427 5120012305	SA2	=4300000020000000000001B	REPL HEADER	CMP30	5180
6170000052	SB7	42		CMP30	5181

25430	10366		BX3	X6		CMP30	5182
	20014		LX0	12		CMP30	5183
	7170377777		SX7	1S17-1	MAX REPL COUNT	CMP30	5184
25431	76500		SX5	B0		CMP30	5185
	20632		LX6	59-33		CMP30	5186
	0333025434		MI	X3,DBZ4	IF NOT EXTENDED	CMP30	5187
25432	20470		LX4	56		CMP30	5188
	12224		BX2	X2+X4	FORM XREPL HEADER	CMP30	5189
	21306		AX3	24-18		CMP30	5190
25433	6170000055		SB7	45		CMP30	5191
	21702		AX7	2		CMP30	5192
25434	0326025435	DBZ4	PL	X6,*+1	IF NOT CONDITIONAL	CMP30	5193
	21306		AX3	18-12		CMP30	5194
	15530		BX5	-X0*X3		CMP30	5195
25435	36625	+	IX6	X2+X5	INSERT BLOCK NUMBER INTO REPL HEADER	CMP30	5196
	37571		IX5	X7-X1		CMP30	5197
	22777		LX7	B7		CMP30	5198
	14355		BX3	-X5		CMP30	5199
25436	0335025437	+	MI	X5,*+1	IF REPL COUNT GREATER THAN MAX	CMP30	5200
	13333		BX3	X3-X3		CMP30	5201
	22771		LX7	X1,B7		CMP30	5202
25437	55671		SA6	A7-B1		CMP30	5203
	54771		SA7	A7+B1		CMP30	5204
	10633		BX6	X3	REDUCE COUNT	CMP30	5205
25440	5160004052		SA6	CNTBSSZ		CMP30	5206
						CMP30	5207
		RM	IFEQ	CP#RM,0		CMP30	5208
	6160025526		WRITEW	B,DBZT,6	WRITE TEXT/XTEXT AND REPL/XREPL	CMP30	5209
		RM	ELSE			CMP30	5210
			SA1	B-1		CMP30	5211
			NZ	X1,DBZ5	IF NOT *W* RECORDS	CMP30	5212
			PUT	B,DBZT,60		CMP30	5213
			EQ	DBZ6		CMP30	5214
		DBZ5	PUTP	B,DBZT,60		CMP30	5215
		RM	ENDIF			CMP30	5216
						CMP30	5217
25443	5110004052	DBZ6	SA1	CNTBSSZ		CMP30	5218
	5120025526		SA2	DBZT		CMP30	5219
25444	0301025400		ZR	X1,DBSSZX	IF COUNT COMPLETED	CMP30	5220
	5140025532		SA4	DBZT+4		CMP30	5221
25445	54541		SA5	A4+B1		CMP30	5222
	76610		SX6	B1		CMP30	5223
	0322025451		PL	X2,DBZ7	IF EXTENDED	CMP30	5224
25446	55341		SA3	A4-B1		CMP30	5225
	54620		SA6	A2		CMP30	5226
	20452		LX4	-18		CMP30	5227
	73740		SX7	X4	CHANGE REPL TO XREPL	CMP30	5228
25447	20670		LX6	56		CMP30	5229
	37447		IX4	X4-X7		CMP30	5230
	12636		BX6	X3+X6		CMP30	5231
	20466		LX4	-6		CMP30	5232
25450	12447		BX4	X4+X7		CMP30	5233
	20503		LX5	45-42		CMP30	5234
	20430		LX4	24		CMP30	5235
	54630		SA6	A3		CMP30	5236
25451	20517	DBZ7	LX5	15		CMP30	5237
	36645		IX6	X4+X5	UPDATE SOURCE ADDRESS	CMP30	5238

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25477	5140003437		DBSSZP1	SA4	O.MEMORY		COMPASS	17621
		53144		SA1	X4+B4		COMPASS	17622
		15610		BX6	-X0*X1		COMPASS	17623
1	25500	20060		LX0	48		COMPASS	17624
2		0320025501		PL	X0,*+1		COMPASS	17625
3		66441		SB4	B4+B1		COMPASS	17626
4	25501	67221	+	SB2	B2-B1		COMPASS	17627
5		54610		SA6	A1		COMPASS	17628
6		0520025477		NZ	B2,DBSSZP1		COMPASS	17629
7	25502	0400025400		EQ	DBSSZX		COMPASS	17630
8							CPSA281	344
9			*		180 PP ASSEMBLY. BSSZ WORDS ARE STORED IN THE PROGRAM IMAGE		CPSA281	345
10			*		BY ZEROING AS MANY FULL CM WORDS AS POSSIBLE...		CPSA281	346
11			*				CPSA281	347
12			*		1) THE STARTING POSITION AND BIT COUNT FOR THE FIRST WORD ARE		CPSA281	348
13			*		DETERMINED AND THAT AMOUNT IS ZEROED.		CPSA281	349
14			*		2) IF THE BSSZ COUNT IS LARGE ENOUGH TO INCLUDE MORE WORDS,		CPSA281	350
15			*		THEN AS MANY FULL WORDS AS POSSIBLE ARE ZEROED.		CPSA281	351
16			*		3) THE REMAINING BIT COUNT FOR THE FINAL WORD IS DETERMINED		CPSA281	352
17			*		AND THAT AMOUNT IS ZEROED.		CPSA281	353
18							CPSA281	354
19	25503	20104	DBSSZQ	LX1	4	(X1) = CBIT = NUMBER OF BITS TO STORE	CPSA281	355
20		7170000074		SX7	60		CPSA281	356
21		20004		LX0	4	RELATIVE BIT OFFSET	CPSA281	357
22	25504	10400		BX4	X0		CPSA281	358
23		27000		IX2	X0/X7	(X2) = POS = OFFSET TO FIRST WORD	CPSA281	359
24	25506	63620		SB6	X2		CPSA281	360
25		10322		BX3	X2		CPSA281	361
26		20202		LX2	2	POS*4	CPSA281	362
27		20306		LX3	6	POS*64	CPSA281	363
28	25507	37232		IX2	X3-X2	POS*60	CPSA281	364
29		37342		IX3	X4-X2	(X3) = ST = LEFT-MOST BIT FOR FIRST WORD	CPSA281	365
30		7241000073		SX4	X1+59	CBIT + 59	CPSA281	366
31	25510	36443		IX4	X4+X3	ST + CBIT + 59	CPSA281	367
32		7170000074		SX7	60		CPSA281	368
33		27404		IX7	X4/X7	(ST + CBIT + 59) / 60	CPSA281	369
34		7277777776		SX7	X7-1	(X7) = RW = NUMBER OF ADDITIONAL WORDS	CPSA281	370
35	25513	6120000074		SB2	60		CPSA281	371
36		63430		SB4	X3	(B7) = SE = NO. BITS TO ZERO IN FIRST WORD	CPSA281	372
37		67724		SB7	B2-B4	= 60 - ST	CPSA281	373
38	25514	66570		SB5	B7		CPSA281	374
39		0317025515		NZ	X7,DBQ1		CPSA281	375
40		63710		SB7	X1	(B7) = SE = CBIT	CPSA281	376
41	25515	43001	DBQ1	MX0	1	FORM MASK FOR ZEROING IN FIRST WORD	CPSA281	377
42		67471		SB4	B7-B1		CPSA281	378
43		23040		AX0	X0,B4		CPSA281	379
44		22050		LX0	X0,B5	POSITION MASK	CPSA281	380
45	25516	5140003437		SA4	O.MEMORY	ZEROING INTO FIRST WORD	CPSA281	381
46		53446		SA4	X4+B6		CPSA281	382
47		15640		BX6	-X0*X4		CPSA281	383
48	25517	54640		SA6	A4		CPSA281	384
49		0307025400		ZR	X7,DBSSZX	RETURN IF NO ADDITIONAL WORDS	CPSA281	385
50		43600		MX6	0		CPSA281	386
51	25520	6237777776		SB3	X7-1	(REMAINING WORDS) - 1	CPSA281	387
52		0430025522		ZR	B3,DBQ3	IF NO FULL WORDS	CPSA281	388
53	25521	67331	DBQ2	SB3	B3-B1	LOOP ON FULL WORDS	CPSA281	389
54		54661		SA6	A6+B1		CPSA281	390

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25553	37320		DDUMPE	IX3	X2-X0	PROGRAM ORIGIN	COMPASS	17660
		0323025555		PL	X3,DDUMPB		COMPASS	17661
		43760		MX7	48	MASK 12 BITS	COMPASS	17662
25554	15337			BX3	-X7*X3		COMPASS	17663
		7233000001		SX3	X3+1	2-S COMPLEMENT ORGBASE	COMPASS	17664
25555	20330		DDUMPB	LX3	24		COMPASS	17665
		12735		BX7	X3+X5		COMPASS	17666
		0321025557		PL	X1,DDUMPG		CP12752	1
25556	43100			MX1	0	CHANGE NEGATIVE TO ZERO	CP12752	2
25557	7221000011		DDUMPG	SX2	X1+9		CP12752	3
		27202		IX1	X2/X0		COMPASS	17669
		12717		BX7	X1+X7		COMPASS	17670
		7261777776		SX6	X1-1		COMPASS	17671
25562	5170025316			SA7	BTEMP		COMPASS	17672
							CMP30	5269
				IFNE	CP#RM,0,3		CMP30	5270
				IX4	X6+X6		CMP30	5271
				LX6	3		CMP30	5272
				IX6	X4+X6		CMP30	5273
							CMP30	5274
		54671		SA6	A7+B1		COMPASS	17673
25563	5110003132			SA1	NOLFG		COMPASS	17674
							CMP30	5275
			RM	IFEQ	CP#RM,0		CMP30	5276
		7211777776		SX1	X1-1		COMPASS	17675
25564	0301025566			ZR	X1,DDUMPF	IF NO LABEL	COMPASS	17676
		64670		WRITEW	B,A7,1		COMPASS	17677
25566	5130025317		DDUMPF	SA3	BTEMPA		COMPASS	17678
		5120003437		SA2	O.MEMORY		COMPASS	17679
25567	63620			WRITEW	B,X2,X3		COMPASS	17680
			RM	ELSE			CMP30	5277
				SA2	PCC		CMP30	5278
				SX3	X1-1		CMP30	5279
			+	ZR	X3,*+1	IF NO HEADER WANTED	CMP30	5280
				SX6	X6+10		CMP30	5281
			+	SA1	B-1		CPS028	530
				IX4	X2+X6		CMP30	5282
			+	ZR	X1,*+1	IF RECORD TYPE W	CPS028	531
				SX4	0		CPS028	532
				STORE	B,RL=X4		CMP30	5283
				ZR	X3,DDUMPF	IF NO LABELS AT ALL	CMP30	5284
				ZR	X2,DDUMPH	IF PRFX TABLE NOT WANTED	CMP30	5285
				PUTP	B,PRFX,X2		CMP30	5286
			DDUMPH	PUTP	B,BTEMP,10		CMP30	5287
			DDUMPF	SA2	O.MEMORY		CMP30	5288
				SA3	BTEMPA		CMP30	5289
				ZR	X3,DDUMP	IF NO BINARY	CPS028	533
				PUTP	B,X2,X3		CMP30	5290
			RM	ENDIF			CMP30	5291
							CMP30	5292
25571	0400025534			EQ	DDUMP		COMPASS	17681
							COMPASS	17682
25572	5140003265		DDUMPC	SA4	LPGM		COMPASS	17683
		5150003572		SA5	ORGBASE		COMPASS	17684
25573	37345			IX3	X4-X5		COMPASS	17685
		0333025534		NG	X3,DDUMP	IF NO BINARY	CMP1	46
25574	0303025534			ZR	X3,DDUMP		CPS028	534

5120003437

SA2 0.MEMORY

CMP30 5293

CMP30 5294

CMP30 5295

COMPASS 17687

CMP30 5296

CMP30 5297

CMP30 5298

CMP30 5299

CMP30 5300

CMP30 5301

CMP30 5302

CMP30 5303

CMP30 5304

CMP30 5305

COMPASS 17688

CPSA281 408

CPSA281 409

CPSA281 410

CPSA281 411

CPSA281 412

CPSA281 413

CPSA281 414

CPSA281 415

CPSA281 416

CPSA281 417

CPSA281 418

CPSA281 419

CPSA281 420

CPSA281 421

CPSA287 9

CPSA287 10

CPSA287 11

CPSA287 12

CPSA287 13

CPSA287 14

CPSA287 15

CPSA287 16

CPSA287 17

CPSA287 18

CPSA287 19

CPSA287 20

CPSA287 21

CPSA287 22

CPSA287 23

CPSA287 24

CPSA287 25

CPSA287 26

CPSA287 27

CPSA287 28

CPSA287 29

CPSA287 30

CPSA287 31

CPSA287 32

CPSA287 33

CPSA287 34

CPSA287 35

CPSA287 36

RM

IFEQ CP#RM,0

WRITEW B,X2,X3

RM

ELSE

IX5 X3+X3

LX3 3

IX4 X3+X5

SA1 B-1

NZ X1,DDUMP2 IF NOT W RECORDS

PUT B,X2,X4

EQ DDUMP

DDUMP2

PUTP B,X2,X4

RM

ENDIF

EQ DDUMP

DDUMPK

SX7 6100B

LX7 48

LX2 16*1

SA5 L.MEMORY

SA4 SEGEPT

MX0 -12

AX4 12

BX6 -X0*X4

SX3 X5+B1

LX6 16*2

BX7 X7+X3

BX7 X7+X2

BX7 X7+X6

SA7 BTEMP

RM

IFEQ CP#RM,0

SA1 NOLFG

SX1 X1-1

ZR X1,DDUMPL IF NO HEADER WANTED

WRITEW B,BTEMP,1 WRITE HEADER WORD

DDUMPL

SA2 0.MEMORY

WRITEW B,X2,X5

RM

ELSE

IX4 X5+X5

LX5 3

IX6 X4+X5

SA6 A7+B1

SA1 NOLFG

SA2 PCC

SX3 X1-1

ZR X3,DDUMPL IF NO HEADER WANTED

SX6 X6+10

SA1 B-1

IX4 X2+X6

ZR X1,DDUMPM IF RECORD TYPE W

SX4 0

DDUMPM

STORE B,RL=X4

ZR X3,DDUMPP

ZR X2,DDUMPN

PUTP B,PRFX,X2

25575 63620

25577 0400025534

25600 7170006100

20760

20220

25601 5150003476

5140003573

25602 43060

21414

15640

73351

25603 20640

12773

12772

12776

25604 5170025316

25605 7211777776

0301025610

25606 6160025316

25610 5120003437

63620

			DDUMPN	PUTP	B,BTEMP,10		CPSA287	37	
			DDUMPP	SA2	0.MEMORY		CPSA287	38	
				SA3	BTEMPA		CPSA287	39	
1				ZR	X3,DDUMP	IF NO BINARY	CPSA287	40	1
2				PUTP	B,X2,X3		CPSA287	41	2
3			RM	ENDIF			CPSA287	42	3
4							CPSA287	43	4
5	25612	0400025534		EQ	DDUMP	RETURN	CPSA281	426	5
6									6
7									7
8									8
9									9
10			**		DFIRST - DUMP PRELIMINARY BINARY INFORMATION.		COMPASS	17690	10
11			*		DFIRST CREATES THE FOLLOWING TABLES:		COMPASS	17691	11
12			*				COMPASS	17692	12
13			*		RELOCATABLE ROUTINES.		COMPASS	17693	13
14			*		77 TABLE = IDENT.		COMPASS	17694	14
15			*		70 TABLE = LDSET.		CP147	461	15
16			*		34 TABLE = PIDL.		COMPASS	17695	16
17			*		36 TABLE = ENTR.		COMPASS	17696	17
18			*				COMPASS	17698	18
19			*		ABSOLUTE CP ROUTINES.		COMPASS	17699	19
20			*		77 TABLE = IDENT.		COMPASS	17700	20
21			*		50 TABLE = OVERLAY CONTROL WORD.		COMPASS	17701	21
22			*				COMPASS	17702	22
23			*		ABSOLUTE CP ROUTINES WITH ENTRY POINTS.		COMPASS	17703	23
24			*		77 TABLE = IDENT.		COMPASS	17704	24
25			*		51 TABLE = OVERLAY ENTRY POINT TABLE.		COMPASS	17705	25
26			*				COMPASS	17706	26
27			*		PP ROUTINES.		COMPASS	17707	27
28			*		77 TABLE = IDENT.		COMPASS	17708	28
29			*				COMPASS	17709	29
30			*		FOR ALL ABSOLUTE ROUTINES, ALLOCATES AND CLEARS MEMORY.		COMPASS	17710	30
31			*		FOR ALL ROUTINES, UPS DKCNT AND CLEARS BINARY RECORD.		COMPASS	17711	31
32			*		ENTRY (X1) = DECK NAME.		COMPASS	17712	32
33			*		(X2) = OVERLAY LEVEL NUMBER.		COMPASS	17713	33
34							COMPASS	17714	34
35							COMPASS	17715	35
36	25613		DFIRSTP	BSS	0		CPS012	13	36
37	25613	5110003601	DFIRSTX	SA1	DKCNT	INCREMENT DECK COUNT	COMPASS	17716	37
38		5120003113		SA2	QVAL+1		CMP19	395	38
39	25614	73611		SX6	X1+B1		COMPASS	17717	39
40		10722		BX7	X2	RESTORE QUAL VALUE	CMP19	396	40
41		54610		SA6	A1		COMPASS	17718	41
42		55721		SA7	A2-B1		CMP19	397	42
43							CPS028	535	43
44				IFNE	CP#RM,0,1		CPS028	536	44
45				STORE	B,RL=0		CPS028	537	45
46							CPS028	538	46
47	25615	0100024606		RJ	SBL	SET BINARY LENGTH	CPS012	14	47
48							COMPASS	17719	48
49	25616	0000000000	DFIRST	PS		RETURN EXIT	COMPASS	17720	49
50	25617	10622		BX6	X2	SAVE SEGMENT INDICATOR	COMPASS	17721	50
51		5160025316		SA6	BTEMP		COMPASS	17722	51
52	25620	0100006262		RJ	LJUST	LEFT JUSTIFY DECK NAME	COMPASS	17723	52
53	25621	5170003600		SA7	DKNAM	SET DECK NAME	COMPASS	17724	53
54		5170003231		SA7	PRFX+1		CMP30	5306	54
55									55
56									56
57									57
58									58
59									59
60									60

25622	0100005351		RJ	DIM	DISPLAY IDENT MESSAGE	CMP30	5307
25623	43100		MX1	0		CMP30	5308
	0100006151		RJ	SQV	SET BLANK QUALIFIER	CMP30	5309
25624	5110000241		SA1	B		CMP30	5310
	0301025613		ZR	X1,DFIRSTP	IF NO BINARY FILE	CMP30	5311
25625	7120000241		CHECK	B		CMP30	5312
						CMP30	5313
		RM	IFEQ	CP#RM,6		CPS028	539
			FETCH	B,OC,X1		CMP30	5316
			SX6	X1-#YES#		CMP30	5317
			ZR	X6,DFIRST0	IF BINARY FILE IS OPEN	CMP30	5318
			OPENM	B,OUTPUT,N		CMP30	5319
		RM	ENDIF			CMP30	5320
						CMP30	5321
25626	5130003132	DFIRST0	SA3	NOLFG		CMP30	5322
	43600		MX6	0		CMP30	5323
25627	0313025667		NZ	X3,DFIRSTA	IF NO LABELS	CMP30	5324
	5110003114		SA1	MACHINE		CMP30	5325
25630	5120003251		SA2	TARGET		CMP30	5326
	5130003252		SA3	VALID		CMP30	5327
25631	7160005555		SX6	2R		CMP30	5328
	0301025634		ZR	X1,DFT4	IF CPU ASSEMBLY	CMP30	5329
25632	10266		BX2	X6		CMP30	5330
	7263000020		SX6	X3+1RP		CMP30	5331
25633	0400025635		EQ	DFT4A		CMP30	5332
25634	0303025635	DFT4	ZR	X3,DFT4A	IF NO VALID PROCESSOR SPECIFIED	CMP30	5333
	7263000030		SX6	X3+1RX		CMP30	5334
25635	20214	DFT4A	LX2	12		CMP30	5335
	5130003061		SA3	FMODE		CMP30	5336
	12626		BX6	X2+X6		CMP30	5337
25636	43036		MX0	30		CMP30	5338
	5140003236		SA4	PRFX+6		CMP30	5339
	20606		LX6	6		CMP30	5340
25637	7170000055		SX7	1R		CMP30	5341
	5120003130		SA2	ABSFG		CMP30	5342
25640	0303025641		ZR	X3,DFT5	IF FMODE = 0	CMP30	5343
	7273000033		SX7	X3+1R0		CMP30	5344
25641	11504	DFT5	BX5	X0*X4		CMP30	5345
	36667		IX6	X6+X7		CMP30	5346
	5130012306		SA3	=4RHPA		CPSA286	6
25642	43066		MX0	-6		CMP30	5348
	12656		BX6	X5+X6		CMP30	5349
	0302025646		ZR	X2,DFT6	IF REL CPU ASSEMBLY	CMP30	5350
25643	21306		AX3	6		CMP30	5351
	0301025646		ZR	X1,DFT6	IF ABS CPU ASSEMBLY	CMP30	5352
	21306		AX3	6	PPU ASSEMBLY	CMP30	5353
25644	5120003116		SA2	PPTYPE		CPSA286	7
	7222000003		SX2	X2+3		CPSA286	8
25645	0312025646		NZ	X2,DFT6	IF NOT 180 PPU ASSEMBLY	CPSA286	9
	21306		AX3	6	SET *TYPE* = H	CPSA286	10
25646	15730	DFT6	BX7	-X0*X3		CMP30	5354
	5110003253		SA1	HTYPE		CMP30	5355
	20766		LX7	54		CMP30	5356
25647	12771		BX7	X7+X1		CMP30	5357
	54640		SA6	A4	STORE WORDS 6 AND 7 OF PRFX TABLE	CMP30	5358
	54741		SA7	A4+B1		CMP30	5359
25650	6140003240		SB4	PRFXC		CMP30	5360

	25651	43600	6150003247	SB5	PRFXC+7		CMP30	5361
	25652	56640		MX6	0		CMP30	5362
			+	SA6	B4	CLEAR PRFX COMMENT AREA	CMP30	5363
		66441		SB4	B4+B1		CMP30	5364
		0545025652		NE	B4,B5,*		CMP30	5365
	25653	5130003421		SA3	0.IDTAB		CMP30	5366
		63631		SB6	X3+B1		CMP30	5367
		43060		MX0	-12		CMP30	5368
	25654	5110003420		SA1	0.SEGTAB	FIND COMMENT TEXT IN IDTAB	CMP30	5369
		5120003164		SA2	SI		CMP30	5370
	25655	36612		IX6	X1+X2		CMP30	5371
		53161		SA1	X6+B1		CMP30	5372
		5021000004		SA2	A1+4		CMP30	5373
	25656	6140003240		SB4	PRFXC		CMP30	5374
		63726		SB7	B6+X2		CMP30	5375
		63616		SB6	B6+X1		CMP30	5376
	25657	56160	DFT1	SA1	B6	FIND END OF COMPRESSED	CMP30	5377
		15610		BX6	-X0*X1	BINARY CONTROL STATEMENT	CMP30	5378
		66661		SB6	B6+B1		CMP30	5379
	25660	0316025657		NZ	X6,DFT1		CMP30	5380
		67771		SB7	B7-B1		CMP30	5381
	25661	0667025664	DFT1A	GE	B6,B7,DFT1B	IF END OF COMMENT TEXT	CMP30	5382
		56160		SA1	B6		CMP30	5383
		66661		SB6	B6+B1		CMP30	5384
	25662	10611		BX6	X1		CMP30	5385
		56640		SA6	B4		CMP30	5386
		66441		SB4	B4+B1		CMP30	5387
	25663	0745025661		LT	B4,B5,DFT1A	IF PRFX TABLE NOT FULL	CMP30	5388
	25664		DFT1B	BSS	0		CMP30	5389
							CMP30	5390
				IFEQ	CP#RM,0,1		CMP30	5391
	25664	6160003230		WRITEW	B,PRFX,LPRFX		CMP30	5392
							CMP30	5393
	25666	5130003132		SA3	NOLFG		CMP30	5394
		7160000226		SX6	10*LPRFX		CMP30	5395
	25667	5160003250	DFIRSTA	SA6	PCC		CMP30	5396
		5110003114		SA1	MACHINE		COMPASS	17739
	25670	5120003130		SA2	ABSFG		COMPASS	17740
		7233777776		SX3	X3-1		CMP30	5397
	25671	0311025613		NZ	X1,DFIRSTP	IF PP, QUIT	COMPASS	17741
		0302025724		ZR	X2,DFIRST1	IF RELOCATABLE	COMPASS	17742
	25672	0303025613		ZR	X3,DFIRSTP	IF NO HEADERS WANTED	CMP30	5398
		5110003160		SA1	EI		COMPASS	17743
	25673	54211		SA2	A1+B1		COMPASS	17744
		37521		IX5	X2-X1		CMP5	13
		0305025714		ZR	X5,DFT3	IF NOT MULTIPLE ENTRY POINT OVERLAY	CMP5	14
	25674	7110005100		SX1	5100B	OVERLAY IDENT WORD	COMPASS	17747
		5130003572		SA3	ORGBASE		COMPASS	17749
	25675	43052		MX0	42		COMPASS	17750
		20160		LX1	48		COMPASS	17751
		7233777776		SX3	X3-1		COMPASS	17752
	25676	37335		IX3	X3-X5		COMPASS	17753
		15630		BX6	-X0*X3		COMPASS	17754
		20622		LX6	18		COMPASS	17755
		36115		IX1	X1+X5		COMPASS	17756
	25677	12661		BX6	X6+X1		COMPASS	17757
		5110025316		SA1	BTEMP		COMPASS	17758

25700	36661	20144	LX1	36		COMPASS	17759	
			IX6	X6+X1		COMPASS	17760	
		5160003247	SA6	OVLHDR		CMP30	5399	
						CMP30	5400	
			RM	IFEQ	CP#RM,0	CMP30	5401	
		64660		WRITEW	B,A6,1	COMPASS	17762	
			RM	ELSE		CMP30	5402	
				IX7	X5+X5	CMP30	5403	
				SA1	PCC	CMP30	5404	
				SA2	B-1	CPS028	540	
				LX5	3	CMP30	5405	
				SX3	X1+10	CMP30	5406	
				IX7	X5+X7	CMP30	5407	
			+	IX4	X3+X7	CPS028	541	
				ZR	X2,*+1	IF RECORD TYPE W	CPS028	542
				SX4	B0	CPS028	543	
				STORE	B,RL=X4	CMP30	5409	
				SX2	PRFX	CMP30	5410	
			+	NZ	X1,*+1	IF PRFX TABLE WANTED	CMP30	5411
				SX2	OVLHDR	CMP30	5412	
				PUTP	B,X2,X3	CMP30	5413	
			RM	ENDIF		CMP30	5414	
						CMP30	5415	
25703	5110003415		DFT2	SA1	O.EPTAB	OUTPUT ENTRY POINT TABLE	COMPASS	17763
		5120003160		SA2	EI		COMPASS	17764
25704	54321			SA3	A2+B1		COMPASS	17765
		37332		IX3	X3-X2		COMPASS	17766
		0303025613		ZR	X3,DFIRSTP	IF END OF EPTAB	COMPASS	17767
25705	73621			SX6	X2+B1		COMPASS	17768
		54620		SA6	A2		COMPASS	17769
		36112		IX1	X1+X2		COMPASS	17770
		53110		SA1	X1		COMPASS	17771
25706	0100006200			RJ	TLUSYMT		COMPASS	17772
25707	43052			MX0	42		COMPASS	17773
		15520		BX5	-X0*X2		COMPASS	17774
		0100006262		RJ	LJUST		COMPASS	17775
25710	12675			BX6	X7+X5		COMPASS	17776
		5160004025		SA6	BINREC		COMPASS	17777
						CMP30	5416	
				IFEQ	CP#RM,0,2		CMP30	5417
		64660		WRITEW	B,A6,1		COMPASS	17778
				ELSE	1		CMP30	5418
				PUTP	B,BINREC,10		CMP30	5419
						CMP30	5420	
25713	0400025703			EQ	DFT2	LOOP	COMPASS	17779
25714	5110012307		DFT3	SA1	=5000BS48	OVERLAY IDENT WORD	COMPASS	17780
		5120003573		SA2	SEGEPT		COMPASS	17781
25715	5130003572			SA3	ORGBASE		COMPASS	17782
		5140025316		SA4	BTEMP		COMPASS	17783
25716	43052			MX0	42		COMPASS	17784
		7233777776		SX3	X3-1		COMPASS	17785
		15330		BX3	-X0*X3		COMPASS	17786
25717	20322			LX3	18		COMPASS	17787
		20444		LX4	36		COMPASS	17788
		12121		BX1	X2+X1		COMPASS	17789
		36343		IX3	X4+X3		COMPASS	17790
25720	12613			BX6	X1+X3		COMPASS	17791

5160003247

SA6

OVLHDR

CMP30 5421

CMP30 5422

CMP30 5423

COMPASS 17793

CMP30 5424

CMP30 5425

CPS028 544

CMP30 5426

CPS028 545

CPS028 546

CPS028 547

CPS028 548

CPS028 549

CMP30 5429

CMP30 5430

CMP30 5431

CMP30 5432

CMP30 5433

COMPASS 17795

CP147 462

CP147 463

CP147 464

CP147 468

CPS2608 57

CPS2608 58

CPS2608 59

CP147 473

CP147 474

CPS2608 60

CP147 475

CP147 476

CP147 477

CP147 478

CP147 479

CP147 480

CP147 481

CP147 482

CP147 483

CP147 484

CP147 485

CP147 486

CP147 487

CP147 488

CP147 489

CP147 490

CP147 491

CP147 492

CP147 493

CP147 494

CP147 495

CP147 496

CP147 497

CP147 498

CP147 499

CP147 500

CP147 501

CP147 502

RM

IFEQ CP#RM,0

WRITEW B,A6,1

RM

ELSE

SA1 PCC

SA2 B-1

SX3 X1+10

BX4 X3

+

ZR X2,*+1

IF RECORD TYPE W

SX4 0

STORE B,RL=X4

+

SX2 PRFX

NZ X1,*+1

IF PRFX WANTED

SX2 OVLHDR

PUTP B,X2,X3

RM

ENDIF

25723 0400025613

EQ

DFIRSTX

RM

IFEQ CP#RM,0

25724 5130003461

DFIRST1

SA3 L.TLDS

WRITE LDSET TABLE

0303025734

ZR X3,DFIRST1A

IF TABLE EMPTY

25725 6233777776

SB3

X3-1

0430025734

ZR

B3,DFIRST1A

25726 0100005472

RJ

LDHDR

PLACE CORRECT WC IN CONTROL WORD

25727 5110003422

SA1

O.TLDS

25730 7233777776

SA3

L.TLDS

SX3

X3-1

DROP EXTRA LDSET CONTROL WORD

63610

WRITEW B,X1,X3

RM

ENDIF

RM

IFNE CP#RM,0

DFIRST1

SA1 L.TLDS

SA2 NBLOCKS

IF NO TLDS

SA3 PCC

ADD HEADER WORD

MULTIPLY BY TEN

SA4 L.EPTAB

ZR X1,DFIRST1B

LDSET CHARACTER COUNT

SX5

X1+B1

MULTIPLY BY TEN

IX6

X5+X5

PIDL CHARACTER COUNT

LX5

3

ADD TWO HEADER WORDS FOR PIDL TABLE

IX1

X5+X6

IF NO ENTRY POINTS

IX5

X2+X2

LENGTH OF ENTRY TABLE

LX2

3

MULTIPLY BY TEN

IX6

X2+X5

ENTRY TABLE CHARACTER COUNT

IX2

X3+X1

CHAR COUNT OF TABLES ABOVE

IX5

X4+X7

LENGTH OF TLDS WITHOUT HEADER WORD

IX4

X2+X5

SAVE PIDL CHARACTER COUNT

SX6

X1-10

SA7

T6RM1

			SA6	T6RM2	SAVE LDSET CHAR COUNT WITHOUT HEADER WORD	CP147	503
			SA2	B-1		CP147	504
		+	ZR	X2,*+1	IF RECORD TYPE W	CP147	505
1			SX4	0		CP147	506
2			STORE	B,RL=X4		CP147	507
3			ZR	X3,DFIRST1D	IF NO PRFX TABLE	CP147	508
4			PUTP	B,PRFX,X3		CP147	509
5		DFIRST1D	SA3	L.TLDS	WRITE LDSET TABLE	CP147	510
6			SB2	36		CP147	511
7			SX2	70B		CP147	512
8			LX2	59-5		CP147	513
9			ZR	X3,DFIRST1A	IF NO LDSET TABLE	CP147	514
10			LX4	X3,B2		CP147	515
11			BX6	X2+X4	INSERT WORD COUNT	CP147	516
12			SA6	BTEMP		CP147	517
13			PUTP	B,BTEMP,10	WRITE HEADER WORD	CP147	518
14			SA1	0.TLDS		CP147	519
15			SA3	T6RM2		CP147	520
16			PUTP	B,X1,X3		CP147	521
17		RM	ENDIF			CP147	522
18						CP147	523
19	25732	0100005102	RJ	ASU	ACCUMULATE STORAGE USED	CP147	524
20						CP147	525
21	25733	43600	MX6	0	CLEAR TLDS	CP147	526
22		5160003461	SA6	L.TLDS		CP147	527
23						CP147	528
24	25734	5110012310	DFIRST1A	SA1	=34000001BS36 WRITE PIDL TABLE	CP147	529
25		5120003167	SA2	NBLOCKS		COMPASS	17797
26	25735	20244	LX2	36		COMPASS	17798
27		36612	IX6	X1+X2		COMPASS	17799
28		5110003600	SA1	DKNAM		COMPASS	17800
29	25736	5120003266	SA2	ENDP		COMPASS	17801
30		12712	BX7	X1+X2		COMPASS	17802
31	25737	5160030217	SA6	RELVEC		CMP30	5460
32		54761	SA7	A6+B1		COMPASS	17804
33		43600	MX6	0		COMPASS	17806
34	25740	5160025317	SA6	BTEMPA	CLEAR LOOP INDEX	COMPASS	17807
35		54661	SA6	A6+B1		CMP30	5461
36	25741	5110003411	DFIRST2	SA1	0.USETAB	COMPASS	17808
37		5140003153	SA4	UI		RSM4159	47
38	25742	36114	IX1	X1+X4	BASE ADDRESS OF BLOCK GROUP	RSM4159	48
39		36316	IX3	X1+X6		CMP30	5462
40		5243000002	SA4	X3+2	FETCH ORIGIN OF BLOCK	COMPASS	17811
41	25743	43064	MX0	-8		CMP30	5463
42		21431	AX4	25	CHECK BLOCK NUMBER	COMPASS	17812
43		15440	BX4	-X0*X4		CMP30	5464
44	25744	0304025763	ZR	X4,DFIRST3	IF ABSOLUTE OR SCM LOCAL BLOCK	CMP30	5465
45		5014777775	SA1	A4-2	FETCH BLOCK NAME	COMPASS	17814
46	25745	0311025746	+	NZ	X1,*+1	COMPASS	17815
47		5110012311	SA1	=7R	CHANGE ZERO NAME TO BLANK	COMPASS	17816
48	25746	10011	BX0	X1	UNCOMPLEMENT NAME IF LCM	CMP30	5466
49		21174	AX1	60		COMPASS	17818
50		13101	BX1	X0-X1		COMPASS	17819
51	25747	0100006262	RJ	LJUST		COMPASS	17820
52	25750	5120025320	SA2	BTEMPB		CMP30	5467
53		5034777775	SA3	A4-2		CMP30	5468
54	25751	54140	SA1	A4		CMP30	5469

43063
73621
20133MX0 -9
SX6 X2+B1
LX1 -33CMP30 5470
CMP30 5471
CMP30 547225752 0323025761 PL X3,DFIRST2B IF SCM COMMON BLOCK
5150003166 SA5 LLBCMP30 5473
CMP30 5474
CMP30 547525753 20141 LX1 33
20030 LX0 24
73261 SX2 X6+B1
15310 BX3 -X0*X1CMP30 5476
CMP30 5477
CMP30 5478
CMP30 547925754 20230 LX2 24
37435 IX4 X3-X5
13525 BX5 X2-X5CMP30 5480
CMP30 5481
CMP30 548225755 0314025757 LX1 -33
0315025763 NZ X4,DFIRST2A IF LCM COMMON BLOCK
NZ X5,DFIRST3 IF NOT FIRST LCM LOCAL BLOCKCMP30 5483
CMP30 5484
CMP30 548525756 5110003165 SA1 LCM
43700 MX7 0CMP30 5486
CMP30 548725757 7130000007 DFIRST2A SX3 7
76010 SX0 B1 ROUND UP BLOCK SIZE TO A MULTIPLE
36113 IX1 X1+X3 OF 8 AND SET BIT 17 FOR LCM BLOCK
25760 20021 LX0 17CMP30 5488
CMP30 5489
CMP30 5490
CMP30 549125761 43052 AX1 3
12110 BX1 X1+X0
DFIRST2B MX0 42CMP30 5492
CMP30 5493
COMPASS 1782311470 BX4 X7*X0
15210 BX2 -X0*X1
36724 IX7 X2+X4COMPASS 17824
CMP30 5494
CMP30 549525762 54620 SA6 A2
5276030220 SA7 RELVEC+1+X6
25763 5110025317 DFIRST3 SA1 BTEMPACMP30 5496
COMPASS 17831
COMPASS 1783225764 7261000004 SA2 L.USETAB
13326 SX6 X1+4
54610 BX3 X2-X6COMPASS 17833
CMP30 5497
COMPASS 1783425765 0313025741 SA6 A1
NZ X3,DFIRST2COMPASS 17835
COMPASS 17836
CMP30 549825766 6160030217 5110003167
SA1 NBLOCKS
WRITEW B,RELVEC,X1+2
ELSE 2
SA3 T6RM1
PUTP B,RELVEC,X3CMP30 5499
CMP30 5500
CMP30 5501
CMP30 5502
CMP30 5503
CMP30 5504
CMP30 5505

* OUTPUT ENTR TABLE.

COMPASS 17837
COMPASS 17838
COMPASS 1783925770 5110003454 SA1 L.EPTAB
5120012312 SA2 =360000000BS36COMPASS 17840
COMPASS 17841
COMPASS 1784225771 20145 LX1 37
12612 BX6 X1+X2
5160025320 SA6 BTEMPBCOMPASS 17843
COMPASS 17844
COMPASS 1784625772 43700 MX7 0
0301026026 ZR X1,DFIRST5 IF NO ENTRY POINTS
55761 SA7 A6-B1COMPASS 17847
COMPASS 17849
CMP30 550625773 64660 IFEQ CP#RM,0,2
WRITEW B,A6,1CMP30 5507
COMPASS 17850

				ELSE PUTP	1 B,BTEMPB,10			CMP30	5508
								CMP30	5509
								CMP30	5510
1	25775	5110003415	DFIRST4	SA1	0.EPTAB			COMPASS	17851
2		5120025317		SA2	BTEMPA			COMPASS	17852
3	25776	36312		IX3	X1+X2			COMPASS	17853
4		53130		SA1	X3	FETCH ENTRY POINT NAME		COMPASS	17854
5		43001		MX0	1			CMP30	5511
6		15110		BX1	-X0*X1	CLEAR CONDITIONAL FLAG		CMP30	5512
7	25777	0100006200		RJ	TLUSYMT	LOOK UP SYMBOL		COMPASS	17855
8	26000	43052		MX0	-18	EXTRACT SYMBOL DEFINITION		CPS010	125
9		15620		BX6	-X0*X2	VALUE		COMPASS	17857
10		21225		AX2	21			COMPASS	17858
11		43063		MX0	-9			CPS010	126
12	26001	15720		BX7	-X0*X2	RELOCATION		CP096A	522
13		23417		AX4	X7,B1			CP096A	523
14		0304026012		ZR	X4,DFIRST4B	IF ABSOLUTE OR SCM LOCAL		CMP30	5515
15	26002	43464		MX4	-8			CPS010	127
16		15424		BX4	-X4*X2			CPS010	128
17		20261		LX2	59-31+21			CMP30	5516
18		73741		SX7	X4+B1	CORRECT COMMON OR NEGATIVE RELOCATION		CP096A	524
19	26003	0332026012		MI	X2,DFIRST4B	IF EXTERNAL		CMP30	5520
20		5150003411		SA5	0.USETAB			CPS010	130
21	26004	5120003153		SA2	UI			RSM4159	49
22		36525		IX5	X2+X5	BASE ADDRESS OF BLOCK GROUP		RSM4159	50
23		20430		LX4	24			CMP30	5522
24	26005	5255000002		SA5	X5+2			CPS010	131
25		20030		LX0	24			CMP30	5524
26	26006	15250	DFIRST4A	BX2	-X0*X5	SEARCH USE TABLE FOR BLOCK		CMP30	5525
27		13224		BX2	X2-X4	WITH MATCHING RELOCATION		CP096A	525
28		5055000004		SA5	A5+4			CMP30	5527
29	26007	0312026006		NZ	X2,DFIRST4A			CP096A	526
30		5045777771		SA4	A5-6	GET BLOCK NAME		CMP30	5529
31	26010	0324026012		PL	X4,DFIRST4B	IF NOT LCM		CMP30	5530
32		53230		RX2	X3			CP096A	527
33		43047		MX0	-21	USE 21-BIT VALUE		CPS010	133
34	26011	15620		BX6	-X0*X2			CPS010	134
35		20644		LX6	36			CMP30	5531
36	26012	20722	DFIRST4B	LX7	18			CP096A	528
37		12676		BX6	X7+X6			CP096A	529
38		5160004026		SA6	BINREC+1			COMPASS	17866
39	26013	0100006262		RJ	LJUST			COMPASS	17867
40	26014	54110		SA1	A1			CMP30	5533
41		13333		BX3	X3-X3			CMP30	5534
42		0321026021		PL	X1,DFIRST4C	IF NOT CONDITIONAL		CMP30	5535
43	26015	54260		SA2	A6			CMP30	5536
44		21222		AX2	18	EXTRACT LOAD CONDITION		CMP30	5537
45		7242777776		SX4	X2-1			CMP30	5538
46	26016	23514		AX5	X4,B1			CMP30	5539
47		0305026021		ZR	X5,DFIRST4C	IF NOT A COMMON BLOCK		CMP30	5540
48	26017	5150003166		SA5	LLB			CMP30	5541
49		20430		LX4	24			CMP30	5542
50		13345		BX3	X4-X5			CMP30	5543
51	26020	0303026021		ZR	X3,DFIRST4C	IF LCM LOCAL BLOCK		CMP30	5544
52		21430		AX4	24			CMP30	5545
53		73341		SX3	X4+B1			CMP30	5546
54	26021	12673	DFIRST4C	BX6	X7+X3			CMP30	5547
55									
56									
57									
58									
59									
60									

55661

SA6 A6-B1

COMPASS 17869

CMP30 5548

CMP30 5549

64660

IFEQ CP#RM,0,2

COMPASS 17870

WRITEW B,A6,2

CMP30 5550

ELSE 1

CMP30 5551

PUTP B,BINREC,20

CMP30 5552

26023 5110025317

SA1 BTEMPA

COMPASS 17871

5120003454

SA2 L.EPTAB

COMPASS 17872

26024 73611

SX6 X1+B1

COMPASS 17873

13462

BX4 X6-X2

COMPASS 17874

54610

SA6 A1

COMPASS 17875

26025 0314025775

NZ X4,DFIRST4

COMPASS 17876

COMPASS 17877

* INITIALIZE CHAIN CELLS.

COMPASS 17878

26026 43600

DFIRST5

MX6 0

COMPASS 17879

5160003465

SA6 L.LNKTAB

COMPASS 17880

26027 5160003463

SA6 L.COMTAB

COMPASS 17881

5160004025

SA6 BINREC

COMPASS 17882

26030 54661

SA6 A6+B1

COMPASS 17883

0400025613

EQ DFIRSTX

COMPASS 17884

COMPASS 17885

** DLAST - DUMP TERMINAL LOADER TABLES.

COMPASS 17887

* THIS ROUTINE IS NON-NULL FOR RELOCATABLE ROUTINES ONLY.

COMPASS 17888

* DLAST CREATES THE FOLLOWING TABLES:

COMPASS 17889

* 42 TABLE = FILL FOR COMMON LINKAGE.

COMPASS 17890

* 44 TABLE = LINK FOR EXTERNAL LINKAGE.

COMPASS 17891

* 43 TABLE = REPL FOR ENTRIES IN REPTAB.

COMPASS 17892

* THIS ROUTINE ALSO CLEARS OUT THE DUMPED TABLES.

COMPASS 17893

* THIS ROUTINE MUST BE CALLABLE FROM MANAGER, SO NO MANAGER

COMPASS 17894

* CALLS MAY EXIST IN IT.

COMPASS 17895

COMPASS 17896

26031 0000000000

DLAST

PS

RETURN EXIT

COMPASS 17897

26032 5110003130

SA1 ABSFG

COMPASS 17898

5120000241

SA2 B

CMP30 5553

26033 0311026031

NZ X1,DLAST

IF PP OR ABS CP ASSEMBLY

CMP30 5554

0302026162

ZR X2,DLAST20

IF NO BINARY FILE

CMP30 5555

CMP30 5556

* DUMP OUT COMMON LINKAGE TABLES.

COMPASS 17904

COMPASS 17905

COMPASS 17906

26034 5110003424

SA1 O.COMTAB

COMPASS 17907

5120003463

SA2 L.COMTAB

COMPASS 17908

26035 0302026107

ZR X2,DLAST10 IF LINKAGE TABLE EMPTY

COMPASS 17909

76610

SX6 B1

CMP30 5557

43036

MX0 30

COMPASS 17910

26036 73111

SX1 X1+B1

SKIP FIRST WORD

CMP30 5558

37226

IX2 X2-X6

CMP30 5559

5160026165

SA6 DLASTT

CMP30 5560

26037 0100026240

RJ

DSORT

SORT COMMON TABLE

COMPASS 17911

26040 0400026045

EQ

DLAST2

CMP30 5561

CMP30 5562

26041 20114

DLAST1

LX1

12

TABLE TYPE (4100B OR 4200B)

CMP30 5563

75565
12315
20344SX5
BX3
LX3A6-B5
X1+X5
36

WORD COUNT

CMP30 5564
CMP30 5565
CMP30 5566

26042 12637

76760

56650

BX6 X3+X7
SX7 B6
SA6 B5HEADER WORD
COMTAB INDEXCMP30 5567
CMP30 5568
CMP30 5569

26043 5170026165

SA7 DLASTT

CMP30 5570
CMP30 5571
CMP30 5572

RM

IFEQ CP#RM,0

66650

RM

WRITEW B,B5,X5+B1 WRITE FILL/XFILL TABLE
ELSECMP30 5573
CMP30 5574
CMP30 5575SX1 B5
SX3 X5+B1
IX4 X3+X3
LX3 3CMP30 5576
CMP30 5577
CMP30 5578IX4 X3+X4
SA2 B-1CMP30 5579
CMP30 5580

NZ X2,DLA1 IF NOT W RECORDS

CMP30 5581

PUT B,X1,X4

CMP30 5582

EQ DLAST2

CMP30 5583

DLA1

PUTP B,X1,X4

CMP30 5584

RM

ENDIF

CMP30 5585

26045 5110003424

DLAST2

SA1 0.COMTAB

CMP30 5586

5120003463

SA2 L.COMTAB

CMP30 5587

26046 5130026165

SA3 DLASTT

CMP30 5588

63720

SB7 X2

CMP30 5589

63630

SB6 X3

CMP30 5590

26047 0667026107

GE B6,B7,DLAST10 IF END OF TABLE

CMP30 5591

53410

SA4 X1

CMP30 5592

53116

SA1 X1+B6

CMP30 5593

26050 43503

MX5 3

CMP30 5594

10644

BX6 X4

CMP30 5595

66300

SB3 B0

CMP30 5596

54640

SA6 A4

CMP30 5597

26051 64540

SB5 A4

CMP30 5598

76600

SX6 B0

CMP30 5599

11751

BX7 X5*X1

CMP30 5600

21511

AX5 9

CMP30 5601

26052 0317026072

NZ X7,DLAST6 IF CONDITIONAL XFILL

CMP30 5602

11751

BX7 X5*X1

CMP30 5603

21511

AX5 9

CMP30 5604

26053 0317026075

NZ X7,DLAST7 IF UNCONDITIONAL XFILL

CMP30 5605

43036

MX0 30

CMP30 5606

11751

BX7 X5*X1

CMP30 5607

26054 43563

MX5 -9 FILL (CONDITIONAL OR NOT)

CMP30 5608

6120000036

SB2 30

CMP30 5609

20536

LX5 30

CMP30 5610

26055 15215

DLAST3

BX2 -X5*X1

EXTRACT CONTROL BYTE

CMP30 5611

22332

LX3 X2,B3

CMP30 5612

67323

SB3 B2-B3

CMP30 5613

36663

IX6 X6+X3

CMP30 5614

26056 11201

BX2 X0*X1

CMP30 5615

0530026060

NZ B3,DLAST4 IF FILL WORD NOT FULL

CMP30 5616

54661

SA6 A6+B1

CMP30 5617

26057 6100000000

SB0 0

CMP30 5618

26060	67323	13666	DLAST4	BX6	X6-X6		CMP30	5621
				SB3	B2-B3	EXTRACT DATA BYTE	CMP30	5622
		15310		BX3	-X0*X1		CMP30	5623
		22433		LX4	X3,B3		CMP30	5624
		36664		IX6	X6+X4		CMP30	5625
26061	66661			SB6	B6+B1	INCREMENT INDEX INTO COMTAB	CPSA083	5
		0530026064		NZ	B3,DLAST4A	IF FILL WORD NOT FULL	CPSA083	6
		54661		SA6	A6+B1		CMP30	5627
26062	75165			SX1	A6-B5	PRESENT WORD COUNT OF 4200 TABLE	CPSA083	7
		7231770000		SX3	X1-7777B	CHECK IF WORD COUNT AT MAXIMUM	CPSA083	8
26063	0323026067			PL	X3,DLAST5	IF WORD COUNT AT MAX, DUMP THIS TABLE	CPSA083	9
		13666		BX6	X6-X6		CMP30	5628
26064	54111		DLAST4A	SA1	A1+B1	GET NEXT WORD OF COMTAB	CPSA083	10
		11301		BX3	X0*X1		CMP30	5631
		37432		IX4	X3-X2		CMP30	5632
26065	0667026067			GE	B6,B7,DLAST5	IF END OF TABLE	CMP30	5633
		0304026060		ZR	X4,DLAST4	IF SAME CONTROL BYTE AND SAME CONDITION	CMP30	5634
26066	11353			BX3	X5*X3		CMP30	5635
		37437		IX4	X3-X7		CMP30	5636
		0304026055		ZR	X4,DLAST3	IF SAME CONDITION	CMP30	5637
26067	0430026070		DLAST5	ZR	B3,*+1	IF LAST FILL WORD IS FULL	CMP30	5638
		54661		SA6	A6+B1		CMP30	5639
26070	7110004200		+	SX1	4200B	WRITE FILL TABLE	CMP30	5640
		21733		AX7	39-12		CMP30	5641
26071	0400026041			EQ	DLAST1		CMP30	5642
							CMP30	5643
26072	43014		DLAST6	MX0	12	PREPARE TO GENERATE CONDITIONAL XFILL	CMP30	5644
		11701		BX7	X0*X1		CMP30	5645
		6120000014		SB2	60-48		CMP30	5646
26073	43211			MX2	9		CMP30	5647
		20271		LX2	-3		CMP30	5648
		6130000011		SB3	9		CMP30	5649
26074	43322			MX3	-42		CMP30	5650
		0400026100		EQ	DLAST8		CMP30	5651
26075	43003		DLAST7	MX0	3	PREPARE TO GENERATE UNCONDITIONAL XFILL	CMP30	5652
		76700		SX7	B0		CMP30	5653
		6120000025		SB2	60-39		CMP30	5654
26076	43222			MX2	18		CMP30	5655
		20271		LX2	-3		CMP30	5656
		6130000022		SB3	18		CMP30	5657
26077	43333			MX3	-33		CMP30	5658
26100	11401		DLAST8	BX4	X0*X1	GENERATE XFILL TABLE	CMP30	5659
		11521		BX5	X2*X1		CMP30	5660
		15613		BX6	-X3*X1		CMP30	5661
		37447		IX4	X4-X7		CMP30	5662
26101	22525			LX5	X5,B2		CMP30	5663
		22636		LX6	X6,B3		CMP30	5664
		0314026105		NZ	X4,DLAST9	IF NOT SAME CONDITION	CMP30	5665
26102	12665			BX6	X6+X5		CMP30	5666
		54661		SA6	A6+B1	STORE XFILL WORD	CMP30	5667
		66661		SB6	B6+B1	INCREMENT INDEX INTO COMTAB	CPSA106	5
		75165		SX1	A6-B5	PRESENT WORD COUNT OF 4100 TABLE	CPSA106	6
26103	7211770000			SX1	X1-7777B	CHECK IF WORD COUNT AT MAXIMUM	CPSA106	7
		0321026105		PL	X1,DLAST9	IF WORD COUNT AT MAX, DUMP THIS TABLE	CPSA106	8
26104	54111			SA1	A1+B1	GET NEXT WORD OF COMTAB	CMP30	5669
		0767026100		LT	B6,B7,DLAST8	IF NOT END OF TABLE	CMP30	5670
26105	11727		DLAST9	BX7	X2*X7		CMP30	5671

7110004100		SX1	4100B	WRITE XFILL TABLE	CMP30	5672
21744		AX7	48-12		CMP30	5673
26106	0400026041	EQ	DLAST1		CMP30	5674
* DUMP OUT EXTERNAL REFERENCES.					COMPASS	17962
					COMPASS	17963
					COMPASS	17964
26107	5110003426	DLAST10	SA1	O.LNKTAB	COMPASS	17965
	5120003465		SA2	L.LNKTAB	COMPASS	17966
26110	5130003456		SA3	L.EXTAB	COMPASS	17967
	0302026162		ZR	X2,DLAST20 IF TABLE IS EMPTY	CMP30	5675
26111	43047		MX0	30+9	CMP30	5676
	73631		SX6	X3+B1	CMP30	5677
	36116		IX1	X1+X6 SKIP FIRST (L.EXTAB)+1 WORDS	CMP30	5678
	20011		LX0	9	CMP30	5679
26112	37226		IX2	X2-X6	CMP30	5680
	5160026165		SA6	DLASTT	CMP30	5681
26113	0100026240		RJ	DSORT SORT EXTERNAL REFERENCE TABLE	COMPASS	17972
26114	0400026121		EQ	DLAST12	CMP30	5682
					CMP30	5683
26115	20114	DLAST11	LX1	12 TABLE TYPE (4400B OR 4500B)	CMP30	5684
	75565		SX5	A6-B5 WORD COUNT	CMP30	5685
	12315		BX3	X1+X5	CMP30	5686
	20344		LX3	36	CMP30	5687
26116	12637		BX6	X3+X7 HEADER WORD	CMP30	5688
	76760		SX7	B6 LNKTAB INDEX	CMP30	5689
	56650		SA6	B5	CMP30	5690
26117	5170026165		SA7	DLASTT	CMP30	5691
					CMP30	5692
		RM	IFEQ	CP#RM,0	CMP30	5693
	66650		WRITEW	B,B5,X5+B1 WRITE LINK/XLINK TABLE	CMP30	5694
		RM	ELSE		CMP30	5695
			SX1	B5	CMP30	5696
			SX3	X5+B1	CMP30	5697
			IX4	X3+X3	CMP30	5698
			LX3	3	CMP30	5699
			IX4	X3+X4	CMP30	5700
			SA2	B-1	CMP30	5701
			NZ	X2,DLA2 IF NOT TYPE W RECORDS	CMP30	5702
			PUT	B,X1,X4	CMP30	5703
			EQ	DLAST12	CMP30	5704
		DLA2	PUTP	B,X1,X4	CMP30	5705
		RM	ENDIF		CMP30	5706
					CMP30	5707
26121	5110003426	DLAST12	SA1	O.LNKTAB	CMP30	5708
	5120003465		SA2	L.LNKTAB	CMP30	5709
26122	5130026165		SA3	DLASTT	CMP30	5710
	53410		SA4	X1	CMP30	5711
	63510		SB5	X1	CMP30	5712
26123	63720		SB7	X2	CMP30	5713
	63630		SB6	X3	CMP30	5714
	5150003417		SA5	O.EXTAB	CMP30	5715
26124	0667026162		GE	B6,B7,DLAST20 IF END OF TABLE	CMP30	5716
	10644		BX6	X4	CMP30	5717
	53116		SA1	X1+B6	CMP30	5718
26125	6245777776		SB4	X5-1	CMP30	5719
	43503		MX5	3	CMP30	5720
	54640		SA6	A4	CMP30	5721

26126	6120000036		SB2	30		CMP30	5722
	11751		BX7	X5*X1		CMP30	5723
	21511		AX5	9		CMP30	5724
26127	0317026144		NZ	X7,DLAST16	IF CONDITIONAL XLINK	CMP30	5725
	11751		BX7	X5*X1		CMP30	5726
	21511		AX5	9		CMP30	5727
26130	0317026150		NZ	X7,DLAST17	IF UNCONDITIONAL XLINK	CMP30	5728
	43036		MX0	30		CMP30	5729
	11751		BX7	X5*X1		CMP30	5730
26131	43563		MX5	-9	LINK (CONDITIONAL OR NOT)	CMP30	5731
	6130000036		SB3	30		CMP30	5732
	20536		LX5	30		CMP30	5733
26132	15215	DLAST13	BX2	-X5*X1	EXTRACT EXTERNAL ORDINAL	CMP30	5734
	22322		LX3	X2,B2		CMP30	5735
	53434		SA4	X3+B4	GET NAME	CMP30	5736
	10644		BX6	X4		CMP30	5737
26133	66320		SB3	B2		CMP30	5738
	54661		SA6	A6+B1	STORE NAME	CMP30	5739
	11201		BX2	X0*X1		CMP30	5740
	76600		SX6	B0		CMP30	5741
26134	15310	DLAST14	BX3	-X0*X1	EXTRACT DATA BYTE	CMP30	5742
	22433		LX4	X3,B3		CMP30	5743
	67323		SB3	B2-B3		CMP30	5744
	36664		IX6	X6+X4		CMP30	5745
26135	0430026136	+	ZR	B3,*+1	IF LINK WORD NOT FULL	CMP30	5746
	54661		SA6	A6+B1		CMP30	5747
	13666		BX6	X6-X6		CMP30	5748
26136	54111	+	SA1	A1+B1	GET NEXT WORD OF LNKTAB	CMP30	5749
	66661		SB6	B6+B1		CMP30	5750
	11301		BX3	X0*X1		CMP30	5751
	37432		IX4	X3-X2		CMP30	5752
26137	0667026142		GE	B6,B7,DLAST15	IF END OF TABLE	CMP30	5753
	0304026134		ZR	X4,DLAST14	IF SAME EXTERNAL AND SAME CONDITION	CMP30	5754
26140	0530026141	+	NZ	B3,*+1	IF LINK WORD IS FULL	CMP30	5755
	66320		SB3	B2		CMP30	5756
	54661		SA6	A6+B1	STORE WORD PADDED WITH ZEROS	CMP30	5757
26141	11353	+	BX3	X5*X3		CMP30	5758
	37437		IX4	X3-X7		CMP30	5759
	0304026132		ZR	X4,DLAST13	IF SAME CONDITION	CMP30	5760
26142	21733	DLAST15	AX7	39-12		CMP30	5761
	0530026143		NZ	B3,*+1	IF LAST LINK WORD IS FULL	CMP30	5762
	54661		SA6	A6+B1		CMP30	5763
26143	7110004400	+	SX1	4400B	WRITE LINK TABLE	CMP30	5764
	0400026115		EQ	DLAST11		CMP30	5765
						CMP30	5766
26144	43025	DLAST16	MX0	12+9	PREPARE TO GENERATE CONDITIONAL XLINK	CMP30	5767
	20011		LX0	9		CMP30	5768
	6120000014		SB2	60-48		CMP30	5769
26145	43211		MX2	9		CMP30	5770
	20271		LX2	-3		CMP30	5771
	6130000011		SB3	9		CMP30	5772
26146	43333		MX3	-42+9		CMP30	5773
	20311		LX3	9		CMP30	5774
	43563		MX5	-9		CMP30	5775
	15515		BX5	-X5*X1		CMP30	5776
26147	0400026153		EQ	DLAST18		CMP30	5777

CMP30	5779
CMP30	5780
CMP30	5781
CMP30	5782
CMP30	5783
CMP30	5784
CMP30	5785
CMP30	5786
CMP30	5787
CMP30	5788
CMP30	5789
CMP30	5790
CMP30	5791
CMP30	5792
CMP30	5793
CMP30	5794
CMP30	5795
CMP30	5796
CMP30	5797
CMP30	5798
CMP30	5799
CMP30	5800
CMP30	5801
CMP30	5802
CMP30	5803
CMP30	5804
CMP30	5805
CMP30	5806
CMP30	5807
COMPASS	18046
CMP30	5808
CMP30	5809
CMP30	5810
CMP30	5811
CMP30	5812
COMPASS	18048
COMPASS	18049
COMPASS	18051
COMPASS	18052
COMPASS	18053
COMPASS	18054
CMP30	5813
COMPASS	18055
CMP30	5814
COMPASS	18056
COMPASS	18057
COMPASS	18058
COMPASS	18059
CMP30	5815
CPS012	15
CPS012	16
CPS012	17
CMP30	5818

	26174	21111	15710	BX7	-X0*X1	RELOCATION	CMP30	5819
				AX1	9		CMP30	5820
		37261		IX2	X6-X1		CPS012	18
1			0322026166	PL	X2,DLT	IF NO LITERALS	CPS012	19
2	26175	5120003572		SA2	ORGBASE		CPS012	20
3			5130003265	SA3	LPGM		CPS012	21
4	26176	37062		IX0	X6-X2		CPS012	22
5		37531		IX5	X3-X1		CPS012	23
6			12205	BX2	X0+X5		CPS012	24
7	26177	0332026166		MI	X2,DLT	IF LITERALS NOT IN THIS SEGMENT	CPS012	25
8			5140003130	SA4	ABSFG		CPS012	26
9	26200	5150003114		SA5	MACHINE		CPS012	27
10			0304026202	ZR	X4,DLT0	IF RELOCATABLE	CPS012	28
11	26201	0305026227		ZR	X5,DLT2	IF ABSOLUTE CPU ASSEMBLY	CPS012	29
12	26202	5120003104	DLT0	SA2	ORGCTR		CPS012	30
13			54321	SA3	A2+B1		CPS012	31
14	26203	5140003571		SA4	MINORG		CPS012	32
15			5150003570	SA5	MAXORG		CPS012	33
16	26204	54620		SA6	A2	SET ORGCTR = FWA OF LITERALS	CPS012	34
17		54730		SA7	A3	RELOCATION	CPS012	35
18			54640	SA6	A4	MINORG	CPS012	36
19			10711	BX7	X1	LWA+1 OF LITERALS	CPS012	37
20	26205	54750		SA7	A5	MAXORG	CPS012	38
21		10622		BX6	X2		CPS012	39
22			22703	LX7	X3		CPS012	40
23	26206	5160026234		SA6	DLTB	SAVE ORGCTR	CPS012	41
24			54761	SA7	A6+B1	RELOCATION	CPS012	42
25			10644	BX6	X4	MINORG	CPS012	43
26	26207	22705		LX7	X5	MAXORG	CPS012	44
27		54671		SA6	A7+B1		CPS012	45
28			54761	SA7	A6+B1		COMPASS	18068
29	26210	0100026413		RJ	RESORG	INITIALIZE FOR BINARY OUTPUT	COMPASS	18072
30	26211	43600	DLT1	MX6	0		COMPASS	18073
31			5160003110	SA6	POSCTR		COMPASS	18074
32	26212	5110026233		SA1	DLTA		COMPASS	18075
33			5120003414	SA2	0.LITAB		COMPASS	18076
34	26213	5130003156		SA3	LI		COMPASS	18077
35			36223	IX2	X2+X3		COMPASS	18078
36			36312	IX3	X1+X2		COMPASS	18079
37	26214	53130		SA1	X3		COMPASS	18080
38			5120003123	SA2	LWORD		COMPASS	18081
39			43300	MX3	0		COMPASS	18082
40	26215	10466		BX4	X6		COMPASS	18083
41			0100025344	RJ	BINOUT		COMPASS	18084
42	26216	0100025141		RJ	ZFOUP		COMPASS	18085
43	26217	5110026233		SA1	DLTA	ADVANCE INDEX	COMPASS	18086
44			73611	SX6	X1+B1		COMPASS	18087
45			54610	SA6	A1		COMPASS	18088
46	26220	5110003104		SA1	ORGCTR		COMPASS	18089
47			5120003570	SA2	MAXORG		COMPASS	18090
48	26221	37412		IX4	X1-X2		CPS012	46
49			0334026211	MI	X4,DLT1	LOOP	CPS012	47
50			43600	MX6	0	INITIALIZE FOR GENERAL PROCESSING	CPS012	48
51	26222	5160003325		SA6	RERR		COMPASS	18094
52			5110026234	SA1	DLTB		CPS012	49
53	26223	54211		SA2	A1+B1		CPS012	50
54			54321	SA3	A2+B1		CPS012	51

[illegible]

COMPASS 18129
COMPASS 18130

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26265	0570026307		NZ	B7,DBW10	IF NOT 18 BITS	CMP30	5844
	5120012313		SA2	=-10000100001B		CMP30	5845
26266	15610		BX6	-X0*X1		CMP30	5846
	20144		LX1	-24		CMP30	5847
	63260		SB2	X6	TEST FOR STANDARD POSITIONS	CMP30	5848
	23322		AX3	X2,B2		CMP30	5849
26267	47633		CX6	X3	IF BIT POSITION IS 0, 15, OR 30	CMP30	5850
	20373		LX3	-1	(B2) = 0, 1, OR 2 RESPECTIVELY	CMP30	5851
	6226777706		SB2	X6-57		CMP30	5852
26270	0333026307		MI	X3,DBW10	IF NONE OF THE ABOVE	CMP30	5853
	21152		AX1	42		CMP30	5854
26271	0331026276		MI	X1,DBW5	IF EXTERNAL	CMP30	5855
	6251777774		SB5	X1-3		CMP30	5856
26272	0650026276		PL	B5,DBW5	IF COMMON	CMP30	5857
	5140004025		SA4	BINREC	PROGRAM RELOCATION (+ OR -)	CMP30	5858
26273	21442		AX4	34		COMPASS	18175
	63340		SB3	X4		COMPASS	18176
	6142000070		SB4	56+B2		COMPASS	18177
26274	73111		SX1	X1+B1		COMPASS	18178
	67343		SB3	B4-B3		COMPASS	18179
	54441		SA4	A4+B1		COMPASS	18180
	22131		LX1	X1,B3		COMPASS	18181
26275	12641		BX6	X4+X1		COMPASS	18182
	54640		SA6	A4		COMPASS	18183
	0400026260		EQ	DBW1		CMP30	5859
26276	5120003104	DBW5	SA2	ORGCTR		CMP30	5860
	43053		MX0	-17		CMP30	5861
	11602		BX6	X0*X2		CMP30	5862
26277	0316026307		NZ	X6,DBW10	IF ORGCTR NOT LESS THAN 2**17	CMP30	5863
	15610		BX6	-X0*X1		CMP30	5869
	73410		SX4	X1		CPS005	10
26300	5150003105		SA5	ORGCTR+1		CPS005	11
	20636		LX6	30		CPS005	12
	55151		SA1	A5-B1		CPS005	13
26301	5130003111		SA3	CLF		CMP30	5884
	63750		SB7	X5		CPS005	14
26302	0617026303		LE	B7,B1,DBW7	CONVERT RELOCATION IF COMMON	CPS005	15
	73551		SX5	X5+B1		COMPASS	18207
26303	20522	DBW7	LX5	18		CPS005	16
	12665		BX6	X6+X5		CPS005	17
	7102000004		SX0	B2+4		CPS005	18
26304	36761		IX7	X6+X1		CPS005	19
	20033		LX0	27		COMPASS	18215
	12670		BX6	X7+X0		CPS005	20
	20525		LX5	39-18		CMP30	5888
26305	0313026320		NZ	X3,DBW12	IF CONDITIONAL	CPS005	21
	43500		MX5	0		CPS005	22
26306	0400026320		EQ	DBW12		CPS005	23
						CMP30	5891
26307	5110003575	DBW10	SA1	BINREL	EXTENDED TABLE ENTRY NEEDED	CMP30	5892
	5120003104		SA2	ORGCTR		CMP30	5893
26310	54321		SA3	A2+B1		CMP30	5894
	20173		LX1	-1		CMP30	5895
	5241003576		SA4	BINREL+1+X1	FETCH BINREL WORD	CMP30	5896
26311	63730		SB7	X3		CMP30	5897
	0321026312		PL	X1,DBW11	IF UPPER HALFWORD	CMP30	5898
	20436		LX4	30		CMP30	5899

26312	43060		DBW11	MX0	-12		CMP30	5900
	21436			AX4	30		CMP30	5901
		5110003111		SA1	CLF	CONDITIONAL LOADING FLAG	CMP30	5902
26313	15640			BX6	-X0*X4		CMP30	5903
	21414			AX4	12		CMP30	5904
		43053		MX0	-17		CMP30	5905
		20214		LX2	12		CMP30	5906
26314	12662		+	BX6	X6+X2		CMP30	5907
	0617026315			LE	B7,B1,++1	CONVERT RELOCATION IF COMMON	CMP30	5908
		73331		SX3	X3+B1		CMP30	5909
26315	20347		+	LX3	39		CMP30	5910
	12663			BX6	X6+X3		CMP30	5911
		15540		BX5	-X0*X4		CMP30	5912
		20560		LX5	48		CMP30	5913
26316	76300			SX3	B0		CMP30	5914
		0301026320		ZR	X1,DBW12	IF NOT CONDITIONAL	CMP30	5915
		21555		AX5	45		CMP30	5916
26317	76110			SX1	B1		CMP30	5917
	20611			LX6	9		CMP30	5918
	12551			BX5	X5+X1		CMP30	5919
		20571		LX5	-3		CMP30	5920
26320	12165		DBW12	BX1	X6+X5	TABLE ENTRY	CMP30	5921
	22601			LX6	X1		CMP30	5922
		0334026322		MI	X4,DBW16	IF EXTERNAL	CMP30	5923
26321	5120003463			SA2	L.COMTAB	PROCESS COMMON RELOCATION	CMP30	5924
		0400026323		EQ	DBW18		CMP30	5925
26322	5120003465		DBW16	SA2	L.LNKTAB	PROCESS EXTERNAL LINKAGE	CMP30	5926
		5130003456		SA3	L.EXTAB		CMP30	5927
26323	5002774336		DBW18	SA0	A2-SIZES		CMP30	5928
		0312026327		NZ	X2,DBW19	IF COMTAB/LNKTAB NON-EMPTY	CMP30	5929
26324	5160025317			SA6	BTEMPA		CMP30	5930
		73131		MANAGE	A0,X3+B1	MAKE INITIAL ALLOCATION	CMP30	5931
26326	5110025317			SA1	BTEMPA		CMP30	5932
26327	0100004745		DBW19	ADDWORD	A0	ADD TABLE ENTRY	CMP30	5933
26330	5030003441			SA3	A0+SIZES	CHECK TABLE LENGTH	CPS005	24
		7253777776		SX5	X3-1		CPS005	26
26331	0315026260			NZ	X5,DBW1	IF TABLE NOT DUMPED, LOOP TO NEXT RELOC	CPS005	27
		7040777753		SX4	A0-LNKTAB		CPS005A	1
26332	43700			MX7	0		CPS005	28
		76300		SX3	B0		CPS005A	2
		14444		BX4	-X4		CPS005A	3
		54730		SA7	A3	CLEAR TABLE SIZE	CPS005	29
26333	0400026320			EQ	DBW12	AND TRY AGAIN	CPS005	30
							CMP30	5935
26334	5110004025		DBW20	SA1	BINREC	COUNTER	CMP30	5936
		5120003574		SA2	BINWORD	DATA	COMPASS	18225
26335	20130			LX1	-36		CMP30	5937
	10722			BX7	X2		COMPASS	18227
		5271004027		SA7	BINREC+2+X1	STORE DATA	COMPASS	18228
26336	76210			SX2	B1		COMPASS	18230
	36612			IX6	X1+X2	INCREMENT WORD COUNT	CMP30	5938
		20644		LX6	36		CMP30	5939
		54610		SA6	A1		CMP30	5940
26337	6271777761			SB7	X1-14	TEST FOR END OF TABLE	COMPASS	18237
		0770026250		MI	B7,DWORDX		CMP30	5941
26340	0100026413			RJ	RESORG	DUMP CARD	COMPASS	18239
26341	0400026250			EQ	DWORDX		CMP30	5942

* OUTPUT CP ABSOLUTE WORD.

COMPASS	18241
COMPASS	18242
COMPASS	18243
COMPASS	18244
COMPASS	18245
COMPASS	18246
COMPASS	18247
COMPASS	18248
COMPASS	18249
COMPASS	18250
COMPASS	18251
COMPASS	18252
COMPASS	18253
COMPASS	18254
COMPASS	18255
CMP30	5943
COMPASS	18260
COMPASS	18261
COMPASS	18262
CPSA213	29
CPSA213	30
F4820	808
F4820	809
F4820	811
F4820	812
F4820	813
F4820	814
F4820	815
F4820	816
F4820	817
F4820	818
CPSA281	428
CPSA281	429
CPSA281	430
F4820	820
F4820	821
F4820	822
F4820	823
F4820	824
F4820	825
F4820	826
F4820	827
F4820	828
F4820	829
F4820	830
F4820	831
F4820	832
F4820	833
F4820	834
F4820	835
F4820	836
F4820	837
F4820	838
F4820	839
F4820	840
F4820	841
F4820	842

* OUTPUT PP WORD.

26342	5110003104	DWORDC	SA1	ORGCTR	
	5120003572		SA2	ORGBASE	
26343	5130003265		SA3	LPGM	
	37412		IX4	X1-X2	
26344	0334026250		NG	X4,DWORDX	IGNORE WORD IF OUT OF RANGE
	37113		IX1	X1-X3	
26345	0321026250		PL	X1,DWORDX	
	5110003437		SA1	O.MEMORY	
26346	36014		IX0	X1+X4	
	5120003574		SA2	BINWORD	
	10622		BX6	X2	
26347	53600		SA6	X0	
	0400026250		EQ	DWORDX	
* OUTPUT PP WORD.					
26350	5120003574	DWORDP	SA2	BINWORD	
	5130003104		SA3	ORGCTR	
26351	5110003572		SA1	ORGBASE	
	5150003265		SA5	LPGM	
26352	37131		IX1	X3-X1	
	0331026250		NG	X1,DWORDX	
	37535		IX5	X3-X5	
26353	5140003116		SA4	PPTYPE	
	0325026250		PL	X5,DWORDX	
26354	73441	+	SX4	X4+B1	
	0314026355		NZ	X4,*+1	IF NOT BCU
	20101		LX1	1	
26355	7274000002	+	SX7	X4+2	
	0307026375		ZR	X7,DWORDQ	IF 180 PP ASSEMBLY
26356	7100000005		SX0	5	
	63410		SB4	X1	
	27101		IX1	X1/X0	WORD INDEX
	63610		SB6	X1	
	66566		SB5	B6+B6	
26361	66755		SB7	B5+B5	
	66576		SB5	B7+B6	5*LOCATION
	77745		SX7	B4-B5	REMAINDER
	36677		IX6	X7+X7	2*REMAINDER
26362	36767		IX7	X6+X7	3*REMAINDER
	20702		LX7	2	12*REMAINDER
	63770		SB7	X7	
26363	6150000060		SB5	48	
	67757		SB7	B5-B7	
26364	7100007777		SX0	7777B	
	22070		LX0	X0,B7	
	22272		LX2	X2,B7	
26365	5110003437		SA1	O.MEMORY	
	53516		SA5	X1+B6	
	15650		BX6	-X0*X5	
26366	0304026370		ZR	X4,DWORDP1	IF BCU ASSEMBLY
	11202		BX2	X0*X2	
	12662		BX6	X6+X2	
26367	54650		SA6	A5	

26370	20264	0400026250	DWORDP1	EQ	DWORDX	RETURN	F4820	843
		11702		LX2	-8		F4820	844
		12667		BX7	X0*X2		F4820	845
		54650		BX6	X6+X7		F4820	846
26371	20060			SA6	A5		F4820	847
		11702		LX0	-12		F4820	848
26372	0320026373		+	BX7	X0*X2		F4820	849
		54551		PL	X0,*+1	IF NOT ACROSS WORD	F4820	850
		10655		SA5	A5+B1		F4820	851
26373	20770		+	BX6	X5		F4820	852
		15660		LX7	-4		F4820	853
		12667		BX6	-X0*X6		F4820	854
		54650		BX6	X6+X7		F4820	855
26374	0400026250			SA6	A5		F4820	856
				EQ	DWORDX	RETURN	F4820	857
* 180 PP ASSEMBLY. 16-BIT PP BYTES ARE PACKED INTO THE BINARY							CPSA281	431
* IMAGE LEAVING NO UNUSED BITS. THE RELATIVE OFFSET INTO THE							CPSA281	432
* PROGRAM IMAGE (*POS*), AND THE SHIFT (*REM*) IS DETERMINED AS							CPSA281	433
* FOLLOWS...							CPSA281	434
* POS = (K*16) / 60							CPSA281	435
* WHERE K = RELATIVE PP BYTE (ORGCTR - ORGBASE)							CPSA281	436
* POS = RELATIVE OFFSET INTO PROGRAM IMAGE							CPSA281	437
* REM = 44 - ((K*16) - (POS*60))							CPSA281	438
* REM IS USED AS FOLLOWS...							CPSA281	439
* 1) FOR PP BYTE FITTING ENTIRELY IN ONE CM WORD...							CPSA281	440
* *REM* IS THE RIGHT-MOST BIT NUMBER OF THE							CPSA281	441
* BYTE TO BE STORED AT (POS).							CPSA281	442
* (RIGHT-MOST BIT OF CM WORD = BIT 0)							CPSA281	443
* 2) FOR PP BYTE CROSSING WORD BOUNDARY...							CPSA281	444
* *REM* IS NEGATIVE. THE UPPER PART OF THE BYTE							CPSA281	445
* CONSISTS OF (REM+16) BITS AND IS STORED							CPSA281	446
* RIGHT-JUSTIFIED AT (POS). THE LOWER PART OF							CPSA281	447
* THE BYTE CONSISTS OF (-REM) BITS AND IS							CPSA281	448
* STORED LEFT-JUSTIFIED AT (POS+1).							CPSA281	449
26375	20104		DWORDQ	LX1	4	K * 16	CPSA281	450
		63310		SB3	X1		CPSA281	451
		7100000074		SX0	60		CPSA281	452
26376	27101			IX1	X1/X0	POS = (K*16) / 60	CPSA281	453
		63610		SB6	X1	(B6) = POS	CPSA281	454
26400	10311			BX3	X1		CPSA281	455
		20302		LX3	2	POS * 4	CPSA281	456
		20106		LX1	6	POS * 64	CPSA281	457
		37113		IX1	X1-X3	POS * 60	CPSA281	458
26401	63410			SB4	X1		CPSA281	459
		6150000054		SB5	44		CPSA281	460
		67434		SB4	B3-B4	K*16 - POS*60	CPSA281	461
26402	67554			SB5	B5-B4	REM = 44 - ((K*16) - (POS*60))	CPSA281	462
		5110003437		SA1	0.MEMORY		CPSA281	463
		53516		SA5	X1+B6	RELATIVE WORD AT *POS*	CPSA281	464

26403	0750026406		MI	B5,DBW30	IF BYTE CROSSES 60-BIT WORD BOUNDARY	CPSA281	473	
		43054	MX0	-16		CPSA281	474	
		22252	LX2	X2,B5	SHIFT BYTE TO POSITION	CPSA281	475	
1	26404	22050	LX0	X0,B5	SHIFT MASK TO POSITION	CPSA281	476	
2		15220	BX2	-X0*X2	STORE BYTE IN PROGRAM IMAGE	CPSA281	477	
3		11605	BX6	X0*X5		CPSA281	478	
4			BX6	X6+X2		CPSA281	479	
5	26405	54650	SA6	A5		CPSA281	480	
6		0400026250	EQ	DWORDX	RETURN	CPSA281	481	
7						CPSA281	482	
8	26406	6145000020	DBW30	SB4	B5+16	REM + 16 (4, 8, OR 12)	CPSA281	483
9		43020	MX0	16	FORM MASKS FOR BOTH UPPER BITS IN (POS)	CPSA281	484	
10		22040	LX0	X0,B4	AND LOWER BITS IN (POS+1)	CPSA281	485	
11	26407	43136	MX1	30		CPSA281	486	
12		11710	BX7	X1*X0	MASK FOR LOWER PART IN (POS+1)	CPSA281	487	
13		15001	BX0	-X1*X0	MASK FOR UPPER PART IN (POS)	CPSA281	488	
14		20254	LX2	44	POSITION BYTE	CPSA281	489	
15	26410	22242	LX2	X2,B4		CPSA281	490	
16		11372	BX3	X7*X2	LOWER PART OF BYTE FOR (POS+1)	CPSA281	491	
17		11202	BX2	X0*X2	UPPER PART OF BYTE FOR (POS)	CPSA281	492	
18		15650	BX6	-X0*X5	MERGE UPPER BITS IN (POS)	CPSA281	493	
19	26411	12662	BX6	X6+X2		CPSA281	494	
20		54650	SA6	A5		CPSA281	495	
21		54551	SA5	A5+B1	MERGE LOWER BITS IN (POS+1)	CPSA281	496	
22		15657	BX6	-X7*X5		CPSA281	497	
23	26412	12663	BX6	X6+X3		CPSA281	498	
24		54650	SA6	A5		CPSA281	499	
25		0400026250	EQ	DWORDX	RETURN	CPSA281	500	
26								
27								
28								
29								
30			**	RESORG	- RESET ORIGIN.	COMPASS	18297	
31			*	RESETS ORIGIN FOR RELOCATABLE ROUTINES.	MAY DUMP TEXT	COMPASS	18298	
32			*	TABLE IF BINREC IS NON-EMPTY.		COMPASS	18299	
33						COMPASS	18300	
34						COMPASS	18301	
35	26413	0000000000	RESORG	PS	RETURN EXIT	COMPASS	18302	
36	26414	5110003130	SA1	ABSFG		COMPASS	18303	
37		5120004025	SA2	BINREC		COMPASS	18304	
38	26415	5130000241	SA3	B		CMP30	5944	
39		0311026413	NZ	X1,RESORG	AVOID ANY PROCESSING ON ABSOLUTE PROGRAMS	COMPASS	18305	
40	26416	0303026413	ZR	X3,RESORG	IF NO BINARY FILE	CMP30	5945	
41		20230	LX2	-36		CMP30	5946	
42		63721	SB7	X2+B1		COMPASS	18307	
43	26417	0471026424	EQ	B7,B1,RESORG1	IF BINARY RECORD EMPTY	CMP30	5947	
44		5130026433	SA3	DBTA	APPEND CONTROL WORD	CMP30	5948	
45	26420	5140003111	SA4	CLF		CMP30	5949	
46		20244	LX2	36		CMP30	5950	
47		36623	IX6	X2+X3		COMPASS	18311	
48	26421	20442	LX4	33-59		CMP30	5951	
49		12664	BX6	X6+X4	OR IN CONDITIONAL LOAD FLAG	CMP30	5952	
50		54620	SA6	A2		COMPASS	18312	
51						CMP30	5953	
52			RM	IFEQ	CP#RM,0	CMP30	5954	
53		64620	WRITEW	B,A2,B7+B1		COMPASS	18313	
54			RM	ELSE		CMP30	5955	
55								
56								
57								
58								
59								
60								

				SX4	B7+B1			CMP30	5956
				IX2	X4+X4			CMP30	5957
				LX4	3			CMP30	5958
1				SA1	B-1			CMP30	5959
2				IX4	X4+X2			CMP30	5960
3				NZ	X1,RES1	IF NOT *W* RECORDS		CMP30	5961
4				PUT	B,BINREC,X4			CMP30	5962
5				EQ	RESORG1			CMP30	5963
6			RES1	PUTP	B,BINREC,X4			CMP30	5964
7			RM	ENDIF				CMP30	5965
8								CMP30	5966
9	26424	5110003104	RESORG1	SA1	ORGCTR	RESET FOR NEW CARD		COMPASS	18314
10		54211		SA2	A1+B1			COMPASS	18315
11		43053		MX0	-17			CMP30	5967
12	26425	63720	+	SB7	X2			COMPASS	18317
13		0617026426		LE	B7,B1,*+1	ADJUST RELOCATION FOR COMMON		COMPASS	18318
14		73221		SX2	X2+B1			COMPASS	18319
15	26426	11401		BX4	X0*X1			CMP30	5968
16		5130026434		SA3	DBTB	SET TABLE HEADER WORD		CMP30	5969
17		20222		LX2	18			CMP30	5970
18	26427	0304026430		ZR	X4,DBT2	IF ORIGIN LESS THAN 2**17		CMP30	5971
19		20206		LX2	6			CMP30	5972
20		54331		SA3	A3+B1			CMP30	5973
21	26430	76600	DBT2	SX6	B0			CMP30	5974
22		12721		BX7	X2+X1			COMPASS	18321
23		5160004026		SA6	BINREC+1			COMPASS	18322
24	26431	55761		SA7	A6-B1			COMPASS	18323
25		10633		BX6	X3			CMP30	5975
26		5160026433		SA6	DBTA			CMP30	5976
27	26432	0400026413		EQ	RESORG			COMPASS	18324
28								CMP30	5977
29	26433	00000000000000000000	DBTA	DATA	0	TEXT/XTEXT CONTROL WORD		CMP30	5978
30	26434	40000001000000000000	DBTB	DATA	40000001BS36	TEXT		CMP30	5979
31	26435	37000001000000000000		DATA	37000001BS36	XTEXT		CMP30	5980
32									
33									
34									
35									
36			**		END OF SECONDARY OVERLAY.			CPS064	1896
37								CPS064	1897
38								CPS064	1898
39				QUAL				CPS064	1899
40	26436		ENDA	BSS	0			CPS064	1900
41	26436		ENDB	BSS	0			CPS064	1901
42									
43									
44									
45									
46									
47									
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51									
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1412THE

**** BUFFERS - INPUT/OUTPUT BUFFERS.

CPSA097 14

CPS064 1904

CPS064 1905

CPS064 1906

CPS064 1907

COMPASS 19136

COMPASS 19137

COMPASS 19138

CMP30 6925

COMPASS 19139

COMPASS 19140

CMP1 54

COMPASS 19144

CPS064 1908

CPS064 1909

COMPASS 19145

COMPASS 19146

COMPASS 19147

CMP14 674

COMPASS 19148

COMPASS 19149

CMP30 6926

CMP30 6927

CPSA097 15

CMP30 6934

COMPASS 19150

ORG ENDB

** MINIMUM FIELD LENGTH FOR COMPASS.

CPSA241 6

CPSA241 7

CPSA241 8

CPSA241 9

COMPASS 19152

35346 MFL= EQU MIN.FL

END COMPASS

72700B CM STORAGE USED 37304 STATEMENTS 2977 SYMBOLS 000009 INVENTED SYMBOLS
PARALLEL CPU ASSEMBLY 16.138 SECONDS 13167 REFERENCES

SYMBOLIC REFERENCE TABLE.

ABASE	3135	51/11	L	94/27	94/36	94/46	S	94/52	271/16	540/09	S
ABSFG	3130	51/06	L	310/03	345/30	393/03		408/06	550/04	575/35	
		270/19	S	310/23	346/52	393/23		409/06	551/17	576/38	
		272/15	S	322/57	370/28	393/55		434/49	564/17	582/39	
		275/46		326/04	377/02	394/22		494/05	565/16	588/11	
		308/37		330/08	384/45	403/48		528/07	566/55	590/38	
		309/47		331/17	385/02	404/18		540/12	571/36	595/39	
ABTF	11572	217/12		220/49	221/35	L					
ACL	4724	88/05	L	88/30	178/43	201/39		216/56			
		88/23		177/13	179/20	206/24					
ACLA	4741	88/10	S	88/12	88/32	L					
ACL1	4737	88/08		88/25	L						

ADDWORD	4745	88/52 L	186/20	303/43	349/19	389/23	453/12	458/25	470/10
		108/18	186/30	321/47	350/56	426/33	453/17	468/18	492/45
		125/25	301/31	347/38	351/18	435/09	456/39	468/23	516/21
		175/57	303/07	348/15	351/24	452/32	458/23	469/53	592/34
ADDWORDT	4747	88/45 S	88/48	88/57 L					
ADDWORD1	4742	88/45 L	88/55						
AERR	3322	53/38 L	136/05 S	263/41 S	294/15 S	352/41 S	379/27 S	456/53 S	556/32 S
		94/24 S	138/34 S	267/07 S	297/16	357/48	385/29 S	469/57 S	558/37 S
		95/32 S	160/33 S	274/09	297/34	364/44 S	391/35 S	513/48 S	566/24 S
		119/51 S	236/50 S	274/29 S	297/57	365/45 S	392/17 S	515/24 S	
		120/40 S	238/55 S	275/31	310/09 S	366/34	395/18	517/52 S	
		121/11 S	251/44 S	279/09 S	321/31 S	366/39 S	402/41 S	542/28 S	
		132/36 S	254/10 S	279/36 S	326/16 S	370/39 S	405/20	549/54 S	
		133/10 S	257/54 S	288/11 S	334/48 S	374/29	412/52 S	550/12 S	
		134/09 S	260/52 S	291/28	338/52 S	374/33	413/16 S	555/27 S	
ALC	4751	88/11	202/29	307/43	403/32	451/12	472/14	492/24	
		88/46	203/16	311/41	430/28	452/15	472/39	509/41	
		89/13 L	203/34	326/28	431/03	453/39	472/45	521/05	
		89/24	213/54	328/32	440/31	456/41	472/52	525/38	
		103/48	286/17	329/13	441/47	458/42	475/16	540/16	
		105/27	301/19	397/37	443/19	462/46	476/01	564/51	
		196/05	303/45	403/18	445/03	467/53	480/07	592/32	
ALCAA	4770	89/44	89/51 L						
ALCB	5027	90/56	91/05 L						
ALCC	5100	90/47 S	91/07	92/47	92/56	93/13 L			
ALCM	3172	51/33 L	93/51	107/39	313/03	472/08 S			
ALCX	4750	89/10 L	90/41						
ALC1	4752	89/14 L	92/50						
ALC10	5016	89/54	90/45 L						
ALC10A	5023	89/47	89/49	90/52	90/55 L				
ALC10B	5030	91/01	91/05	91/07 L	91/25				
ALC11	5032	91/03	91/13 L						
ALC11A	5036	91/17	91/21 L						
ALC12	5040	91/20	91/24 L						
ALC13	5045	89/48	91/49 L						
ALC14	5047	91/02	91/04	91/56 L					
ALC15	5062	90/54	91/09	91/22	91/47	92/16	92/47 L	93/11	
ALC17	5064	89/50	91/52	92/52 L	479/37				
ALC18	5075	89/46	93/05 L						
ALC2	4756	89/21	89/28 L						
ALC3	4757	89/31 L	89/34						
ALC4	4771	89/42	89/53 L						
ALC5	4772	89/43	89/55 L						
ALC6	4776	90/09 L	90/31						
ALC7	5005	90/16	90/22 L						
ALC8	5014	90/38	90/40 L						
ARG	402	33/21	33/38 L	34/25	34/26	34/37			
ARGA	11576	38/18	219/53	221/39 L					
ARGE	572	34/50	35/16	35/26	36/43	40/41	217/44		
		34/56	35/22	35/33	38/23 L	44/09			
ARGF	11662	222/23	222/25	222/27	222/29	222/33 L			
		222/24	222/26	222/28	222/30				
ARGL	11601	37/10	221/40 L						
ARGLFN	11667	222/33	222/36 L						
ARGM	11602	34/43 S	38/23	44/08 S	217/43 S	221/41 L			
ARGN	11606	36/21	221/42 L						
ARGQ	11612	34/30	221/43 L						

ARG1	411	33/48 L	33/51	34/02						
ARG1A	414	33/54 L	34/03							
ARG1B	417	33/53	34/05 L							
ARG10	470	35/57 L	221/07							
ARG11	474	36/03	36/06	36/09 L						
ARG12	476	35/53	36/09	36/12 L						
ARG13	502	36/15	36/21 L							
ARG14	507	36/26 L	221/02							
ARG15	510	36/31 L	221/01							
ARG16	511	36/27	36/32 L							
ARG17	513	36/37 L	36/42							
ARG18	517	36/38	36/44 L							
ARG19	520	36/49 L	221/06							
ARG2	420	34/06 L	34/16							
ARG2A	427	34/28	34/30 L							
ARG2B	421	34/12 L	34/21							
ARG20	522	36/54 L	37/02	37/08						
ARG21	526	37/03	37/05 L							
ARG22	530	36/55	37/09 L							
ARG23	534	37/14	37/17 L							
ARG24	536	37/24 L	221/11							
ARG25	544	37/26	37/31	37/34 L						
ARG26	557	38/02 L	221/12							
ARG27	567	38/09	38/12	38/17 L						
ARG3	431	34/32	35/15	35/50	36/35	37/09	37/33	38/03	38/19	
		34/37 L	35/24	36/11	36/45	37/20	37/37	38/06		
		34/39	35/25	36/20	36/51	37/29	37/55	38/15		
ARG4	435	34/44 L	34/49							
ARG5	440	34/47	34/51 L							
ARG5A	444	34/54	35/05 L							
ARG6	446	35/07	35/09 L							
ARG6A	447	35/12 L	35/37							
ARG7	456	35/11	35/27 L							
ARG7A	457	35/32 L	220/53	221/04						
ARG8	462	35/41 L	220/55							
ARG9	466	35/43	35/48	35/50 L						
ARG=	1	3/41 E	7/07 D							
ASC6T8	40	52/12 D	160/48	298/49						
ASMJ	3220	51/54 L	92/53							
ASMK	3222	51/55 L	91/51 S							
ASML	3224	51/56 L	92/54							
ASMM	3225	51/57 L	103/31 S	103/32	182/10	314/46	315/17	524/44		
ASU	5102	90/40	187/44	203/42	303/51	307/48	329/14	443/20	477/27	
		93/22 L	201/34	206/26	304/21	311/30	398/44	446/18	549/23	
		93/34	202/30	301/25	304/36	312/06	440/26	469/12	579/22	
		93/36	203/24	301/47	307/07	328/40	442/55	477/05	587/31	
ASU1	5105	93/27 L	93/30							
ATIME	3173	51/34 L	236/06	314/17						
ATS	5111	93/44 L	93/55	93/57	188/13	206/27				
ATS1	5115	93/49	93/51 L							

B	241	41/52	220/50	331/29	394/27	524/01	572/27	577/06	583/10
		48/08 D	222/23	331/31	418/49	524/01	572/30	577/41	585/30
		177/11	222/26	345/32	440/51	564/16	573/04	578/04	587/46
		178/09	222/27	345/36	441/44	566/52	573/36	578/30	590/36
		190/06	222/28	346/09	442/30	567/31	573/38	580/39	595/41
		216/30	310/20	346/10	443/11	568/28	575/04	580/57	595/56
		216/34 S	310/33	387/36	445/36	569/14	575/06	582/04	
		216/38	310/42	394/25	446/17	571/30	576/32	582/40	
BADLOC	3264	52/25 L	328/01	374/23	389/12	418/54	510/23		
		122/24 S	369/12	380/51	399/24	440/01			
BASESTK	3500	73/20 L	74/05	94/26	94/41				
BBUF	34735	597/20 L							
BBUFL	1001	30/07 D	48/41	216/31	597/20	597/22			
BLANKS	4270	51/53 L	221/06						
BLCM	3044	31/24	49/44 L	93/52					
BTIME	3076	31/44	50/22 L	192/09					
BUCKET	35736	49/41	60/40	63/17	65/07	67/05	67/51	69/24	
		56/45	61/03	63/26	65/29	67/14	68/23	69/33	
		59/42	61/39	63/41	65/41	67/23	68/33	471/57	
		59/52	62/42	63/55	66/38	67/32	68/56	597/21 L	
		60/19	62/57	64/15	66/47	67/42	69/14		
BUFFERS	30731	215/55	597/13 L	597/22					
B1=1	0								
CARD	26437	106/17	122/40	155/13	291/23	381/46	436/25	464/13	517/04
		119/34	123/21	155/25	291/30	390/24	436/40	464/28	545/52
		120/07	124/38	164/38	301/06	391/11 S	437/51	465/47	545/55
		120/31	141/22	237/15	338/17 S	391/24 S	439/08	469/31	557/32
		120/46	142/17	240/05	338/37	391/26	449/57	474/29	597/07 L
		121/46	142/44	282/39	338/42 S	391/41 S	453/54	486/41	
		122/26 S	143/57	285/51	345/41	392/01	461/29	490/54	
		122/27	144/22	285/52	366/51	435/27	463/11	490/56	
		122/35 S	154/37	289/56	366/57 S	436/09	463/18	500/06 S	
CBC	5120	94/08 L	94/25	94/40	94/51	94/56	271/01	271/25	
CBCA	5145	94/10	94/37	94/43	94/53	95/01 L	271/17		
CBC1	5124	94/15 L	94/20						
CBC2	5130	94/19	94/26 L						
CBC3	5136	94/12	94/41 L						
CBC4	5143	94/13	94/52 L						
CBUF	10562	178/12	193/42 L						
CCC	5150	95/15 L	95/33	95/57	96/10	96/17	96/22	284/20	284/44
CCCA	5206	95/17	95/54	96/03	96/19	96/24 L	284/36		
CCC1	5154	95/22 L	95/27						
CCC1A	5156	95/28 L	95/38						
CCC2	5160	95/26	95/34 L						
CCC2A	5164	95/37	95/42 L						
CCC2B	5165	95/40	95/44 L						
CCC2C	5166	95/42	95/46 L						
CCC3	5173	95/19	96/01 L						
CCC3A	5202	96/13	96/15 L						
CCC4	5204	95/20	96/18 L						
CCOL	3141	51/15 L	122/32	285/15 S	285/28 S	474/23 S	540/30 S		
CCT	3306	53/18 L	165/10	436/44 S	489/26	504/29 S	540/20 S	548/32 S	552/51 S
		164/25	392/11 S	486/42 S	490/25	508/49	544/23	549/02 S	
CDB	655	37/28	38/05	41/12 L	41/20	41/32			
CDB1	657	41/17 L	41/29						
CDB2	664	41/22	41/24	41/31 L					
CDC1	5220	96/47 L	96/54						

CDEC
CHAR5214
314596/39 L
51/18 L
106/20 S96/55
142/48 S
144/30 S295/31
271/24
284/19326/08
327/17352/01
352/33382/23
385/09458/26
462/15517/54
554/42

120/01 S

148/47

284/43

332/24

358/49

391/12

463/14 S

556/18

120/35 S

240/27

292/35

333/55

359/31

397/48

464/31 S

557/26

121/16

250/27

295/03

334/08

363/06

402/22

466/05

558/39

122/29 S

250/39

297/26 S

334/34

364/19

410/12

466/11

123/06

255/24

298/09 S

336/53

370/30

412/20

467/17

130/13

260/26

298/30

337/43

371/16

418/02

513/03

130/47

260/38

303/08

346/54

371/22

454/18

514/42

137/56

263/28

321/23

347/09

372/47

455/28

516/53

142/20 S

270/57

322/10

349/27

377/49

456/47

516/55

CIF

5223

97/10 L

97/21

97/32

98/45

193/20

424/39

CIF1

5234

97/25

97/27

97/32 L

CIO=

4352

92/06

177/16

189/16

192/45

309/14

311/11

420/19

427/16

92/17

177/54

189/41

196/39

309/15

318/53

421/37

446/17

92/18

178/05

189/43

196/46

309/38

331/31

423/22

524/01

92/19

178/22

189/46

207/35

310/42

346/10

423/23

548/18

118/39

179/14

189/48

207/36

311/06

394/27

423/24

118/47

188/43

190/05

207/37

311/10

419/30

424/24

CLF

3111

50/37 L

276/22

406/22

409/35 S

591/35

595/48

276/14

376/11 S

406/49 S

540/04 S

592/03

CLL

5237

98/56 L

99/17

CLL1

5243

99/07 L

99/16

CLL2

5245

99/10

99/13 L

CLP1

3102

50/31 L

51/40

471/16

471/17

CLS

5250

99/35 L

196/07

471/18

474/34

540/18

569/31

99/50

307/53

472/16

539/44

564/54

CLS1

5247

99/31 L

99/39

CLS2

5253

99/40 L

99/49

CLS3

5255

99/42

99/45 L

CMP

10400

33/26

47/08

188/07 L

CMPA

10551

193/23

193/29 L

CMPB

10555

193/30 L

CMPTAB

5

61/03 D

213/54

CMP1

10401

188/09 L

188/26

188/37

193/17

193/18

193/22

CMP1A

10417

188/34

188/36

188/39 L

189/02

CMP2

10424

188/24

188/53 L

CMP2B

10434

189/11

189/13

189/15 L

CMP3

10437

188/40

188/45

189/08

189/29 L

CMP4

10441

189/30

189/39 L

CMP4A

10445

189/40

189/43 L

CMP5

10447

189/42

189/44 L

CMP5A

10453

189/45

189/48 L

CMP6

10455

189/47

189/49 L

CMP6A

10464

189/57

190/02

190/04 L

CMP7

10466

189/55

190/06 L

CMP7B

10505

191/21

191/28 L

CMP7C

10522

192/21

192/24 L

CMP8

10523

192/18

192/26 L

CMP9

10533

192/41

192/42

193/05 L

COCT

5260

100/03 L

100/14

214/38

373/29

COCT1

5262

100/07 L

100/13

CODESTK

3503

73/29 L

74/05

95/46

96/01

COL

3142

51/16 L

122/41 S

240/04

242/23

250/33

391/25

455/15

121/47

124/31

240/41

250/02

391/09

454/48

469/30

COLUMN

3144

51/17 L	122/23 S	144/24 S	250/36 S	338/38 S	453/53	455/53	517/03
106/23	123/20	155/12	282/38	345/40	454/52 S	456/02	557/31
119/28	141/21	240/17 S	285/49	366/42	455/19 S	463/13 S	
120/08 S	142/18 S	240/44 S	291/20	381/45	455/32	463/17	
120/32 S	142/46 S	242/26 S	297/23	390/23	455/41	464/10	
120/44	143/54	250/04 S	298/06	391/21	455/49 S	464/29 S	
7/19 D	51/15	285/14	474/22	540/29			
3/38 E	33/04 L						
50/14 L	191/08	218/56 S					
50/15 L	191/05	219/03 S					
50/16 L	191/11	219/02 S					
70/53 D	72/15						
7/25 D	271/20	282/03	284/39	435/55	436/08	437/23	439/43
100/39 L	102/19	163/54	168/27	313/28	314/25	315/03	476/05
102/13	163/46	165/34	182/04	313/35	314/43	317/29	
100/27 L	100/35	100/48					
31/11	31/30	101/14 L	163/13	528/32	528/36	530/17	
101/01 L	101/10	101/24	101/26	101/29			
101/21	101/24 L						
37/38	195/04 D	219/15					
101/37 L	101/47	471/56	540/11				
101/40 L	101/46						
31/45	101/57 L	102/22	314/18				
102/01	102/03	102/24 L					
102/16	102/25 L						
18/24 D	31/54	217/13	310/55				
21/46 L	99/37	107/31 S	191/18	220/23			
33/10 S	107/10	107/32	204/38				
21/38 L	33/09 S	46/01 S	115/50 S	116/18	116/23 S	213/48	
3/51 D	3/55	18/08 L	24/19				
18/40 D	188/23	192/10	215/21	538/43			
44/10	188/54	213/40	218/48				
23/37 L	23/38	48/08					
19/26 L	220/02	220/51	318/22	318/43			
20/55 L	21/01	33/12 S	188/27	188/55 S	192/40	193/15	448/40
20/40 L							
20/04 L	195/33 S						
23/19 L	23/20	48/09					
19/18 L	118/40	168/02	168/35	192/19	318/06		
18/49 L	31/48	188/16	220/52	310/47	571/33		
22/39 L	22/40	48/06					
20/27 L	419/38	424/26	426/01	426/38 S	481/48	490/40	
97/33 S	421/48 S	424/41	426/09	427/24 S	486/38	502/11	
189/01 S	423/26 S	425/05 S	426/29 S	436/48	489/25	508/54	
24/19 D							
21/25 L	36/17 S	196/33	201/43	204/30	206/35	206/46	
36/10 S	185/04	200/19	202/31	206/20 S	206/40	206/50	
20/48 L							
18/57 L	166/22	173/14	189/07	318/17	532/34	538/39	
42/14 S	167/27	174/01	215/54	355/41	533/54	547/53	
118/33	173/02	188/39	216/18	355/53	534/24	552/18	
20/10 L	31/04	93/46					
21/55 L	33/39	33/40	36/26	473/30			
21/47 L	33/08 S	191/17					
21/39 L	45/49	88/16	102/44	116/45	117/11	213/43	218/25
33/07 S	45/57 S	90/49	116/22 S	117/10	117/14 S	214/22	
23/01 L	23/02	48/07					

CP.ORG	2777	17/54 D	32/48	43/31	46/27	47/08	47/11		
CP.PAGE	117	19/09 L	189/29	221/05	318/37	539/03			
		168/37	192/11	318/13	538/37	539/09 S			
CP.PCOM	206	22/05 L	37/04 S	37/19 S	473/44				
CP.PD	122	19/37 L	37/35 S	37/39	191/10 S	218/53	219/12 S	219/30	221/11
CP.PS	123	19/43 L	38/14 S	166/28	184/01	218/52	219/45	221/12	540/05
		37/36	38/17 S	168/11	186/48	219/13 S	219/52 S	315/51	
		37/54 S	163/39	181/52	191/07 S	219/24	219/54	397/07	
CP.PW	124	19/55 L	191/13 S	218/55	219/19				
CP.STEXT	161	21/13 L	36/12	185/01	201/42	201/50	204/31	206/41	
CP.STOP	114	18/14 L	191/31						
CP.USER	131	20/33 L							
CP.XNAME	127	20/16 L	221/10	222/24	222/26	222/29	222/30	419/01	
CP#FRM	0	7/34 D	48/28 F	168/32 F	213/06 F	346/57 F	427/15 F	507/50 F	577/05 F
		12/01 F	48/43 F	169/36 F	214/49 F	347/50 F	427/31 F	523/56 F	577/40 F
		15/31 F	49/01 F	173/55 F	215/48 F	358/51 F	441/43 F	525/08 F	578/03 F
		17/27 F	49/08 F	177/09 F	216/10 F	359/43 F	442/29 F	538/47 F	578/21 F
		17/53 F	49/57 F	177/52 F	216/29 F	387/35 F	443/10 F	548/17 F	578/33 F
		17/55 F	52/32 F	179/10 F	216/42 F	418/48 F	445/34 F	548/34 F	580/37 F
		17/57 F	91/28 F	188/42 F	309/05 F	419/19 F	468/30 F	567/29 F	580/56 F
		22/11 F	92/01 F	189/04 F	309/13 F	419/29 F	472/10 F	568/27 F	582/03 F
		22/42 F	97/12 F	189/09 F	309/37 F	419/57 F	479/02 F	569/13 F	583/09 F
		23/04 F	105/26 F	189/37 F	310/32 F	421/20 F	481/11 F	572/16 F	585/29 F
		23/22 F	106/38 F	192/44 F	311/02 F	423/20 F	486/34 F	572/24 F	595/55 F
		23/40 F	107/44 F	193/45 F	318/31 F	424/23 F	487/04 F	573/03 F	
		23/55 F	110/33 F	196/31 F	318/46 F	424/28 F	488/21 F	573/32 F	
		28/04 F	111/36 F	199/46 F	319/09 F	424/48 F	490/19 F	574/47 F	
		41/44 F	118/32 F	200/57 F	345/35 F	425/49 F	493/33 F	575/08 F	
		48/04 F	166/33 F	207/33 F	346/08 F	426/52 F	507/37 F	576/31 F	
CRLF	3177	51/38 L	432/39 S	524/42					
CT	3151	51/22 L	95/53	96/18	157/31	159/15	284/35	539/53 S	
		95/47	96/06 S	157/25	158/16	283/26 S	298/32	539/54 S	
CTM	10575	192/06	195/35 L						
CTMAP	10605	195/23	195/56 L						
CTMAS	10606	195/20	195/57 L						
CTMA76	10604	195/25	195/55 L						
CTM1	10567	195/20 L	195/40	195/43	195/53				
CTM2	10572	195/22	195/24	195/26 L					
DATE	3212	51/47 L	472/33	473/02	474/03				
DBUF	34735	597/19 L							
DBUFL	0	30/08 D	597/19	597/22					
DEBUG	0	7/45 D	45/34 F	49/21 F	192/33 F	216/25 F			
		30/08	47/15 F	79/06 F	208/27 F	216/50 F			
DERR	3323	53/39 L	326/54 S	395/47	512/15 S				
DFL	5335	102/37 L	102/47	102/54	103/03	188/14			
DFL1	5346	102/51	102/55 L						
DI	3162	51/26 L	430/23 S	431/29 S	433/29	492/33	523/42 S	535/11	535/31
DIM	5351	103/12 L	236/37	314/40	394/09	575/01			
		103/33	247/44	331/07	394/39				
DIM1	5355	103/19 L	103/26						
DIM2	5357	103/23	103/26 L						
DMF	11630	33/22	222/22 L	222/31					
DPBA	3230	52/02 L	52/10	441/06 S	474/14 S				
DUPTAB	26	67/32 D	72/05	301/19	301/31	307/43	441/47	445/03	

E	231	41/42 S	48/09 D	118/45	167/56	177/56	189/50	216/11	538/41
		42/20	115/36 S	118/47	168/19	178/05	190/03	216/14	
		42/39 S	115/37	167/33	168/34	178/10	190/05	318/03	
		42/44 S	115/46 S	167/39	177/55	189/49	215/51	318/51	
	EBUF 30731	597/16 L							
	EBUFL 1001	23/19	30/09 D	597/16					
	ECHFLG 3315	53/28 L	301/41 S	304/16 S	307/14 S	400/02	547/57		
	ECHTAB 30	67/51 D	303/45						
	EDITFG 3267	52/28 L	435/25	447/42 S	489/13 S	490/33			
	EERR 3324	53/40 L	301/52 S	304/43 S	389/50 S	470/56 S	471/06 S		
	EFLG 3345	54/09 L	238/08 S	260/53 S	304/41 S	362/18	392/18 S	440/39 S	515/25 S
		94/23 S	238/54 S	263/42 S	306/43 S	364/43 S	393/09 S	454/30 S	517/53 S
		95/31 S	242/54 S	267/08 S	309/02 S	365/43 S	394/07 S	464/06 S	522/07 S
		119/52 S	243/34 S	269/17	310/10 S	365/56	395/04 S	465/11 S	534/49 S
		120/41 S	244/38 S	269/43	321/32 S	366/40 S	395/14 S	466/43 S	537/19 S
		121/10 S	245/23 S	273/31 S	322/04	366/50 S	399/28 S	470/02 S	537/55 S
		124/12 S	246/10 S	274/28 S	322/31 S	369/16 S	402/40 S	470/23 S	542/23
		132/35 S	246/46 S	276/03 S	324/16 S	369/19	407/12 S	470/28 S	546/18 S
		133/12 S	247/26 S	279/08 S	326/17 S	370/40 S	411/33 S	470/57 S	547/10
		134/10 S	251/37 S	279/35 S	326/53 S	374/48 S	412/53 S	471/04 S	549/55 S
		136/01 S	251/45 S	279/42 S	327/01 S	376/24	413/17 S	499/38 S	550/11 S
		136/06 S	252/15 S	288/12 S	328/06 S	379/26 S	417/27 S	508/37	555/28 S
		138/33 S	254/11 S	289/17 S	334/47 S	379/44	419/25 S	510/19 S	556/33 S
		158/44 S	254/43 S	290/47 S	334/51 S	380/55 S	427/13 S	511/40 S	558/32 S
		160/34 S	255/29 S	290/51	338/53 S	381/01	432/40 S	512/16 S	558/38 S
		167/04	255/45 S	291/51 S	352/42 S	385/30 S	432/53	512/30 S	563/01 S
		170/20	255/52 S	293/51 S	356/50 S	389/17 S	434/15 S	513/49 S	565/12 S
		170/52 S	257/55 S	301/50 S	361/36 S	389/49 S	438/56 S	515/14 S	566/25 S
EI 3160		51/25 L	492/30	529/11	531/18	577/25			
		431/25 S	523/36 S	529/33	576/43				
ELEXT 6277		129/39 L	132/05	132/26	530/07	531/05			
		131/06	132/17	322/20	531/03 S				
ELFN 11573		35/36	41/40	221/36 L	222/28	222/30			
ELOP 6274		129/36 L	130/36 S	130/57	136/14 S				
ELREG 6300		129/40 L	240/25	241/37	250/14	517/24 S	557/53 S		
		130/48	241/09	242/04	455/45	517/31 S	558/03 S		
ELREL 6276		129/38 L	132/04	132/25	410/28	530/09	555/39 S		
		130/39 S	132/16	322/24	515/50 S	530/19	563/18 S		
ELVAL 6275		129/37 L	322/19	411/23	515/08 S	516/48	522/20 S	557/54 S	
		131/15	351/45 S	412/43 S	515/49 S	517/26 S	530/03	558/15	
		132/07	351/46	412/45	516/01 S	517/35	554/35 S	563/08 S	
		132/15	351/53	512/53 S	516/19	521/49	555/38 S	563/25	
		133/36	410/36	514/02 S	516/27	522/11 S	557/20		
ENDA 26436		43/31	111/55	596/43 L					
ENDB 26436		596/44 L	597/26						
ENDP 3266		52/27 L	308/32 S	309/48	579/32				
ENDSEQ 30027		306/57	308/23	597/09 L					
ENDTAB 36		69/33 D							
ENDZ 15434		201/38	234/54 D						
ENS1 5420		105/05	105/10 L						
ENS2 5421		105/06	105/09	105/13 L					
ENTOP 5374		104/10 L	196/13	290/54	308/19	374/44	469/19	481/31	
		104/26	204/18	291/44	369/37	381/20	480/38		
ENTOPT 5403		103/44 S	103/49	104/28 L					
ENTOP1 5364		103/44 L	104/23						
ENTSYMT 5407		104/43 L	372/44	511/46	556/43	562/47			
ENTSYMTT 5436		105/21 S	105/40	106/02 L					

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FVAL
G

11575
10662

43/51
196/38 S
196/39

220/54
196/46
196/47

221/38 L
196/54
197/03

197/09
197/16

199/47 D

GAC

577

33/49

34/14

36/54

38/57

39/09

39/16

40/33

GACA

11613

33/55

36/37

38/44 L

39/03

39/10

40/08

GACB

11614

39/04

221/45 L

GACC

11615

39/23 S

39/56

40/05

221/46 L

GACD

11616

39/17

39/26

39/37 S

221/47 L

GACE

11617

39/47

221/48 L

GACF

11622

40/04

221/49 L

GAC1

600

39/38

221/50 L

38/45 L

39/11

39/13

39/21

39/22

40/02

GAC2

604

38/53

38/55 L

GAC3

612

38/50

39/12 L

GAC4

613

38/51

39/15 L

GAC5

614

38/45

39/17 L

GAC6

625

39/32

39/34 L

GAC7

627

39/20

39/35 L

GAC8

632

39/42 L

39/44

GAC9

640

39/33

40/04 L

GAV

644

34/33

35/18

35/49

36/08

38/04

40/45

GAV1

646

34/38

35/44

36/04

37/27

40/30 L

40/47

GAV2

651

40/33 L

40/38

40/34

40/39 L

GBUF

13432

199/44

199/44

199/44

199/44

234/53 L

234/54

GBUFL

2002

30/10 D

199/44

234/54

GET

10662

199/44 L

199/47

GETCH

5444

106/22 L

151/09

242/01

336/56

351/13

391/20

462/22

517/33

121/04

151/28

242/27

337/49

351/19

402/26

462/29

556/17

121/22

151/48

250/05

338/47

351/43

411/22

462/35

556/26

135/10

154/35

250/10

338/55

352/29

412/44

514/41

556/52

136/15

157/51

250/37

338/57

356/32

454/57

514/50

557/01

136/19

158/06

294/02

347/12

359/20

455/05

515/31

557/49

136/24

158/07

295/06

348/09

371/21

455/27

515/55

557/55

138/11

240/18

298/52

348/37

371/30

455/40

516/34

558/04

138/52

240/32

332/28

349/40

372/52

455/50

516/40

558/05

141/07

240/45

334/07

350/08

385/19

456/01

517/21

144/39

241/06

334/16

350/27

391/15

458/05

517/27

151/05

241/34

334/39

350/50

391/18

458/08

517/32

GNC1

5442

106/15 L

106/28

GNC2

5443

106/18 L

106/29

HAFEXIT

1

3/33 D

117/41 F

118/04 F

128/25 F

128/43 F

HASH

5441

104/12

104/44

106/04 L

125/47

126/28

HTYPE

3253

52/16 L

359/41 S

471/30 S

575/52

I

211

41/47

48/06 D

193/16

222/25

222/29

42/17 S

192/45

220/56

222/27

448/39

IBUF

1776

22/39

22/39

22/39

22/39

32/48 D

32/50

IBUFL

1001

17/34 D

22/39

30/11 D

32/48

IDNAM

3120

50/48 L

236/35 S

247/43

315/07

538/51

236/22 S

247/34 S

314/36

399/30

65/29 D

286/17

492/45

492/46

IDTAB

17

51/13 L

238/05

248/19 S

248/23 S

428/14 S

466/33

237/45 S

248/17 S

248/21 S

248/26

428/47 S

540/07 S

IFDF

3200

51/39 L

336/09 S

336/22

337/09 S

515/11

562/52

335/26 S

336/19 S

336/2

1412THE

14121HE

LOV	716	33/19	43/16 L	43/25					
LOVA	727	43/23	43/30 L	45/20 S	45/31				
LOVB	732	43/26	43/39 L						
LOV1	717	43/19 L	43/21						
LPGM	3265	52/26 L	331/38	537/13	549/29 S	565/20	572/53	593/06	
		275/49	534/32	543/22	564/22	571/40	588/06	593/23	
LPRFX	17	52/10 D	441/44	576/32	576/35				
LR	3372	54/39 L	312/17	336/49	342/02	344/33	533/56	546/57	
LRMTAB	23	67/05 D	389/21						
LS	3374	54/40 L	547/54						
LST	10723	193/06	201/31 L	206/28					
LSTA	11151	201/37 S	206/23	207/18 L					
LSTF	11161	206/39	207/21 L						
LSTM	11165	207/11 S	207/13	207/22 L					
LSTN	11152	206/32	207/19 L						
LSTS	11155	206/34	207/20 L						
LSTT	11171	206/37	207/23 L						
LSTTHOU	3055	49/53 L	89/40	102/48 S	116/50 S	178/53			
LST1	10733	201/45	201/49 L	204/36					
LST1A	10736	201/52	201/55 L						
LST1B	10737	201/54	201/56 L						
LST2	10762	202/44 L	202/56						
LST2A	10763	202/43	202/48 L	203/04					
LST2B	10765	202/55 L	203/02						
LST2C	10770	202/48	203/05 L						
LST3	11001	203/20	203/25 L						
LST4	11011	203/38	203/43 L						
LST5	11015	203/52 L	204/27						
LST5A	11030	204/15	204/21 L						
LST5B	11031	204/20	204/22 L						
LST5C	11025	204/06	204/11	204/15 L					
LST6	11034	203/51	204/29 L	207/16					
LST6A	11040	201/47	204/38 L						
LST6B	11047	204/41	204/43	204/54 L					
LST6C	11055	204/55	204/57	205/11 L					
LST6D	11062	205/13	205/24 L						
LST6E	11101	206/04 L	206/11						
LST6F	11106	204/39	205/28	205/30	206/14	206/19 L			
LST7	11113	201/56	206/32 L						
LST7A	11116	89/51	197/22	206/34 L					
LST8	11126	202/05	202/10	202/15	202/20	202/25			
		202/09	202/14	202/19	202/24	206/39 L			
LST9	11130	206/33	206/36	206/40 L					
LST9A	11134	206/45	206/49 L						
LST9B	11136	206/47	206/54 L						
LST9C	11140	206/48	206/53	207/01 L					
LST9D	11142	207/05 L	207/07						
LST9E	11144	206/57	207/11 L						
LSYSMAC	3040	49/40 L	204/02	204/33 S	205/46 S	307/26			
LT	3376	54/41 L	180/24						

LWORD	3123	50/51 L	256/27	282/57 S	293/38	298/55	411/45	428/17	540/31
		127/09	256/40	286/50	293/45	349/11	412/04	428/30	551/50
		246/12	269/12	286/54	294/18	356/25	413/50	430/30	557/06
		246/26	271/50 S	287/19	294/24	378/01 S	415/07	431/55	558/55
		246/29	273/20	287/25	294/31	379/21	416/10 S	471/38 S	559/16
		253/04	274/04	287/56	297/09	390/57	416/42	515/40	560/23
		254/17	275/02	288/14	297/31	392/41	417/06 S	518/07	561/02
		254/24	275/25	289/19	297/50	403/25	417/29	519/05	588/41
		256/15	277/49	289/31	298/14	406/29	417/41	519/28	
		256/22	278/22	293/33	298/18	409/55	428/15	521/15	
LX	3400	54/42 L	124/28	292/33	547/01	547/55			
L.CMPTAB	3446	72/15 L	115/31	116/11					
L.COMTAB	3463	72/15 D	91/13	582/19 S	582/47	583/25	587/33 S	592/25	
L.DUPTAB	3467	72/15 L	301/32	307/56	444/41	445/38	477/11 S		
		300/20	307/21 S	442/57 S	445/36	446/20 S	478/19 S		
L.ECHTAB	3471	72/15 L	302/44	477/14 S	477/53 S				
L.ENDTAB	3477	72/15 L							
L.EPTAB	3454	72/15 L	321/35	431/19	580/47	582/09			
L.ERRTAB	3474	72/15 D	315/26	316/02	317/19	317/48			
L.EXTAB	3456	72/15 L	326/25	434/54	532/05	585/09			
		91/15	434/47	531/32	533/17	592/28			
L.IDTAB	3460	72/15 L	441/21	492/26					
L.INTER	3441	72/15 L	92/08	115/57 S	310/13 S	312/23	312/25	507/32 S	549/06
L.LASTAB	3466	72/15 L	307/24 S	424/13	477/13 S	478/29 S			
L.LITAB	3453	72/15 L	430/16	431/20	520/29	521/14			
L.LNKTAB	3465	72/15 D	91/14	582/18 S	585/08	585/45	587/34 S	592/27	
L.LRMTAB	3464	72/15 L	328/08	328/41					
L.MACDEF	3443	72/15 L	205/27	307/31 S	468/24	478/05			
		204/29	205/31	467/31	469/13 S	480/04			
L.MARDIS	3472	72/15 L	303/32	304/44	449/21	451/57	476/29	478/01 S	
		302/43	304/27 S	307/22 S	449/26	454/13	477/09 S	505/11	
L.MARGS	3473	72/15 L	304/28 S	307/23 S	453/13	458/19	477/10 S		
		302/42	304/51	451/56	456/35	476/28	478/02 S		
L.MEMORY	3476	72/15 L	183/20 S	187/40	203/26	207/15 S	480/02 S	480/47 S	
		93/06	186/33	202/28 S	203/44	311/38 S	480/16	564/49	
		102/40	187/05	203/08	204/22	479/41	480/40	573/20	
L.MICTAB	3474	72/15 L	307/30 S	440/05	440/29 S	443/04	501/42		
L.OPTAB	3442	72/15 L	205/11	205/14	205/50	307/38 S	307/42	307/52 S	443/18
L.QVTAB	3451	72/15 L	125/06	125/26	311/34 S	312/23			
L.RASTAB	3465	72/15 L	307/20 S	327/54	329/09	329/16	477/12 S	478/24 S	
L.REFTAB	3475	72/15 L	91/24	91/46 S	177/05 S	179/05 S	179/54	525/06 S	
L.RELTAB	3467	72/15 D							
L.RMTAB	3463	72/15 L	307/19 S	329/12	329/17				
L.RVTAB	3455	72/15 L							
L.SEGTAB	3457	72/15 L	330/37	491/21	526/54	542/32			
		308/46	441/16	491/40	532/56	549/30			
L.SLITS	3452	72/15 L	430/17	431/21	433/24	516/07			
L.SSYMS	3444	72/15 L	202/33	203/07 S	204/54	205/01	307/34 S	398/40	398/50 S
L.STACK	3462	72/15 L	306/34	400/05	446/41	475/55	477/28	508/53	
		304/06	307/12 S	432/35	447/31	477/08 S	505/05		
L.SYMTAB	3447	72/15 L	180/19	181/25 S	183/17	371/50	472/11	553/06	
		179/39	180/51	182/27	319/01 S	441/46	492/56		
L.SYSMIC	3445	72/15 L	204/40	204/44	307/36 S	472/51			
L.TEMTAB	3470	72/15 L	301/20	301/51 S	303/46	304/30 S	444/18 S	446/21 S	
		301/18	301/29 S	303/44	303/54 S	304/40 S	445/41		
L.TLDS	3461	72/15 L	108/04	347/01	348/22	352/17	578/22	578/28	579/25 S

L.USETAB	3450	72/15	L	283/08	S	378/09	430/15	432/05	519/01	540/13	560/01
		271/57		319/03	S	402/52	431/18	494/07	527/01	551/49	580/31
MACDEF	2	59/52	D								
MACFLG	3314	53/27	L	307/13	S	457/29	S	547/56			
MACHFLG	3312	53/22	L	243/36	S	249/54		449/04	S		
MACHINE	3114	50/39	L	282/56	S	342/39		393/24	466/37	525/56	554/43
		127/35		288/23		342/52		404/54	511/20	536/42	559/02
		149/02		293/41		343/03		413/47	513/04	536/57	560/22
		237/37		294/43		343/16		414/36	516/35	537/20	564/21
		271/49	S	299/05		377/57	S	416/32	516/41	542/50	566/50
		277/47		321/19		393/04		428/35	519/27	550/27	571/37
MARDIS	31	68/23	D	303/07		452/32		453/17	453/39	456/39	458/25
MARGS	32	68/33	D	452/15		453/12		456/41	458/23	462/46	
MAXCORE	3043	49/43	L	93/25		93/45		312/18	472/01	S	
MAXFL	3056	49/54	L	116/43		218/14		218/15	218/22		
MBASE	3134	51/10	L	94/31	S	94/50	S	136/41	410/17	412/23	471/40
MEMORY	35	69/24	D	88/11		186/20		186/30	564/51		540/39
MFL	200000	8/26	D	107/20							
MFL=	35346	3/42	E	597/33	D						
MICFLG	3311	53/21	L	391/07	S	436/37	S	546/47	547/38		
		391/04	S	436/04	S	437/15	S	547/32			
MICMARK	64	8/38	D	435/53		435/55		437/55	439/41		
MICTAB	33	68/56	D	69/53		440/31		472/45	472/52		
MIDFL	60000	8/44	D	49/55							
MIDFLN	3057	49/55	L	90/50		102/49		218/24	218/31	S	218/38
MIN.FL	35346	20/10		45/50		45/55		46/03	46/21		49/43
U	MODL76	31/14	F	312/47	F						597/22
											D
											597/33
MODSH	22	195/18	D	195/29		195/31					
MOVE	5515	90/30		109/43		286/23		308/25	440/36	462/54	521/13
		90/39		110/09		301/24		328/39	445/20	468/02	535/28
		108/42		116/17		303/50		328/56	451/54	472/57	536/24
		108/51		203/23		307/01		329/23	456/46	480/14	549/12
		109/07	L	203/41		307/47		440/25	458/47	510/02	589/19
MOVED1	5521	109/13		109/18	L						
MOVEI	5503	108/32	L	109/12							
MOVEI	5512	108/54	L	109/05							
MOVER	5506	108/36		108/42	L	109/21					
MSG=	302	27/47	D	32/03		39/34		92/53	118/13	206/32	207/13
		31/51		36/21		40/04		92/54	128/44	206/34	214/45
		31/52		38/18		43/26		103/32	182/17	206/37	219/53
		32/02		38/23		46/17		111/50	193/23	206/39	222/33
MSTACK	62	8/51	D	73/29		73/48		74/05	74/05	74/05	
		73/20		73/39		73/57		74/05	74/05	430/55	
MTD	5523	89/57		109/29	L	116/04		196/40	420/02		
		102/38		109/45		178/44		200/25	479/12		
MTD1	5526	109/34	L	109/44							
MTD2	5532	109/42		109/44	L						
MTU	5533	88/22		109/53	L	110/11					
MTU1	5536	110/02	L	110/10							
MTYPE	3115	50/40	L	243/25		283/15	S	342/51	343/15	359/11	S
MVL	5542	110/31	L							359/45	378/14
M.	6	225/30	D								
NBASE	3133	51/09	L	136/40		349/06		410/27	S	471/39	S
		94/30	S	136/49	S	349/16	S	412/25	492/43	552/44	S
		94/49	S	145/47		410/19		412/33	S	533/44	S
NBLOCKS	3167	51/30	L	494/54		495/25		540/32	579/28	580/38	

NCARDS	12	8/57 D	155/13	438/02	459/17	504/21	540/54	597/09	
		75/48	306/55	439/08	474/33	504/44	597/07	597/12	
		76/07	308/22	459/16	490/29	535/01	597/08		
NCHARS	3127	51/05 L	159/24	271/46 S	283/03 S	298/31	363/13 S	378/06 S	471/37 S
NEJF	3072	50/17 L	219/55	221/03	292/43	305/35	401/18		
NERR	3332	53/46 L	322/28 S						
NFERS	13	53/47 D	171/04	171/06					
NFNAME	4	43/56	221/55 D						
NFOUP	3136	51/12 L	249/25	407/05 S	410/03	519/23 S	558/57 S		
		243/07	249/44 S	407/53	412/01	519/55	560/51 S		
		243/21 S	406/17	408/41 S	518/09 S	540/02 S	560/53		
NLISTOPS	16	54/44 D	73/39	123/50					
NLITS	144	9/06 D	294/16	298/12	515/38	597/10			
		293/36	297/30	356/20	557/04				
NOAS	3307	53/19 L	247/57	508/30	534/53	546/26			
		237/21 S	508/13 S	508/31	538/05	548/02			
NOLFG	3132	51/08 L	370/35 S	572/22	573/33	575/15	576/34		
NOM.FL	60000	9/12 D							
NOPCT	200	9/18 D	104/15	196/05	214/31	443/25	597/22		
		104/03	125/50	214/26	307/50	475/02			
NOS	1	3/14 D	3/40 F	15/02 F	34/11 F	34/19 F	39/25 F		
U NOSBE		201/06 F							
NSYMT	400	9/24 D	104/54	126/34	214/26	214/31	472/12	597/22	
NTABLES	37	69/34 D	89/14	93/23	109/30	109/54	319/02		
NUMCHR	3	195/17 D	195/18						

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73/20 D	232/27 D	232/43	233/02	233/31 D	233/47	234/06	234/21 D
73/20	232/28	232/43 D	233/02	233/32	233/47 D	234/06	234/22
73/20 D	232/28	232/44	233/02 D	233/32	233/48	234/06 D	234/22
73/20	232/28 D	232/44	233/03	233/32 D	233/48	234/07	234/22 D
73/29 D	232/29	232/44 D	233/03	233/33	233/48 D	234/07	234/23
73/29	232/29	232/45	233/03 D	233/33	233/49	234/07 D	234/23
73/29 D	232/29 D	232/45	233/04	233/33 D	233/49	234/08	234/23 D
73/29	232/30	232/45 D	233/04	233/34	233/49 D	234/08	234/24
73/39 D	232/30	232/46	233/04 D	233/34	233/50	234/08 D	234/24
73/39	232/30 D	232/46	233/12	233/34 D	233/50	234/09	234/24 D
73/39 D	232/31	232/46 D	233/12	233/35	233/50 D	234/09	234/25
73/39	232/31	232/47	233/12 D	233/35	233/51	234/09 D	234/25
73/48 D	232/31 D	232/47	233/13	233/35 D	233/51	234/10	234/25 D
73/48	232/32	232/47 D	233/13	233/36	233/51 D	234/10	234/33
73/48 D	232/32	232/48	233/13 D	233/36	233/52	234/10 D	234/33
73/48	232/32 D	232/48	233/14	233/36 D	233/52	234/11	234/33 D
73/57 D	232/33	232/48 D	233/14	233/37	233/52 D	234/11	234/34
73/57	232/33	232/49	233/14 D	233/37	233/53	234/11 D	234/34
73/57 D	232/33 D	232/49	233/22	233/37 D	233/53	234/12	234/34 D
73/57	232/34	232/49 D	233/22	233/38	233/53 D	234/12	234/35
232/04 D	232/34	232/50	233/22 D	233/38	233/54	234/12 D	234/35
232/12	232/34 D	232/50	233/23	233/38 D	233/54	234/13	234/35 D
232/12	232/35	232/50 D	233/23	233/39	233/54 D	234/13	234/36
232/12 D	232/35	232/51	233/23 D	233/39	233/55	234/13 D	234/36
232/13	232/35 D	232/51	233/24	233/39 D	233/55	234/14	234/36 D
232/13	232/36	232/51 D	233/24	233/40	233/55 D	234/14	234/37
232/13 D	232/36	232/52	233/24 D	233/40	233/56	234/14 D	234/37
232/14	232/36 D	232/52	233/25	233/40 D	233/56	234/15	234/37 D
232/14	232/37	232/52 D	233/25	233/41	233/56 D	234/15	234/38
232/14 D	232/37	232/53	233/25 D	233/41	233/57	234/15 D	234/38
232/15	232/37 D	232/53	233/26	233/41 D	233/57	234/16	234/38 D
232/15	232/38	232/53 D	233/26	233/42	233/57 D	234/16	234/39
232/15 D	232/38	232/54	233/26 D	233/42	234/01	234/16 D	234/39
232/16	232/38 D	232/54	233/27	233/42 D	234/01	234/17	234/39 D
232/16	232/39	232/54 D	233/27	233/43	234/01 D	234/17	234/40
232/16 D	232/39	232/55	233/27 D	233/43	234/02	234/17 D	234/40
232/24	232/39 D	232/55	233/28	233/43 D	234/02	234/18	234/40 D
232/24	232/40	232/55 D	233/28	233/44	234/02 D	234/18	234/41
232/24 D	232/40	232/56	233/28 D	233/44	234/03	234/18 D	234/41
232/25	232/40 D	232/56	233/29	233/44 D	234/03	234/19	234/41 D
232/25	232/41	232/56 D	233/29	233/45	234/03 D	234/19	483/08
232/25 D	232/41	232/57	233/29 D	233/45	234/04	234/19 D	
232/26	232/41 D	232/57	233/30	233/45 D	234/04	234/20	
232/26	232/42	232/57 D	233/30	233/46	234/04 D	234/20	
232/26 D	232/42	233/01	233/30 D	233/46	234/05	234/20 D	
232/27	232/42 D	233/01	233/31	233/46 D	234/05	234/21	
232/27	232/43	233/01 D	233/31	233/47	234/05 D	234/21	
42/01	48/07 D	167/29	188/43	189/28	222/24	318/53	
42/16 S	118/37	171/52	188/44	216/01	222/25	539/02	
42/33	118/39	174/03	189/14	220/57	318/32	539/12	
42/42	166/36	177/45	189/16	222/23	318/47		
23/01	23/01	23/37	23/37	32/49 L	32/51		
23/01	23/01	23/37	23/37	32/50	42/15		
23/01	23/37	32/50 D	32/52				
53/37 L	236/47 S	242/55 S	246/09 S	249/30	289/18 S	393/08 S	466/31 S
125/56 S	238/09 S	243/35 S	247/25 S	249/56	306/42 S	417/28 S	474/46 S

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OPADS 3273

52/36 L	253/28 S	260/07	263/18	265/18	279/21 S	385/47 S	456/05
240/10 S	253/45	260/27 S	263/29 S	266/26 S	279/29	386/24	456/36
241/11	254/54	261/12	263/38 S	266/41	279/52	386/26	456/40
241/40 S	255/10	261/16	264/01	267/18	280/02	386/40	456/43
242/35	256/02	261/25	264/05	267/23	280/09	386/41	497/38 S
249/10 S	257/24 S	261/29	264/14	278/21 S	280/16	455/24 S	497/56 S
249/35	257/28	262/09	264/18	278/24	280/28	455/37 S	499/16
249/41	257/35	262/13	264/27	278/27	280/35	455/43 S	
250/42	258/52	262/43	264/31	278/50 S	280/36	455/47	
251/06	259/33	263/14	265/11	279/01	385/04 S	455/54	
193/07	207/31 L	207/38					
196/10	225/29 L	234/43					
34/40	220/48 L	221/13					
220/49	221/16 L						
59/42 D							
220/50	221/17 L						
220/51	221/18 L						
220/52	221/19 L						
220/53	221/20 L						
220/54	221/21 L						
220/55	221/22 L						
35/20	220/56	221/23 L					
220/57	221/24 L						
221/01	221/25 L						
33/45 S	221/02	221/26 L					
221/03	221/27 L						
221/04	221/28 L						
221/05	221/29 L						
221/07	221/30 L						
221/31 L							
35/23	221/10	221/32 L					
53/15 L	242/49	245/10	248/08	266/17	306/49 S	451/05	508/20
125/43 S	243/01 S	246/08 S	249/04	269/04	333/30	451/13	544/10 S
126/08 S	243/18	246/14	249/49	291/19	333/36 S	451/31	
237/32	243/24	246/28	253/11	291/33	374/20	452/43	
237/53	244/08	246/35	257/06	291/47 S	449/05 S	457/10	
111/55	235/07	235/10 D	235/11				
50/34 L	276/19	375/49 S	407/56	491/22	536/33 S	565/18	593/21
127/11	308/33 S	376/30	408/36 S	514/08	537/16	588/15	596/12
270/21 S	309/52 S	376/33 S	409/01 S	518/14	542/03 S	588/49	
272/17 S	330/20	393/30	411/12	518/41	542/52	589/04 S	
273/33	330/29	405/32	431/43	518/51	551/21 S	591/26	
274/14	330/47 S	406/02	431/47 S	522/40	555/44	591/32	
275/10	330/56	406/19	431/53	526/05	559/17	591/51	
275/38	331/46 S	407/14	471/32 S	533/37 S	563/41	593/04	
2/26	3/43 D	3/54					
55/08 L	60/40	63/17	65/07	67/05	67/51	69/24	90/01
56/45	61/03	63/26	65/29	67/14	68/23	69/33	109/34
59/42	61/39	63/41	65/41	67/23	68/33	69/34	110/03
59/52	62/42	63/55	66/38	67/32	68/56	89/10	
60/19	62/57	64/15	66/47	67/42	69/14	89/15	
9/32 D	33/18 F	47/01 F	177/14 F	193/09 F	215/19 F	597/14 F	
9/33	43/14 F	49/11 F	177/29 F	201/33 F	234/52 F		
9/33 D	45/13 F	111/19 F	178/15 F	206/22 F	235/01 F		
111/21 L	111/44	177/32	193/12				
111/54 L	177/30	193/10					
52/11 L	441/41 S	577/03 S	578/01 S				

OVLM	5571	111/49 S	111/50	111/57 L					
OVLY	5573	111/22	112/02 L	215/29 S					
OV LZ	5575	111/25 S	111/34	111/42	111/45	112/11 L			
OV L1	5550	111/28	111/31 L						
OV L2	5554	111/37 L	111/39						
O.CMPTAB	3407	61/03 L	115/47	116/05	116/10				
O.COMTAB	3424	70/53 D	582/46	583/24					
O.DUPTAB	3430	67/32 L	72/05	307/55	445/37	448/25	448/28		
O.ECHTAB	3432	67/51 L	447/11	447/14					
O.ENDTAB	3440	69/33 L	178/47	197/23	200/46	214/27 S	479/16		
		117/17 S	196/42	200/26	202/06	420/04			
O.EPTAB	3415	63/41 L	321/34	529/41	577/24	581/04			
O.ERRTAB	3435	69/53 D	316/01	316/18	317/11				
O.EXTAB	3417	64/15 L	326/47	531/36	532/03	533/16	535/49	585/51	
O.IDTAB	3421	65/29 L	441/17	552/35	576/06				
O.INTER	3402	56/45 L	92/07	548/54					
O.LASTAB	3427	67/23 L	447/19	447/22					
O.LITAB	3414	63/26 L	520/35	536/36	561/57	588/36	589/13		
O.LNK TAB	3426	71/44 D	585/07	585/44					
O.LRMTAB	3425	67/05 L	328/07	328/34	328/42				
O.MACDEF	3404	59/52 L	445/16	448/20	469/02	480/11			
		205/39	448/17	451/48	478/06				
O.MARDIS	3433	68/23 L	303/31	450/03	454/12	495/50	505/15		
O.MARGS	3434	68/33 L	495/51	505/23					
O.MEMORY	3437	69/24 L	200/27	203/17	204/19	480/15	570/01	589/12	
		102/39	200/47	203/25	420/03	480/39	570/48	593/11	
		179/08 S	201/57	203/35	479/17	543/33	572/29	593/51	
		187/04	202/32	203/43	479/40	543/45	573/01	594/56	
		196/41	203/09	203/54	480/08	569/28	573/37		
O.MICTAB	3435	68/56 L	69/53	440/04	443/05	501/43			
O.OPTAB	3403	59/42 L	125/49	205/52	307/46	443/21			
		104/14	205/22	206/13	307/49	474/54			
O.QVTAB	3412	62/57 L	104/57	125/05	183/38	371/37	383/23	384/15	537/35
O.RASTAB	3426	67/14 L	71/44	329/15	447/27	447/30			
O.REFTAB	3436	69/14 L	91/26	178/46	179/56	186/01			
O.RELTAB	3430	72/05 D	408/14						
O.RMTAB	3424	66/47 L	70/53	329/20					
O.RVTAB	3416	63/55 L	130/07	133/24	135/19				
O.SEGTAB	3420	65/07 L	491/20	523/16	541/38	549/24	576/09		
		441/23	491/39	526/52	542/39	552/33			
O.SLITS	3413	63/17 L	433/34	434/37	516/06	535/13	535/33		
O.SSYMS	3405	60/19 L	202/34	205/09	398/01	398/25			
O.STACK	3423	66/38 L	304/05	400/03	446/42	447/32	476/09	477/29	505/04
O.SYMTAB	3410	61/39 L	126/33	180/20	181/23	183/18	185/46	371/49	492/57
		105/03	179/38	180/52	182/28	184/15	311/45	441/51	553/07
O.SYSMIC	3406	60/40 L	204/52	472/55					
O.TEMTAB	3431	67/42 L	301/23	303/49	443/22	444/14	445/21	445/40	
O.TLDS	3422	65/41 L	108/13	348/21	349/53	350/42	351/52	352/18	578/27
O.USETAB	3411	62/42 L	330/23	375/52	406/03	434/08	521/16	536/27	579/39
		185/16	333/12	377/12	407/45	491/43	527/15	537/08	581/23
		271/56	335/45	378/08	409/20	493/01	527/44	551/26	587/50
		273/37	357/15	402/51	431/50	494/06	530/38	551/48	
		283/07	375/36	404/24	432/04	518/57	534/27	562/24	
PAGENO	3215	51/50 L	168/29 S	168/50					
PASS	3260	52/21 L	89/35	177/40 S	471/25 S	540/41 S			
PASS0	10507	188/08	192/06 L						
PCC	3250	52/13 L	576/36 S						

PERR	3331	53/45 L	324/14									
PGCNT	3216	51/51 L	167/31	171/51	175/55	189/31	192/27 S	318/20	547/26			
POPS	13062	204/13	232/03 L									
POSCTR	3110	50/36 L	279/49 S	299/03 S	411/01	414/32	471/36 S	555/49	588/34 S			
		127/06	279/56 S	378/02 S	411/25	415/15	514/13	556/09				
		237/27	280/06 S	379/30 S	411/51	415/27	514/30	558/54				
		248/05	280/13 S	379/47 S	412/03	415/37	514/33	559/22 S				
		251/49	283/01 S	406/18	412/16	415/52	518/06	560/21				
		252/32	288/01 S	407/06 S	413/07	416/11 S	519/26	560/43				
		269/13	288/18 S	407/52	414/14	416/13	519/48	561/01				
		271/51 S	294/30 S	408/45 S	414/30	416/50	540/35 S	565/43				
PPBYT	3262	52/23 L	256/19	283/05 S	294/47	378/04 S	537/05					
		254/21	256/37	288/30	299/10	428/40						
PPJUMP	3131	51/07 L	253/57	282/52 S	377/54 S							
PPMEMSZ	3126	51/04 L	253/40	254/57	364/50 S	471/42 S						
PPTYPE	3116	31/10 S	135/41	246/13	287/02	312/38	414/37	556/05				
		50/41 L	157/33	253/05	287/28	313/26 S	416/14	564/23				
		95/35	158/13	255/01	288/26	363/05 S	417/23	569/39				
		96/08	159/27	256/33	289/13	378/15	514/26	571/44				
		101/15	175/18	271/45 S	294/46	378/49 S	539/45	575/47				
		127/36	246/04	282/35 S	298/33	413/33	550/29	593/27				
PRESET	5600	99/33	112/38	170/33	401/55	474/27	540/51					
		112/25 L	112/43	181/30	416/05	474/31	540/55					
		112/32	166/02	315/31	453/45	540/28						
PRFX	3230	52/01 L	440/56	441/44	574/57 S	575/32	576/32					
PRFXC	3240	52/09 L	286/02	286/21	441/11	575/57	576/14					
		286/01	286/15	441/10	441/25	576/01						
PRTA	10561	177/06	177/44 S	178/13 S	179/17	193/41 L	235/10					
PRTB	11563	178/42	193/44 D	312/22								
PSIM	3270	52/29 L	253/17	283/30	359/12	378/22						
PSIM2	3271	52/30 L	254/33	255/35	364/47	471/21 S						
PSIZE	3073	50/18 L	181/44	184/05	220/06 S	315/33	315/45	533/08				
PULL	5610	94/42	96/02	113/01 L	113/41	123/46	383/42	384/12	404/16			
PULL1	5607	112/55 L	113/06									
PULL2	5620	113/24	113/27 L									
PUSH	5627	94/35	95/52	114/05 L	115/18	123/19	383/19	384/06	405/37			
PUSH1	5625	113/53 L	114/25	114/37								
PUSH2	5636	114/17	114/26 L									
PUSH3	5642	114/10	114/38 L									
PUSH4	5650	115/01 L	115/09									
PUSH5	5653	114/53	115/10 L									
QUALSTK	3525	73/48 L	74/05	383/16	383/41	384/03	384/11					
U	QUAL\$	194/06 F	195/02 F									
	QVAL	50/38 L	183/15 S	334/19	372/45	384/14 S	433/22	515/20	552/43 S			
		104/45	183/30	334/22	383/15	384/16	433/44 S	516/04	556/45			
		125/19	322/33	334/43	383/20	397/41	435/05 S	537/34	574/41			
		126/29	327/03	371/15	383/44 S	398/47	492/42	540/03 S				
		177/42 S	327/28	371/36	384/02	433/17	514/55	543/10 S				
QVTAB	10	62/57 D	125/25	311/33								
R	3020	49/02 D	177/16	177/54	189/44	189/48	207/35	216/19				
		91/29	177/16	178/11	189/46	190/08	207/35	525/09				
RASTAB	24	67/14 D	71/44	328/32	329/01	329/13						
RA.CCD	70	CPUTEXT	39/31	39/34	39/40 S	40/01						
RA.CEJ	66	CPUTEXT	25/45									
RA.LDR	67	CPUTEXT	43/20	45/30 S	111/33 S	111/38	200/53 S	201/02	479/25 S	479/29		
RA.LWP	65	CPUTEXT	45/14	215/20								
RA.MTR	1	CPUTEXT	25/38	25/56	26/14	26/19	26/54					

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SCADCON	6440	133/52 L	275/06	279/27	290/23	358/13	369/11	380/34	395/52
		134/08	275/29	281/17	295/29	361/41	373/27	380/40	550/15
		134/15	278/26	281/25	296/41	362/04	375/18	386/03	550/22
		136/46	278/43	290/04	325/36	362/46	376/23	386/17	
		273/24	278/56	290/10	349/13	364/24	377/06	391/33	
		274/08	279/14	290/16	357/47	369/05	380/24	395/09	
SCADCONT	6452	133/54 S	133/57	134/17 L					
SCADCON1	6445	134/04 L	134/07						
SCADMU	6453	133/30	133/37	134/28 L	135/02				
SCADX	6466	130/18	135/11 L						
SCADX1	6465	130/19	135/10 L						
SCADX2	6473	135/22 L	135/26	135/36					
SCAD1	6317	130/17 L	132/56	133/02	133/18	133/34			
SCAD110	6417	132/48	133/03 L						
SCAD110E	6422	133/07	133/10 L						
SCAD111	6424	133/09	133/13 L						
SCAD112	6426	132/49	133/19 L						
SCAD113	6430	133/21	133/24 L						
SCAD2	6323	130/30 L	136/21	136/26					
SCAD21	6365	131/04	132/04 L						
SCAD210	6372	132/06	132/13 L						
SCAD215	6373	132/15 L	132/32						
SCAD22	6377	131/05	132/25 L						
SCAD220	6435	131/17	132/28	133/35 L					
SCAD225	6403	131/14	132/33 L						
SCAD23A	6362	131/20	131/53 L						
SCAD23B	6363	131/52	131/56 L						
SCAD23C	6364	131/55	132/02 L						
SCAD24	6405	132/03	132/12	132/24	132/37 L	133/39			
SCAD24A	6416	132/53	132/57 L						
SCAD3	6327	130/37 L	136/16						
SCAD4	6340	130/45	130/54	130/57 L					
SCAD40	6337	130/49	130/55 L						
SCAD53	6501	135/23	135/37 L						
SCAD55	6513	135/31	135/32	136/04 L					
SCAD56	6515	135/18	136/08 L						
SCAD61	6507	135/42	135/44	135/45	135/52 L				
SCAD800	6517	132/38	132/39	136/13 L					
SCAD900	6522	130/31	130/32	136/17 L					
SCAD901	6525	130/34	136/22 L						
SCANEV	6332	130/46 L	474/20 S	540/46 S					
SCD	6565	162/44 D	294/19	298/17	356/26	516/52	557/24		
		293/39	297/32	351/50	515/41	557/07			
SCE	5774	119/27 L	347/14	348/46	350/52	351/21			
		120/10	348/11	349/42	351/15				
SCEA	6000	119/30	119/32	119/34 L					
SCE1	6003	119/39 L	119/46						
SCE2	6010	119/43	119/55 L						
SCE3	6014	119/53	120/07 L						
SCITEM	6025	120/38	334/17	372/15	385/12	513/33	516/02	556/21	
		120/43 L	337/51	372/23	419/47	514/25	555/07	556/27	
		334/01	371/25	383/10	458/09	514/45	555/15		
		334/11	371/31	383/54	513/25	514/51	556/04		
SCITEM1	6016	120/23 L	120/30						
SCITEM2	6017	120/27 L	120/49						

SCLIST 6036 121/08 310/02 326/11 332/29 336/57 374/28 402/27 550/03

121/14 L 321/26 327/20 333/26 359/30 382/19 466/04
236/34 322/13 330/53 333/41 365/18 397/51 541/53SCL1 6040 121/17 L 121/23
SCL2 6031 121/04 L 121/19
SCL3 6032 121/05 L 121/18

U SCOPE1 3/48 F 14/51 F 15/01 F 34/10 F 34/18 F

U SCOPE2 7/33 F 43/18 F

SCR 3000 48/26 L 48/29

SCS 11210 192/08 213/39 L 213/42 214/04

SCSFL 11225 213/53 S 213/55 214/12 L

SCS1 11222 214/04 L 214/10

SEGTAB 16 65/07 D 492/24

SEQ 30003 164/33 308/24 448/42 474/33 508/15 533/41 S 544/57 S

165/09 436/47 474/30 489/47 S 508/16 544/33 S 597/08 L

306/56 446/53 S 474/32 490/10 S 509/14 544/48 S

122/31 L 236/17 247/54 389/27 467/01 470/35

122/50 237/23 300/31 426/17 469/29 552/46

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SETUPC 6076 122/45 122/47 L

SETUP0 6044 121/40 L 122/46

SETUP1 6046 121/44 121/46 L

SETUP3 6050 121/50 L 121/55 122/10

SETUP4 6053 122/03 L 122/07 122/17

SETUP5 6057 122/04 122/12 L

SETUP6 6061 122/11 122/12 122/18 L

SFL 11226 192/29 214/20 L 215/35

SFLA 11254 214/39 214/45 215/37 L

SFLB 11260 215/38 L

SFL0 11227 214/21 L 214/34

SFL1 11246 214/29 214/48 L

SFL2 11246 215/18 L

SFL3 11253 215/25 215/35 L

SFP 11261 192/28 215/46 L 217/01

SFP1 11271 215/57 216/05 216/08 L

SFP2 11275 215/56 216/07 216/13 216/18 L

SFP3 11277 216/20 216/22 L

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SFV1 741 44/01 L 44/05

SFV2 746 43/55 44/04 44/10 L

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11/06 D 11/06 11/06 D 11/06 11/06 D 104/56

SHORTEJ 3065 50/12 L 168/05

SI 3164 51/27 L 330/38 526/53 532/57 541/37 552/32

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SIZES 3441 72/14 L 89/11 90/02 109/35 592/29

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SLF2 11323 217/36 L 217/40

SLF3 11327 217/38 217/45 L

SLF4 11330 217/35 217/49 L 217/53

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SL0	6101	123/03	L	123/05	123/44	123/57	355/43	355/55	
SL01	6113	123/24	L	123/42					
SL02	6115	123/28		123/31	L				
SL03	6116	123/33	L	123/37					
SL04	6121	123/40	L	123/43	124/09	124/14			
SL05	6123	123/08		123/45	L				
SL06	6126	123/52	L	123/56					
SL07	6130	123/36		124/01	L				
SL08	6134	124/03		124/10	L				
SLU1	6206	126/40	L	126/50					
SLU2	6211	126/48		126/50	L				
SLU3	6177	126/23	L	126/46	126/56				
SMC	6530	136/39	L	297/13	302/07	366/33	379/42	396/52	550/55
		136/50		297/56	302/35	367/46	385/33	397/01	
		285/06		300/04	341/31	367/49	385/53	550/34	
		295/35		300/16	366/27	379/18	386/10	550/40	
SMCA	6536	136/43	S	136/47	136/52	L			
SMP	11332	192/07		218/13	L	218/32	218/36	218/39	
SMP1	11346	218/27		218/34	L				
SNT	6137	124/26	L	124/30	124/50	236/19	292/39	400/52	401/14 401/48
SNT1	6145	124/39	L	124/43	124/49				
SPF	11350	192/31		218/47	L	220/07			
SPFA	11415	37/38		37/41	219/15	219/16	220/09	L	
SPFB	11417	219/05		219/37	219/42	220/10	L		
SPF1	11362	219/10		219/12	L				
SPF10	11413	220/03		220/05	L				
SPF2	11363	218/51		219/15	L				
SPF3	11370	219/21		219/23	L				
SPF4	11372	219/26		219/28	L				
SPF5	11374	219/32		219/34	L				
SPF6	11401	219/41		219/44	L				
SPF7	11405	219/48		219/52	L				
SPF8	11407	219/50		219/54	L				
SPF9	11411	219/56		220/02	L				
SPY	0	9/50	D	32/07	F	33/15	F	44/18	F 221/08
SQIMAGE	30617	437/29	S	458/46	500/05	S	507/51	597/12	L
		437/52		459/14	501/25		510/01		
SQLGN	3263	52/24	L	327/51	S	447/45	S	460/51	S 499/51 509/29
		301/05	S	391/08	S	458/40	461/38	S	501/26 S 509/49
		306/53	S	436/36	S	458/43	486/44	S	507/48
SQV	6151	125/04	L	322/09	327/16	371/29	383/14	514/49	556/25
		125/24		326/07	334/15	372/22	384/01	535/04	575/03
SQV1	6155	125/12	L	125/17					
SQV2	6157	125/08		125/18	L	125/28			
SQV3	6162	125/13		125/25	L				
SSTCNT	3175	51/36	L	307/37	S	311/31	311/43	398/21	398/55 S
SSYMS	3	60/19	D	202/29	311/41	397/37			
STACK	21	66/38	D	476/01					
STACKPTR	3550	74/04	L	101/38					
STCA	7312	162/45	D	272/05	281/30	281/56	S	298/41	478/45 500/02
STCNT	3170	51/31	L	313/27	508/03				
STF	4712	168/44							
STOP	310	18/14		31/04	L				
STPA	346	31/22	S	32/02	32/30	L			
STPB	352	31/23	S	31/51	32/31	L			
STPC	356	31/40	S	31/46	S	31/52	32/03	32/33	L
STPD	362	31/31		32/38	L				

STP0	325	31/25	31/44 L								
STP1	340	31/49	31/50	32/02 L							
STP2	344	31/56	32/05 L								
STP3	344	32/28 L									
STYPE	26436	122/48	300/32	309/33	436/07	438/01 S	460/41	488/16	545/27 S		
		237/24	306/33	327/47 S	436/12 S	447/46	461/17	499/54	597/06 L		
		247/55	306/54 S	389/28	437/21	459/17	467/02	504/41 S			
SYMCNT	3171	51/32 L	104/39	313/34							
SYMTAB	6	61/39 D	105/27	472/14							
SYNAME	3121	50/49 L	310/48	399/32 S	399/45 S	440/50	511/21				
SYSFLG	3313	53/26 L	53/31	307/17 S	457/31 S	476/19	477/38 S	547/54			
SYSMIC	4	60/40 D	203/16								
SYS=	253	27/44 D	36/22	45/31	102/01	117/10	192/09	214/46	472/33		
		31/57	38/24	45/52	107/32	118/15	194/47	218/14	472/34		
		32/28	39/26	46/18	111/34	128/46	200/55	222/34	472/35		
		33/39	43/27	93/01	111/52	191/27	206/38	236/06	479/26		
T	3030	49/09 L	178/22	179/14	179/15						
TARGET	3251	52/14 L	359/27 S	471/29 S	575/19						
TBUF	10562	49/09	49/09	49/09	49/09	179/19	193/43 L	193/44			
TECOE	6272	129/33 L	131/16	132/02 S	132/10 S	132/14 S	132/41	133/35			
TEEXT	6273	129/34 L	131/07	132/11 S	132/23 S	132/30	132/43				
TEMTAB	27	67/42 D	300/54	301/17	303/21	303/43	443/19				
TEOP	6267	129/30 L	130/26 S	132/40	132/50	133/05	136/18 S	136/23 S			
TEREL	6271	129/32 L	131/09	132/29							
TEVAL	6270	129/31 L	130/22 S	132/20 S	133/29						
TFL	762	33/13	45/48 L								
TFLA	1005	46/04	46/16 S	46/17	46/20 L						
TFLBB	1011	45/52	45/53	46/21 L							
TFL1	776	46/10 L	46/15								
TFL2	750	45/11 L	45/51	46/02							
TFL3	756	45/16	45/29 L								
TIME	3213	51/48 L	472/34	473/12	474/04						
TITBUF	3201	51/43 L	167/54	168/50	236/18	400/51	401/47	474/25	474/26		
TITBUFL	6	51/44 D	51/45	124/33	474/26						
TITFG	3140	51/14 L	400/45	401/05	401/51 S	540/01 S					
TLDS	20	65/41 D	108/18	347/38	348/15	349/19	350/56	351/18	351/24		
TLINE	3077	50/23 L	195/32 S	314/01							
TLUOP	6166	125/45 L	203/53	242/48	333/33	461/51	474/50				
		126/09	237/31	291/27	374/32	466/29	481/28				
TLUOPSHF	7	11/05 D	11/05	11/05 D	11/05	11/05 D	104/16				
		11/05	11/05 D	11/05	11/05 D	11/05	125/52				
		11/05 D	11/05	11/05 D	11/05	11/05 D					
TLUOP1	6173	125/57 L	126/07								
TLUOP2	6165	125/41 L	126/05								
TLUSYMT	6200	126/27 L	327/23	357/10	433/51	535/45	561/13	581/10			
		126/53	334/04	372/18	511/43	553/53	562/44				
		326/20	334/21	372/28	521/54	556/37	577/33				
TXARG	454	35/21	35/23 L								
TXTFL	20000	9/56 D	200/29								
TXTFLG	3310	53/20 L	247/56	301/42 S	303/53 S	306/39	329/33 S	466/54 S	470/50 S		
		238/41 S	300/27 S	301/53 S	304/31 S	307/15 S	389/10 S	468/22 S	471/05 S		
		238/44 S	301/30 S	303/12 S	304/38 S	327/49 S	389/43 S	470/32 S	477/15 S		
UERR	3327	53/43 L	275/30	322/30 S	341/26	357/49	395/19	456/54 S	530/02 S		
		236/51 S	297/17	334/52 S	341/40	366/35	395/29 S	515/13 S	542/27 S		
		274/10	298/01	336/33	344/17	391/36 S	427/09 S	522/06 S	562/57 S		

UI	3153	51/23 L	308/27	357/16	403/53	409/21	434/26	521/17	551/27
		130/03	309/49	375/20	404/19	430/20 S	491/26	521/26	560/02
		130/04	330/14	375/37	404/25	430/26 S	492/29	523/24 S	562/25
		135/11	330/22	375/54	405/35	431/24 S	493/02	530/39	579/40
		135/12	330/24	377/08	406/05	431/31 S	494/08	534/28	581/24
		185/17	333/13	377/13	406/07	431/45	518/43	536/28	587/51
		273/38	335/46	402/53	406/41	431/51	518/44	537/09	
		273/41	356/41	403/11	407/46	432/06	519/02	540/36 S	
UPPOS	6214	127/05 L	245/07	252/17	258/08	261/52	263/44	265/10	
		127/10	245/19	252/25	260/55	262/08	263/57	266/31	
		243/23	246/27	254/18	261/11	262/21	264/13	267/17	
		244/07	246/32	256/16	261/24	262/57	264/26	267/34	
		244/34	251/47	256/28	261/37	263/13	264/53	428/18	
UPPOS1	6217	127/10 L	127/20						
UESTK	3537	73/57 L	74/05	404/15	405/33	430/54			
UETAB	7	62/42 D	319/02	403/18	430/28				
U.	4	73/20 D	73/20	73/29 D	73/39	73/48 D	73/48	73/57 D	
		73/20	73/29 D	73/29	73/39 D	73/48	73/57 D	73/57	
		73/20 D	73/29	73/39 D	73/39	73/48 D	73/57		
VALID	3252	52/15 L	283/18 S	359/10 S	359/25	378/21 S	471/23 S	575/20	
VALUES	30053	293/35	294/21	299/02 S	356/34	424/21	515/36	557/09	
		293/46	297/29	299/11	420/20	425/07 S	515/43	597/10 L	
		294/14	298/11	356/22	424/12 S	426/15	557/03		
VERR	3330	53/44 L	411/32 S						
VFL1	6230	127/40	127/41	127/43 L					
VFL2	6232	127/47 L	127/50						
VFL3	6234	127/46	127/53 L						
VFL4	6235	127/55 L	127/57						
VFYLINK	6223	127/34 L	127/54	128/04	321/28	330/54	394/30	549/51	
		127/53	128/02	310/05	326/13	394/04	434/52	550/07	
VWORD	3124	50/56 L	283/21	286/51	409/56	416/06	539/48		
		282/53 S	283/44	287/20	411/46	471/22 S			
WD45ERR	3344	54/03 L	254/44 S	255/46 S					
WECNT	3150	51/21 L	171/08	314/41					
WLC	6245	99/15	128/41	205/10	205/40	220/28			
		128/36 L	204/53	205/23	206/17	469/11			
WLCM	6256	128/44	128/48 L						
WLC1	6240	128/18 L	128/34	128/40					
WLC2	6242	128/20	128/23 L						
WLC3	6250	128/27	128/44 L						
WNB=	272	27/46 D	178/08	178/10	188/44	190/06	190/08	418/49	423/53
		92/04	178/09	178/11	189/28	190/07	345/36	418/50	575/06
WTH=	4544	118/37	168/48	169/37	174/05	190/03			
		118/45	168/50	174/03	189/14	539/12			
WTW=	4603	91/29	311/05	441/44	445/42	567/31	573/04	577/41	582/04
		92/15	318/32	442/30	507/38	568/28	573/36	578/04	583/10
		166/36	318/47	443/11	507/51	569/14	573/38	578/30	585/30
		169/38	346/09	445/36	525/09	572/27	576/32	580/39	595/56
		310/33	387/36	445/39	539/02	572/30	577/06	580/57	
WWORD	3125	51/03 L	287/22 S	289/33 S	411/10	415/08	417/04		
		286/53 S	287/27	410/01 S	411/49 S	416/08	417/31 S		
		286/56	289/21 S	411/02	413/51	416/43	417/43 S		
W1ERR	3333	53/51 L	309/03 S	510/20 S	511/41 S	512/31 S			
W2ERR	3334	53/52 L	362/26 S	365/42 S	395/26 S	395/46	542/26 S		
W3ERR	3335	53/53 L	466/44 S						
W4ERR	3336	53/54 L	454/29 S	464/05 S					
W5ERR	3337	53/55 L	470/29 S	499/37 S					

W6ERR	3340	53/56 L	361/37 S	395/05 S							
W7ERR	3341	53/57 L	158/43 S	251/36 S	255/53 S	293/52 S	366/49 S				
		136/02 S	236/52 S	252/14 S	273/32 S	293/55	558/33 S				
W8ERR	3342	54/01 L	124/11 S	244/39 S	245/24 S	246/47 S	255/30 S	279/43 S	395/13 S		
W9ERR	3343	54/02 L	236/48 S	438/55 S							
X	3010	48/44 D	418/50	420/18 S	420/50 S	421/37	423/53	424/20	427/16		
		216/43	419/30	420/19	421/37	423/22	423/56 S	426/14			
XLIST	3062	50/10 L	123/04	217/16 S							
XR	3176	51/37 L	186/15	186/21	187/12	418/12 S	471/48 S				
XRDV	7777776	10/07 D	51/37	471/47							
XTF	3010	48/41 L	48/44	419/17 S	420/26	424/16					
ZLC	11421	192/30	220/22 L	220/24	220/29						
ZLCA	11426	220/26	220/31 L								

SYMBOL QUALIFIER = COMCSYS

MSGA	307	27/30 S	27/36 L								
MSG1	300	27/15 L	27/26	27/34							
MSG=	302	27/20 L	27/47								
RCL1	264	26/12 L	26/22								
RCL=	266	26/17 L	26/20	27/45							
SYSA	251	25/30 L	25/47	25/57							
SYS1	252	25/32	25/34 L	25/41	25/54 S						
SYS2	256	25/34	25/45 L								
SYS3	260	25/46	25/49 L								
SYS4	261	25/48	25/51 L								
SYS=	253	25/36 L	26/13	26/43	27/18	27/44					
WNB1	274	26/50 L	26/55								
WNB2	271	26/41 L	26/57								
WNB=	272	26/45 L	26/52	26/53	27/46						

SYMBOL QUALIFIER = MACRO\$

GETPAGE	11363	37/38 D	219/15 D								
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SYMBOL QUALIFIER = PASS1

ABS	12314	232/12	270/18 L	378/16	378/27	378/30					
AUT	20024	236/07	330/51	430/14 L	431/09						
AVO	20052	308/52	330/50	431/17 L	431/32						
BASE	12317	232/24	270/50 L								
BASEMIC	22674	270/52	271/06 S	471/45 S	503/33 L						
BASE1	12322	270/51	270/57 L								
BCOP	12356	234/36	272/53 L								
BCU	12334	234/34	271/43 L								

244/19 244/21 L

1

CTLCP	10664	237/48	237/51	240/04 L					
CTLCPER	10737	240/26	240/35	241/39 L	241/49	242/15			
		240/30	241/22	241/48	242/05				

CTLCP1	10701	240/22	240/32 L						
CTLCP10	10760	240/52	242/21 L						
CTLCP11	10765	241/41	242/22	242/35 L					
CTLCP2	10704	240/29	240/39 L						
CTLCP2A	10707	240/31	240/34	240/40	240/45 L	242/16			
CTLCP3	10711	240/51 L	241/31	241/50	241/57	242/17			
CTLCP4	10717	240/57	241/02	241/06 L					
CTLCP5	10720	241/03	241/07 L						
CTLCP6	10745	241/14	241/52 L						
CTLCP6A	10721	241/09 L	241/38	242/06					
CTLCP7	10777	242/52	243/02 L						
CTLCP7A	10741	241/23	241/42 L						
CTLCP8	11007	243/24 L	246/44	246/48					
CTLCP9A	10754	240/53	242/10 L	242/31					
CTLMC	11042	245/04 L	246/21						
CTLPP	11060	237/50	246/12 L						
CTLPPER	11055	237/49	246/04 L	246/19	277/48				
CTLPPM	11037	244/44 L	246/05						
CTLPP0	11066	246/17	246/24 L						
CTLPP1	11077	246/31	246/41 L						
CTLPP2	11100	246/40	246/43 L						
CTL1	10602	236/29	236/32 L						
CTL100	10615	237/11 L	292/23	304/32	329/34	341/44	373/57	457/30	
		238/32	301/43	320/52	341/39	360/29	389/44	457/32	
		238/45	304/17	320/57	341/41	361/05	426/55	477/16	
CTL105	10623	236/31	237/14	237/20	237/22 L	301/54	305/01	469/21	471/07
CTL110	10624	237/23 L	391/37	391/49	392/04	392/12			
CTL2	10604	236/26	236/34 L						
CTL200	10640	237/46	237/48 L						
CTL260	10645	237/43	238/04 L						
CTL280	10643	237/42	237/53 L	238/06					
CTL290	10651	237/17	237/26	238/18 L					
CTL300	10653	238/20	296/07	320/28	340/12	340/45	345/07	370/04	398/52
		238/31 L	305/23	327/06	340/13	341/27	356/48	370/36	398/56
		270/23	306/09	334/49	340/21	342/41	359/53	370/38	400/04
		276/55	319/28	334/53	340/28	342/56	364/25	372/50	400/18
		286/24	319/55	336/38	340/29	343/05	364/45	381/21	418/13
		290/55	320/02	336/40	340/37	343/20	364/51	390/56	428/09
		291/48	320/05	340/05	340/44	344/21	369/38	396/40	
CTL400	10655	238/40 L	374/45	374/49	381/48	381/51	382/25		
CTL60	10610	236/46 L	237/40						
CTL65	10612	236/49 L	243/30	243/37	244/40	245/25	287/09	411/31	
		243/27	243/33	244/36	245/21	278/06	294/01	411/34	

CTL70

10614

237/03 L	284/26	324/40	339/19	356/52	370/41	393/56	427/26
238/10	285/07	324/41	339/20	357/55	376/12	394/10	428/11
238/56	285/17	324/42	339/21	358/01	379/20	395/06	428/12
271/02	290/01	324/43	339/23	361/38	379/28	395/24	428/19
271/07	290/53	324/44	345/33	362/24	379/31	395/30	440/41

272/19	291/25	331/04	346/22	362/27	381/19	399/33	
273/52	293/57	331/08	346/56	365/40	383/37	400/49	
275/16	297/20	336/34	347/11	365/46	384/47	400/53	
281/18	297/41	338/54	349/34	366/41	391/02	401/38	
281/26	306/05	339/16	355/42	367/35	392/19	404/11	
281/38	321/25	339/17	355/44	369/24	393/10	407/23	
284/21	323/52	339/18	356/43	369/36	393/14	419/27	

CTL80

10647

238/07 L	321/20	330/09	338/04	345/31	370/29	404/55	
306/37	326/05	332/39	338/05	346/53	384/46		

CU

12477

233/28 293/08 D

CWI

20112

236/32	300/24	320/50	389/41	432/51 L	437/16	470/30	
238/31	301/02	327/53	391/05	433/06	457/18	470/48	
238/42	301/16	341/32	426/07	433/08	461/16		
292/17	303/14	389/24	426/30	436/05	466/55		

CWI1

20115

432/56 L 433/04

CWI2

20120

432/54 433/07 L

DATA

13136

233/29 293/33 L

DATA1

13137

293/35 L 294/03

DATA20

13150

293/42 293/44 293/49 293/53 L

DECMIC

13210

232/32 295/27 L

DIS

13250

233/30 297/09 L

DIS1

13265

297/22 297/35 L

DM

12477

233/31 299/34 D

DMC1

13213

295/32 L 373/30

DMC3

13227

295/47 296/06 L 296/28 296/30

DMC4

13231

295/43 296/08 L

DMC5

13233

296/13 L 296/19

DMC6

13236

296/15 296/22 L

DMC7

13241

296/25 296/29 L

DSL

20123

308/26 330/13 433/21 L

DSL1

20127

433/29 L 434/22 434/43

DSL2

20143

433/57 434/03 L

DSL2A

20146

434/14 L 434/56

DSL3

20150

433/37 433/50 433/54 434/21 L 434/50 434/53

DSL4

20151

434/09 434/26 L

DSL5

20155

434/36 L 435/10

DSL6

20160

434/06 434/12 434/47 L

DSL7

20122

433/17 L 433/32

DUP

13340

233/32 300/02 L

DUP1

13353

300/24 L 300/36 300/55

DUP2

13402

300/42 301/16 L

DUP3

13372

300/43 300/47 300/54 L

DUP4

13374

300/51 300/52 300/53 301/02 L

DUP5

13403

301/12 301/17 L

DUP6

13421

300/30 301/47 L

ECHO

13433

233/33 302/33 L

ECH1

13443

302/50 L 302/53 303/10

ECH2

13446

302/51 302/55 L

ECH4

13454

302/54 303/11 L

ECH5

13457

303/15 L 303/26 303/28

ECH6

13470

303/25 303/29 L

ECH7

13473

303/36 L 303/40

ECH8	13516	303/30	303/39	304/21	L					
ECH9	13524	303/16	304/36	L						
EDIT	20173	236/16	435/24	L	435/29	436/46	437/10			
		237/22	435/26		435/56	436/56				
EDITM	20316	439/40	L	486/54	490/41					
EDT1	20203	435/37		435/43	L	435/52				
EDT10	20254	437/40		437/45	L					
EDT11	20261	438/04	L	438/16		438/57				
EDT12	20262	438/03		438/04		438/07	L	439/37		
EDT13	20266	438/21	L	438/35						
EDT14	20267	438/21		438/24	L					
EDT15	20271	438/28		438/31	L					
EDT17	20277	438/44		438/52	L					
EDT18	20302	438/45		438/48		439/04	L			
EDT19	20303	439/05		439/07	L					
EDT2	20214	436/13	L	436/17		436/19				
EDT20	20306	439/16	L	439/32		439/35				
EDT21	20307	439/19	L	439/26		439/31				
EDT22	20310	439/15		439/18		439/19		439/22	L	
EDT23	20315	439/14		439/27		439/36	L			
EDT3	20217	436/23	L	438/15		438/31				
EDT4	20224	436/30		436/35	L					
EDT5	20227	436/41	L	436/43						
EDT5.1	20234	436/53	L	436/55						
EDT5.2	20236	436/50		437/01	L					
EDT6	20241	435/54		437/14	L					
EDT7	20247	437/31	L	437/41						
EDT8	20250	437/35	L							
EDT9	20251	437/35		437/38	L	437/44				
EJECT	10653	232/33		305/23	D					
ELSE	13541	233/12		305/55	L					
ELS1	13545	306/03		306/04		306/07	L			
EMT	20317	270/56		296/06		383/09		440/37	473/18	473/43
		284/18		367/34		439/55	L	473/10	473/28	474/02
EMT1	20326	440/11	L	440/15						
EMT2	20333	440/24		440/26	L					
EMT3	20336	440/16		440/30	L					
EMT5	20344	440/02		440/03		440/38	L			
END	13546	233/13		300/38		306/33	L	389/36	461/52	467/08
ENDDD	10653	232/34		319/28	D				470/43	483/08
ENDIF	14227	233/14		319/52	L					
ENDIF1	14233	319/57		320/01		320/03	L			
ENDLOST	22210	481/30		483/08	L					
ENDM	10653	232/35		320/28	D					
ENDX	14234	233/34		320/50	L					
END1	13563	306/36		307/06	L					
END1A	13556	306/45		306/51	L					
END2	13604	307/32		307/40	L					
END3	13661	309/11		309/20	L					
END4	13603	307/38	L	307/41						
END5	13616	307/55	L	308/15		308/16		308/21		
END5A	13627	307/39		308/06		308/22	L			
END7	13642	308/46	L							
ENTRY	14241	233/35		321/19	L	323/01				
ENTRYC	14304	233/36		322/57	L					
ENTRY1	14243	321/23	L	321/27		321/33		321/48	321/52	323/04
ENTRY2	14251	321/29		321/34	L					

ENTRY3	14254	321/40	L	321/45					
ENTRY4	14256	321/38		321/46	L				
ENTRY5	14261	321/44		321/49	L				
EQU	14307	233/37		234/25		323/26	L		
EQU1	16634	323/28		394/57	L				
EQU2	16653	395/22		395/25	L				
EQU3	16640	395/02		395/07	L				
EQU4	16645	395/11		395/15	L				
ERA	10661	238/53	L	275/08		295/48	297/38	372/51	375/28
		273/28		275/14		297/21	356/36	375/25	377/18
		273/35		295/46		297/36	371/27	375/26	381/07
ERR	10614	233/38		323/52	D				
ERRMI	10614	233/39		324/40	D				
ERRNG	10614	233/40		324/41	D				
ERRNZ	10614	233/41		324/42	D				
ERRPL	10614	233/42		324/43	D				
ERRZR	10614	233/43		324/44	D				
EXT	14335	233/44		326/04	L				
EXT1	14337	326/08	L	326/12		326/18	326/39	326/51	326/55
EXT2	14345	326/14		326/19	L				
EXT3	14365	326/24		326/43		326/52	L		
EXT4	14360	326/22		326/40	L				
EXT4A	14367	326/27		326/57	L				
EXT5	14371	326/10		327/03	L				
GSM	20346	307/25		440/49	L	440/52	440/53	446/22	
GSM0	20372	441/32		441/39	L				
GSM1	20404	442/05	L	442/09		442/13	442/18	442/21	442/22 442/25
GSM10	20455	444/30	L	444/36		444/40	445/30		
GSM11	20461	444/37		444/41	L				
GSM12	20463	444/47	L	444/51		444/53			
GSM13	20466	444/47		444/54	L				
GSM13A	20476	445/08		445/15	L				
GSM13B	20500	445/14		445/21	L				
GSM14	20504	444/31		445/36	L				
GSM15	20512	440/55		446/17	L				
GSM2	20413	442/05		442/26	L				
GSM3	20431	443/28	L	443/33		443/44			
GSM4	20433	443/34	L	443/48					
GSM5	20436	443/44	L	443/53		444/09	444/13		
GSM6	20440	443/43		443/49	L				
GSM6A	20441	443/42		443/52	L				
GSM7	20442	443/51		443/55	L				
GSM8	20443	444/01	L	444/08					
GSM8A	20446	444/02		444/10	L				
GSM9	20450	443/28		444/14	L				
HERE	14405	232/36		327/46	L				
HEREPK	14447	307/02		328/02		329/08	L		
HEREPK1	14461	329/03		329/25	L				
HRE1	14416	328/04		328/07	L	328/55	328/57		
HRE2	14421	328/13	L	328/17					
HRE3	14423	328/19	L	328/23		328/24			
HRE4	14426	328/19		328/26	L				
HRE5	14436	328/31		328/41	L				
HRE6	14445	328/13		328/54		329/01	L		
IDENT	14465	234/11		330/08	L				
IDT1	14510	330/43		330/50	L				
IF	14552	233/45		332/24	L				

IFABS	14663	332/56	335/13 L						
IFC	14740	232/37	337/43 L						
IFCEQ	15011	339/06	339/07	339/16 L					
IFCGE	15013	339/08	339/09	339/18 L					
IFCLE	15015	339/10	339/11	339/20 L					
IFCM	15003	337/55	339/06 L	339/12					
IFCNT	3556	75/04 L	237/36	305/57	307/11 S	341/37 S	471/20 S		
		237/12	238/18	306/44 S	319/52	341/43 S	508/07		
IFCOM	14673	333/01	335/35 L						
IFCOMLOC	14675	335/40 L	336/04						
IFCP	15101	233/46	343/03 L						
IFCP6	15103	233/47	343/09 L						
IFCP7	15104	233/48	343/14 L						
IFCP7A	15105	343/10	343/15 L						
IFCT	15001	338/14 S	338/49	338/56	339/01 L				
IFC1	14743	337/47	337/50 L						
IFC2	14750	338/02	338/05 L						
IFC3	14757	338/24 L	338/36						
IFC3A	14761	338/24	338/27	338/29 L					
IFC3B	14763	338/29	338/32	338/34 L					
IFC4	14777	338/50	338/55 L						
IFC5	14775	338/46	338/51 L						
IFDEF	14711	333/04	336/18 L						
IFEQ	15017	233/49	340/02 L						
IFEXT	14705	333/03	336/08 L						
IFGE	15025	233/50	340/26 L						
IFGT	15023	233/51	340/18 L						
IFLCM	14577	332/50	333/09 L						
IFLE	15031	233/52	340/42 L						
IFLOC	14702	333/02	335/56 L						
IFLT	15027	233/53	340/34 L						
IFMAC	14605	332/51	333/26 L						
IFMI	15111	233/54	344/04 L						
IFMIC	14613	332/52	333/41 L						
IFMODS	14563	332/33	332/49 L	333/05					
IFNAME	3557	75/05 L	305/56	319/54	341/38 S				
IFNE	15021	233/55	340/10 L						
IFNOU	14714	335/31	336/14	336/25 L					
IFPL	15110	233/56	343/56 L						
IFPP	15072	233/57	342/39 L						
IFPP6	15074	234/01	342/45 L						
IFPP7	15075	234/02	342/50 L						
IFPP7A	15076	342/46	342/51 L						
IFREG	14667	332/57	335/25 L						
IFREL	14660	332/55	335/05 L						
IFSET	14620	332/53	333/53 L						
IFSST	14657	332/54	334/57 L						
IFS1	14621	333/54 L	335/01						
IFS2	14627	333/57	334/07 L						
IFS3	14633	334/10	334/14 L						
IFS4	14643	334/05	334/30 L						
IFS6	14652	334/18	334/43 L						
IFS7	14653	334/02	334/13	334/37	334/46 L				
IFS8	14655	334/06	334/25	334/29	334/33	334/50 L			
IFXX	15033	340/03	340/11	340/19	340/27	340/35	340/43	340/54 L	

IFXXNO	15052	306/01	339/02	340/20	342/40	343/04	344/22
		336/37	339/22	340/36	342/54	343/18	396/16
		336/39	340/04	341/29 L	342/55	343/19	
IFXXT	15051	340/55 S	341/28 L				
IFZZ	15112	343/57	344/12 L				
IF1	14555	332/27	332/29 L				
IF2	14557	332/33 L	332/38				
IF3	14562	332/37	332/40 L				
IF4	14716	333/16	333/29	333/44	334/36	335/09	335/21
		333/22	333/37	333/49	334/42	335/19	335/41
IF4A	14717	336/29	336/35 L				
IF5	14721	336/36	336/39 L				
INDUP	20571	447/04	448/25 L				
INECH	20534	447/07	447/11 L				
INLIB	20537	447/06	447/19 L				
INMAC	20566	447/03	448/17 L				
INPUT1	20517	236/15	300/29	389/25	447/54	448/13	449/06
		237/11	303/15	446/40 L	447/56	448/35	461/44
INP1XX	20602	448/33	448/51 L				
INP5	20574	447/49	448/33 L				
INRMT	20542	447/05	447/27 L				
IN2	20545	447/15	447/23	447/31 L	448/21	448/29	
IN3	20557	447/52	447/55 L	448/03	448/12		
IN3A	20561	447/50	447/57 L				
IN4	20576	446/43	448/39 L				
IRP	10653	232/38	345/07 D				
ITE	20610	447/53	449/16 L	449/30	449/34		
ITEA	20621	449/23 S	449/25	449/36 L			
ITE1	20614	449/25 L	449/32				
ITE2	20620	449/19	449/24	449/33 L			
ITP	20622	448/34	449/47 L	449/51	449/53	450/22	450/42
ITP1	20627	449/49	449/57 L				
ITP3	20636	450/15	450/26 L				
ITP4	20640	450/32 L	450/36	450/38			
LCC	15130	234/03	345/30 L				
LCC1	15136	345/45 L	345/55				
LCC2	15137	345/47 L	345/53				
LCC3	15143	345/56 L	346/02	346/06			
LCC4	15144	345/52	346/02 L				
LDE1	15355	351/17	352/16 L				
LDE2	15361	347/23	348/30	350/01	351/06	352/07	352/36
		347/24	349/31	350/32	351/36	352/29 L	
LDE3	15362	347/20	348/42	348/54	349/17	349/48	350/36
LDE4	15364	348/01	352/35	352/40 L			
LDSA	15366	347/16	352/53 L				
LDSB	15407	347/29	353/18 L				
LDSC	15416	348/50	353/32 L				
LDSD	15427	349/01	353/46 L				
LDSE	15440	349/44	354/03 L				
LDSET	15155	234/33	346/52 L				
LDSF	15444	350/13	354/10 L				
LDSG	15445	350/14	354/17 L				
LDS1	15163	347/09 L	348/07	348/39	349/29	350/02	350/53
		347/15	348/31	348/40	349/30	350/07	351/07
		348/02	348/36	348/49	349/39	350/48	351/12
LDS10	15205	348/01 L	353/19				
LDS2	15165	347/08	347/13 L	347/52	349/33		

LDS20	15206	348/07	L	353/20			
LDS21	15207	348/09	L	348/19			
LDS22	15215	348/14		348/17	L		
LDS23	15223	348/20		348/30	L		
LDS3	15170	347/18	L	347/22			
LDS30	15224	348/36	L	353/21			
LDS31	15235	348/52	L	348/56			
LDS32	15241	348/44		349/06	L		
LDS33	15250	349/04		349/19	L		
LDS34	15256	349/26		349/32	L		
LDS4	15203	347/04		347/06		347/51	L
LDS40	15260	349/39	L	353/22			
LDS41	15264	349/46	L	349/50			
LDS42	15271	349/43		350/01	L		
LDS50	15272	350/07	L	353/23			
LDS51	15276	350/15	L	350/28			
LDS52	15303	350/18		350/30	L		
LDS53	15313	350/10		350/50	L		
LDS60	15323	351/12	L	353/24			
LDS61	15324	351/13	L	351/27			
LDS70	15342	351/42	L	353/25			
LIFCM	6	337/50		339/12	D		
LIFMODS	14	332/30		333/05	D		
LIST	15446	232/39		355/41	L		
LIT	15457	234/05		356/17	L		
LIT1	15460	356/19	L	356/33			
LIT2	15470	356/31		356/34	L		
LIT3	15500	356/21		356/49	L		
LOC	15517	234/04		357/44	L		
MACALL	20644	238/04		242/51		451/04	L
MACRO	15566	232/40		360/27	L		
MACROE	15570	232/41		361/03	L		
MAX	15572	234/06		361/28	L		
MAXA	15614	361/32	S	362/11	L		
MAXB	15625	361/28		362/29	L		
MAX1	15573	361/29	L	368/08			
MAX2	15600	361/34		361/39	L		
MAX3	15602	361/42	L	362/12		362/30	368/11
MAX4	15607	361/57	L	362/14			
MAX5	15616	362/01		362/15	L		
MAX6	15623	362/19		362/25	L		
MCH	15535	232/13		358/49	L		
MCHA	15540	358/55		359/04	L		
MCHB	15542	358/57		359/08	L		
MCH0	15546	359/14		359/18	L		
MCH0A	15547	359/17		359/20	L		
MCH1	15554	359/06		359/07		359/23	359/24 359/28 L
MCH2	15555	359/30	L	359/34		359/39	
MCH3	15562	359/33		359/40	L		
MCH4	15565	359/47		359/52	L		
MCLA	21071	452/04	S	457/19		457/34	L
MCLE	20736	452/45		453/35	L		
MCLE3	20743	453/49	L				
MCLE4	20744	453/51	L	454/20		454/32	
MCLE5	20751	454/04	L	454/08			
MCLE8	20761	454/21	L	454/33			
MCLE9	20763	453/56		454/07		454/28	L

	MCLE9A	20765	453/52	454/31 L					
	MCLO	20767	452/42	454/48 L					
	MCLOA	21075	454/56 S	455/14	457/35 L				
1	MCLOR	21103	455/08	455/51	458/04 L	458/27			
2	MCLOR1	21111	458/13 L	458/16					
3	MCLOR2	21114	458/12	458/19 L					
4	MCL01	20777	455/03	455/04	455/08 L				
5	MCL02	21000	455/06	455/09 L	456/48				
6	MCL02A	21004	455/10	455/23 L					
7	MCL03	21006	455/28 L	455/52	456/04				
8	MCL06	21023	455/46	455/53 L					
9	MCL06A	21025	456/01 L	456/17	456/26				
10	MCL07	21034	456/09	456/18 L					
11	MCL08	21037	455/30	455/31	456/30 L				
12	MCL08A	21050	456/34	456/47 L					
13	MCL09	21051	455/16	456/52 L					
14	MCLS	21076	457/43 L	457/48	457/52	462/21	462/28	462/33	
15	MCL0	20656	451/10	451/31 L					
16	MCL01	20667	451/45	451/56 L					
17	MCL1	20704	452/21	452/28 L					
18	MCL1A	20701	452/20	452/22 L	452/25				
19	MCL10	20710	452/14	452/37 L					
20	MCL15	20713	452/36	452/43 L					
21	MCL20	20715	452/46 L	453/21	454/24	457/01			
22	MCL21	20721	452/56 L	453/08					
23	MCL22	20725	453/03	453/09 L					
24	MCL23	20731	453/17 L	453/23					
25	MCL30	20734	452/50	453/22 L					
26	MCL60	21054	452/47	457/05 L					
27	MCL61	21062	457/15	457/18 L					
28	MCL62	21063	457/17	457/19 L					
29	MCL63	21070	457/28	457/31 L					
30	MCT4	15672	365/25	365/34 L					
31	MCT5	15675	365/19	365/23	365/41 L				
32	MCU	15632	234/35	363/04 L					
33	MD	12477	234/07	363/41 D					
34	MEMSEL	15642	234/39	364/18 L					
35	MEMSEL1	15661	364/35	364/38	364/41	364/47 L			
36	MEMSEL2	15662	364/21	364/29	364/32	364/50 L			
37	MICCNT	15663	232/42	365/18 L					
38	MICRO	15705	232/43	366/25 L					
39	MIC2	15722	366/47	366/51 L					
40	MIC3	15716	366/37	366/42 L					
41	MIC4	15730	367/09 L	367/21					
42	MIC5	15733	367/12	367/17 L					
43	MIC6	15735	367/02	367/03	367/07	367/20	367/22 L		
44	MIC7	15737	367/23	367/25 L					
45	MIC8	15741	367/24	367/31 L					
46	MIN	15751	234/08	368/07 L					
47	MLUA	22665	502/01	502/02 S	503/26 L				
48	MLUB	22672	501/57	502/01	502/09	503/31 L			
49	MLU1	22625	501/49 L	501/53					
50	MLU2	22631	502/03 L	502/06					
51	MLU4	22643	502/13	502/30 L					
52	MLU5	22647	502/41 L	502/49					
53	NDOP	15753	234/37	369/03 L					
54	NDOP1	15763	369/14	369/17 L					
55									
56									
57									
58									
59									
60									

	NDOP2	15770	369/23	369/29 L					
	NIL	10653	232/44	370/04 D					
	NOLABEL	15774	232/45	370/28 L					
1	NOREF	16003	232/46	371/15 L	372/53				
2	NOR1	16011	371/24	371/28 L					
3	NOR2	16023	371/55 L	372/04	372/09				
4	NOR3	16030	371/20	372/13 L					
5	NOR3A	16035	372/14	372/22 L					
6	NOR4	16037	371/32	372/27 L					
7	NOR5	16042	372/19	372/37 L					
8	NOR6	16044	372/20	372/29	372/33	372/42 L			
9	NOR7	16045	371/41	371/44	372/03	372/16	372/41	372/45 L	
10	OCTMIC	16052	232/47	373/25 L					
11	OPDEF	16056	232/48	373/55 L					
12	OPSYN	16060	232/49	374/20 L					
13	OPS1	16075	374/26	374/27	374/30	374/34	374/46 L		
14	ORG	16077	234/09	375/16 L	377/04				
15	ORGC	16144	234/10	377/02 L					
16	ORG1	16101	375/19 L	377/21					
17	ORG2	16106	375/30 L	377/10	377/23				
18	PASS1	10562	188/11	236/05 L					
19	PCARD	21122	300/54	303/21	329/08	426/22	458/48	469/28	492/46
20			301/17	329/01	389/39	458/36 L	468/10	470/11	
21	PCARDT	21132	458/38 S	458/41	458/50 L				
22	PDC	21133	303/20	459/06 L	460/52	468/05			
23	PDC1	21137	459/21 L	459/55	460/01	460/07	460/29	460/34	
24	PDC2	21140	459/26 L	459/41					
25	PDC3	21145	459/35	459/45 L					
26	PDC4	21147	459/49 L	459/53					
27	PDC5	21151	459/47	459/54 L	460/11	460/24			
28	PDC6	21153	459/52	460/05 L					
29	PDC7	21157	459/54	460/15 L					
30	PDC8	21167	460/23	460/38 L					
31	PEC	21175	303/19	461/06 L	461/24	461/28	461/40	468/04	
32	PECA	21225	461/08 S	461/21	461/53 L				
33	PEC1	21200	461/11 L	461/46					
34	PEC2	21212	461/27	461/29 L					
35	PEC3	21214	461/34 L	461/37					
36	PEC4	21220	461/19	461/44 L					
37	PEC5	21223	461/15	461/50 L					
38	PERIPH	16156	232/14	377/49 L	378/50				
39	PERIPH1	16166	378/10 L	378/13					
40	PER1	16160	377/52	377/54 L					
41	PER2	16176	378/24	378/28 L					
42	PG0	21711	381/50	382/22	474/48 L	474/49			
43	PG01	21722	474/56	475/13 L					
44	PG02	21710	474/45 L	474/51	475/12	475/29			
45	PMA	21226	302/55	453/22	454/10	462/09 L	462/56		
46	PMACE	21263	302/52	454/31	463/09	463/16 L	463/34	463/50	
47	PMACER	21527	465/49	470/25	470/30 L	470/44	470/47		
48	PMACER1	21525	466/52	470/27 L					
49	PMACEX	21260	463/08 L	463/24					
50	PMACE0	21261	463/11 L	463/36					
51	PMACE1	21272	463/26	463/32 L	463/35	463/42			
52	PMACE2	21274	463/38 L	463/45	463/46				
53	PMACE3	21276	463/30	463/44 L	463/49				
54	PMACF	21304	302/50	453/51	464/09 L	465/07	466/10	467/16	
55									
56									
57									
58									
59									
60									

PMACFER	21301	464/04 L	464/34	464/42	464/49	464/50	464/56	464/57	465/01
PMACFF	21336	465/03	465/09 L						
PMACFN	21303	464/07 L	464/32	465/12					
PMACF1	21312	464/18	464/22 L						
PMACF1A	21311	464/19 L	464/24						
PMACF2	21323	464/39 L	464/43						
PMACF3	21325	464/37	464/44 L						
PMACL	21523	466/09	466/20	466/23	466/24	466/27	466/28	470/22 L	
PMACRO	21340	360/28	361/04	373/56	465/32 L	469/22	470/51		
PMAC10	21356	465/50	466/01	466/10 L	466/13				
PMAC100	21424	467/15	467/28 L						
PMAC120	21437	467/48	468/03 L	470/18					
PMAC130	21445	468/13 L	471/01						
PMAC132	21450	468/15	468/16	468/19 L					
PMAC135	21466	468/32	469/15 L						
PMAC140	21472	468/09	469/26 L						
PMAC142	21510	469/43	469/44	469/48	469/55 L				
PMAC146	21514	469/27	470/05 L						
PMAC148	21517	470/07	470/11 L						
PMAC190	21520	468/12	469/34	469/54	470/04	470/15 L			
PMAC200	21544	470/16	470/55 L						
PMAC202	21546	466/57	470/34	471/02 L					
PMAC21	21361	466/14 L							
PMAC22	21376	466/34	466/35	466/40	466/42 L				
PMAC30	21400	466/32	466/41	466/45 L					
PMAC31	21403	466/53 L	467/05	467/12	467/23				
PMAC310	21415	467/10	467/13 L						
PMAC35	21417	467/16 L	467/24						
PMAC36	21422	467/19	467/22 L						
PMAC9	21347	465/43	465/54 L						
PMA1	21233	462/18 L	462/23						
PMA2	21235	462/22 L	462/27						
PMA3	21237	462/24 L	462/31	462/32					
PMA4	21240	462/27 L							
PMA5	21241	462/17	462/29 L	462/34					
PMA6	21245	462/20	462/35 L						
PMA7	21246	462/19	462/36 L						
PMA8	21251	462/37	462/43 L						
POS	16201	234/12	379/16 L						
POS1	16210	379/24	379/29 L						
PPOP	16221	232/50	380/19 L						
PPOP1	16222	272/54	380/20 L						
PPOP2	16240	380/44	380/47	380/48	380/51 L				
PPOP3	16243	380/53	380/56 L						
PPU	16177	232/15	378/48 L						
PRS	21551	236/05	471/15 L	474/36					
PRS2	21574	471/51 L	471/55						
PRS2A	21623	472/37	472/42 L						
PRS2C	21631	472/43	472/51 L						
PRS3	21636	472/50	472/56	473/01 L					
PRS4	21661	473/34	473/42 L						
PUD2	21762	476/52 L	476/55						
PUD3	21765	475/57	477/05 L						
PUD4	21756	476/31	476/37 L						
PURGDEF	16255	232/51	381/45 L						
PURGMAC	16262	232/52	382/19 L	382/26					
PUSHDN1	21750	476/21 L	476/25						

PUSHDOWN	21731	301/38	304/04	329/29	426/45	457/24	475/44 L	477/01
PUSHDT	21773	475/47 S	476/06	476/33	477/18 L			
PUSHUP	22000	300/28 S	389/11 S	448/56	469/20	478/03	478/16	478/25
		302/41 S	447/55	465/42 S	477/26 L	478/09	478/20	478/35
PUSHUP1	22006	477/37 L	477/41					
PUSHUP2	22017	477/46	477/54 L					
PUSHUP3	22026	477/47	478/17 L					
PUSHUP4	22030	477/48	478/21 L					
PUSHUP5	22032	477/49	478/26 L					
P1TEMP	3561	75/10 L	286/18	326/30	347/40 S	362/15	391/23 S	404/57 S 444/56 S
		240/15 S	290/52	327/56 S	348/23	366/31 S	391/39	410/11 S 445/22
		240/55 S	291/26	329/11 S	349/52	366/45	394/57 S	410/45 451/39 S
		241/10	291/35	329/25	350/41	374/22 S	395/21	411/29 451/47
		242/10	295/32 S	330/19 S	351/28	380/23 S	397/42 S	424/15 S 452/13
		243/15 S	295/36	330/44	351/51	380/26	397/53	426/40 457/06
		243/22	300/08 S	332/26 S	352/16	380/41	398/04	433/33 S 457/25
		277/52 S	300/49	336/35	356/18 S	381/04	402/19 S	434/21 465/35 S
		277/55	321/22 S	341/04 S	356/19	381/49	402/31	434/36 466/06 S
		281/22 S	321/36	341/16	356/27	382/20 S	402/46	439/56 S 466/14
		281/27	323/03 S	344/12 S	361/48 S	389/19 S	403/20	440/30 469/18
		286/16 S	326/19 S	344/16	362/08	389/38	403/38	440/32 499/30 S
P1TEMPA	3562	75/11 L	290/17	302/40 S	333/54 S	347/35 S	398/39	445/05 459/45
		240/47 S	290/31	303/29	334/30	369/10 S	419/11 S	452/33 464/35
		242/30 S	291/22 S	328/27 S	334/38 S	369/17	426/42	452/46 466/45
		244/23 S	291/45	328/43	334/40	380/30 S	433/52	453/18 467/28
		244/31	300/13 S	333/32 S	341/11 S	380/56	440/23 S	453/35 475/15 S
		290/09 S	301/34	333/34	341/21	398/26	440/27	453/50 S 475/17
P1TEMPB	3563	75/12 L	302/49 S	328/33	349/14	351/25	404/22 S	433/28 S 468/25
		244/24 S	303/55	348/13 S	349/25	380/39 S	406/06	433/47 468/54
		244/27	304/09	348/17	350/55 S	398/45	419/53 S	454/21 469/15
		290/15 S	304/22	349/03 S	351/05	403/13 S	420/33	456/55 469/33
		300/22 S	304/42	349/10 S	351/23 S	404/01 S	423/40	467/18
P1TEMPC	3564	75/13 L	290/22 S	425/32	452/41	462/47	468/13	502/32 S
		240/16 S	375/33 S	434/48 S	458/22 S	462/55	469/26	
		240/39	375/53	435/07	458/24	465/55 S	469/50 S	
		242/21	421/35 S	451/07 S	462/45 S	466/03 S	470/01 S	
P1TEMPCD	3565	75/14 L	362/05	426/27	453/40	461/10 S	467/54	499/31 S
		290/42	419/42 S	426/34	453/57	461/33 S	468/11	
		303/27	426/02	427/20	454/49	465/57 S	472/35	
		361/31 S	426/08	453/38 S	456/30	466/48	473/19	
P1TEMPE	3566	75/15 L	454/09 S	461/25	470/40	503/18 S		
		302/39 S	454/14	466/07 S	502/23 S			
QUAL	16267	232/53	383/01 L					
QUALMIC	22676	383/03	383/36 S	471/19 S	503/35 L			
QUAL1	16273	383/02	383/10 L					
QUAL2	16301	383/22 L	383/45					
QUAL3	16307	383/25	383/36 L					
QUAL4	16310	383/13	383/41 L					
RCD	22037	308/57	474/35	478/43 L	478/57			
RCD1	22042	478/49 L	478/56					
REP	16330	234/13	384/45 L	388/10	388/40			
REPC	16330	234/14	388/10 D					
REPI	16330	234/15	388/40 D					
REQA	16542	276/47	390/46	392/21 L				
REQB	16545	391/43	392/24 L					
REQD	16547	277/19	392/27 L					
REQ1	16526	391/45	391/47 L	391/51				

	REQ2	16530	391/53 L	391/57						
	REQ3	16532	391/55	392/01 L						
	REQ4	16540	390/40	392/16 L						
1	REQ.1	16500	390/45	390/50	390/54	391/03 L				
2	REQ.2	16475	390/42	390/55 L						
3	REQ.3	16472	390/47	390/49 L						
4	REQ.4	16514	391/27 L	391/30						
5	RIV	22045	359/48	479/11 L	480/48					
6	RIVA	22120	479/15 S	479/26	479/32	480/50 L				
7	RIVB	22122	480/06 S	480/12	480/31	480/52 L				
8	RIV1A	22051	479/16 L	479/38						
9	RIV2	22057	479/28 L	479/30						
10	RIV2A	22065	479/34	479/40 L						
11	RIV3	22102	480/03	480/15 L						
12	RIV4	22106	480/25 L	480/45						
13	RIV5	22112	480/32	480/36 L						
14	RIV7	22116	480/24	480/46 L						
15	RJY	10663	239/04 L	474/17						
16	RMT	16431	232/54	389/08 L						
17	RMT1	16436	389/15	389/18 L						
18	RMT2	16441	389/20	389/24 L	389/31	389/40				
19	RMT3	16453	389/37	389/41 L	389/51					
20	RMT4	16456	389/26	389/48 L						
21	RNC	22141	97/16	425/20	425/42	481/20	490/17			
22			98/44	425/27	481/18	481/47 L				
23	RNCA	22205	481/22 S	481/32	483/07 L					
24	RNCX	22125	481/16 L	482/10	482/18	482/29	482/41	482/55	483/05	
25			482/06	482/16	482/25	482/39	482/49	483/03		
26	RNCX1	22135	481/29	481/32 L						
27	RNC1	22123	481/13 L	481/49						
28	RNC2	22145	481/50	481/54 L						
29	RNC4	22153	481/55	482/14 L						
30	RNC5	22160	481/52	482/22 L	482/40					
31	RNC5A	22163	482/27 L	482/30						
32	RNC5B	22166	482/26	482/32 L						
33	RNC6	22172	481/53	482/45 L	483/04					
34	RNC6A	22176	482/52 L	482/57						
35	RNC6B	22201	482/51	483/01 L						
36	RNS	22211	426/16	448/41	486/32 L	491/09				
37	RNSA	22322	489/16 S	490/26	491/11 L					
38	RNS1	22216	486/45	486/47 L						
39	RNS2	22221	486/52	486/54 L						
40	RNS3	22223	487/02 L	490/46						
41	RNS3A	22226	487/15 L	487/33	487/36					
42	RNS3B	22227	487/18 L	487/20	487/30					
43	RNS3C	22231	487/14	487/21	487/24 L					
44	RNS4	22235	487/07	487/42 L						
45	RNS4A	22237	487/46 L	487/48	488/02	488/08	488/11			
46	RNS4B	22240	487/45	487/49 L	488/03					
47	RNS4C	22242	487/53	487/56 L						
48	RNS4D	22244	487/56	488/04 L						
49	RNS5	22247	486/57	488/16 L						
50	RNS5A	22250	488/19 L	490/49						
51	RNS5B	22251	488/26 L	488/37	488/38	488/39				
52	RNS5C	22254	488/34	488/37 L						
53	RNS6	22256	487/17	488/12	489/13 L					
54	RNS6A	22271	489/32	489/46 L						
55										
56										
57										
58										
59										
60										

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USEPR	17101	402/45	404/15	L					
USEPR1	17104	404/17	404/22	L					
USER	17125	375/45	404/10		406/01	L	407/07		
USES	17120	375/44	404/06		405/31	L	405/38		
USE1	17076	403/36	404/06	L					
USE2	17077	404/10	L	404/32					
USE3	17046	403/02	L	403/08					
USE4	17050	403/06		403/08	L	403/42			
USE5	17065	403/07		403/37	L				
USE6	17040	402/34		402/42		402/44	L		
USE7	17037	402/38		402/43	L				
USE8	17031	402/29		402/31	L				
USE9	17033	402/30		402/34	L				
VFD	17237	234/23		409/55	L				
VFDA	17313	410/22	S	410/25		411/36	L		
VFDL	17533	234/41		417/23	L				
VFDL1	17536	417/25		417/29	L				
VFD1	17244	410/05		410/08	L				
VFD2	17246	410/12	L	411/26		411/28			
VFD2A	17277	411/11	L	411/20					
VFD2B	17303	411/11		411/22	L				
VFD3	17310	410/14		411/29	L				
VFD.0	17241	410/02	L	417/32					
WINA	23057	509/39	S	509/43		510/05	L		
WINTER	23001	237/03		308/56		457/16		508/02	L
		306/50		433/07		470/03		508/11	
WIN1	23006	508/09		508/13	L				
WIN2	23016	508/32	L	508/36					
WIN3	23022	508/42	L	508/46					
WIN4	23024	508/39		508/47	L				
WIN5	23035	509/16	L	509/23					
WIN6	23041	509/04		509/07		509/26	L		
WIN6A	23042	509/24		509/29	L				
WIN7	22773	507/31	L	509/48					
WIN8	22774	507/38	L	509/36					
XLEV	3560	75/06	L	292/18		307/18	S	320/51	426/46
						478/30			
XREF	17542	233/03		418/02	L				
XREF1	17545	418/04		418/07	L				
XREF2	17547	418/08		418/11	L				
XREF3	17550	418/06		418/10		418/12	L		
XTEXT	17551	234/24		418/46	L				
XTEXTF	17771	425/09		425/14		425/17		427/02	L
XTEXTQ	17774	427/04		427/13	L				
XTEXTU	17773	420/46		421/43		423/36		423/43	424/55
		421/39		423/28		423/39		424/51	425/36
								425/31	425/41
XTX1	17560	418/57		419/06	L				
XTX10	17651	423/29	L						
XTX11	17655	423/33		423/38	L				
XTX12	17657	423/42	L	423/49					
XTX13	17663	421/49		423/46		423/53	L		
XTX13A	17665	419/48		423/57	L				
XTX14	17665	420/51		424/11	L				
XTX15	17676	424/29		424/39	L				
XTX16	17702	424/32		424/50	L				
XTX16A	17713	425/03		425/06	L				
XTX17	17720	425/16	L	425/19					
XTX18	17723	425/15		425/20	L				

XTX19	17725	424/31	425/27 L						
XTX2	17565	418/56	419/08	419/24 L					
XTX20	17735	424/43	425/47 L						
XTX21	17741	424/44	425/21	425/43	425/53	426/01 L			
XTX21A	17746	426/14 L	426/23						
XTX22	17755	424/42	425/55	426/27 L					
XTX22A	17757	426/21	426/31 L						
XTX3	17567	419/23	419/30 L						
XTX4	17603	420/07	420/09 L						
XTX5	17617	420/42 L	420/47						
XTX6	17623	420/34	421/22 L						
XTX7	17634	421/41 L	421/46						
XTX8	17640	420/31	423/22 L						
XTX9	17647	423/27 L	423/37						
YDEFLOC	23063	308/44	356/47	362/23	365/39	395/23	510/22 L	510/27	520/12
YDEFLOC1	23061	510/18 L	510/24						
YDEFSYM	23067	276/54	398/19	435/06	510/42 L	511/48	512/14	512/28	
		326/38	434/35	510/26	510/43	512/05	512/17	512/32	
YDEFSYMT	23143	510/57 S	511/42	511/45	511/56	512/08	512/18	512/34 L	
YDEFSYM1	23075	511/03 L	511/05						
YDEFSYM2	23141	511/18	512/29 L						
YDEFSYM3	23114	511/36	511/38 L						
YDEFSYM4	23116	511/24	511/25	511/27	511/35	511/38	511/42 L		
YDEFSYM5	23122	511/44	511/49 L						
YDEFSYM6	23135	512/07	512/18 L						
YDEFSYM7	23131	512/08 L	512/21						
YDEFSYM8	23100	511/10 L	511/17						
YDS4	23120	511/45 L	511/52						
YDS5	23130	511/54	512/06 L						
YEVITEM	23145	239/05	241/08	242/03	455/44	516/54	517/55		
		240/24	241/36	410/24	512/48 L	517/28			
YEVITEMN	23344	512/57	517/49	517/54 L					
YEVITEMS	23313	513/02 S	513/51	515/01	515/16	515/27	516/53 L		
		513/29	514/04	515/05	515/19	515/51	517/34		
YEVITER	23176	513/27	513/47 L	514/37	515/42				
YEVITFL	23345	512/50 S	516/51	517/57 L					
YEVITOK	23217	514/31	514/34 L						
YEVIT10	23156	513/06	513/10 L	516/56					
YEVIT100	23311	513/13	516/48 L						
YEVIT200	23170	513/19	513/33 L						
YEVIT21	23164	513/11	513/25 L	516/36	516/42	517/09	517/11	517/18	
YEVIT210	23201	513/37	513/38	513/55 L	514/28				
YEVIT211	23202	513/56 L	514/09						
YEVIT212	23203	514/02 L	514/16	514/36					
YEVIT22	23165	513/26 L	516/24	516/30					
YEVIT220	23205	513/39	514/08 L						
YEVIT230	23206	513/42	514/13 L						
YEVIT231	23207	514/14 L	514/21						
YEVIT240	23210	513/43	514/20 L						
YEVIT250	23211	513/21	514/25 L						
YEVIT300	23221	513/15	514/41 L						
YEVIT301	23245	514/47	515/23 L	516/03					
YEVIT302	23244	514/53	515/20 L						
YEVIT303	23226	514/44	514/49 L						
YEVIT304	23243	515/12	515/17 L						
YEVIT400	23250	513/17	515/31 L						
YEVIT420	23263	515/34	515/55 L						

YEVI421	23274	516/13 L	516/18						
YEVI422	23276	516/09	516/19 L						
YEVI423	23265	515/57 L	516/38	516/44					
YEVI424	23301	516/17	516/26 L						
YEVI430	23303	515/35	516/34 L						
YEVI435	23306	515/37	516/40 L						
YEVI500	23315	513/07	513/09	517/03 L					
YEVI530	23331	517/07	517/29 L						
YEVI550	23342	517/41	517/50 L						
YFOUP	23346	237/29	375/46	431/41	518/04 L	518/20	519/46	520/01	
		357/44	411/27	514/32	518/10	518/50	519/51		
YFUALL	23365	393/11	393/54	432/03	518/49 L				
YFU1	23356	518/30 L	518/40	519/13					
YPRLOC	23377	243/16	246/25	277/50	297/10	428/16	520/04		
		244/05	273/21	286/55	391/01	452/40	520/06		
		245/05	275/03	293/34	410/07	519/25 L	520/13		
YPRLOCT	23427	519/44 S	519/47	520/15 L					
YPRLOC1	23405	519/30	519/37 L						
YPRLOC2	23407	519/36	519/40	519/42 L					
YPRLOC3	23423	520/05	520/07 L						
YPRLOC4	23376	519/22 L	519/54						
YTLITT	23463	521/04 S	521/06	521/32 L					
YTLIT1	23435	520/38 L	520/56						
YTLIT10	23445	520/41	520/42	520/49	520/50	520/55 L			
YTLIT2	23440	520/44 L	520/52						
YTLIT20	23446	520/32	520/45	520/57 L					
YTLIT6	23461	520/54	521/26 L						
YTLULIT	23430	356/37	515/44	520/26 L	521/30				
YTLUSYM	23466	513/28	514/54	521/48	521/53 L	522/14	522/30		
YTLUSYM1	23477	521/56	522/15 L						
YTLUSYM2	23464	521/47 L	522/27						
YTLUSYM3	23473	522/02	522/06 L						
YTLUSYM4	23475	522/05	522/09 L						
YUPLOC	23504	273/51	275/15	278/05	287/07	293/54	297/40	522/39 L	522/46

SYMBOL QUALIFIER = PASS2

ABS	12126	232/12	270/32 D						
AEI	23510	331/23	523/15 L	523/44	532/51	533/42			
ALM	25321	549/33	564/15 L	564/18	564/19	564/47	564/52	564/55	
ALM1	25330	564/28	564/31 L						
ALM2	25332	564/32	564/46 L						
BASE	12326	232/24	271/16 L						
BCOP	12126	234/36	273/05 D						
BCU	12354	234/34	272/28 L	363/24					
BINOUT	25344	252/03	258/17	262/17	264/22	267/39	288/19	417/01	566/26
		252/23	261/07	262/30	264/35	279/50	294/39	559/14	588/44
		252/30	261/20	263/09	265/05	279/57	299/04	565/14 L	
		254/27	261/33	263/22	265/25	280/07	414/05	565/15	
		256/25	261/46	263/53	266/40	280/14	415/36	565/53	
		256/43	262/04	264/09	267/31	288/04	415/48	566/22	
BINOUTR	25342	565/10 L	565/25	565/34					
BINOUT1	25352	565/19	565/26 L						

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CPL	7437	164/20 L	165/11	171/01	173/01	538/17	552/52	
		164/22	165/41	172/43	355/57	547/31	561/44	
CPL1	7447	164/39 L	164/43	164/47	165/06			
CPL2	7462	165/15 L	165/40					
CPOP	12126	232/30	291/05 D					
CPSYN	12126	232/31	292/04 D					
CRL	23530	247/45	524/41 L	524/43	524/48			
CRLA	23536	524/47	524/50 L					
CRLB	23541	524/46 S	524/51 L					
CTEXT	13124	233/27	292/32 L					
CTYPE	3567	75/24 L	172/09	292/47 S	305/36 S	397/10 S	401/11 S	546/54 S 552/21 S
CU	13135	233/28	293/17 L					
CUL	7473	165/49 L	166/12	172/02	172/24	535/05		
CUL1	7501	165/51	166/03 L					
CUL2	7503	166/08 L	166/11					
DATA	13155	233/29	294/12 L					
DBQ1	25515	570/42	570/44 L					
DBQ2	25521	570/56 L	571/01					
DBQ3	25522	570/55	571/03 L					
DBSSZ	25401	274/41	310/17	376/39	393/28	409/31	566/51	
		276/18	331/21	386/39	394/20	566/47 L		
DBSSZC	25461	566/56	569/25 L					
DBSSZP	25465	566/54	569/34 L					
DBSSZP1	25477	569/54	570/01 L	570/09				
DBSSZQ	25503	569/45	570/22 L					
DBSSZX	25400	566/44 L	566/53	567/45	568/39	569/32	570/10	570/52 571/15
DBTA	26433	595/47	596/29 S	596/32 L				
DBTB	26434	567/01	596/19	596/33 L				
DBT2	26430	596/21	596/24 L					
DBW1	26260	590/46 L	591/25	592/37				
DBW10	26307	591/01	591/10	591/29	591/50 L			
DBW11	26312	591/56	592/01 L					
DBW12	26320	591/46	591/48	592/16	592/22 L	592/43		
DBW16	26322	592/24	592/27 L					
DBW18	26323	592/26	592/29 L					
DBW19	26327	592/30	592/34 L					
DBW2	26264	590/53	590/55 L					
DBW20	26334	590/48	592/45 L					
DBW30	26406	595/01	595/11 L					
DBW5	26276	591/12	591/14	591/26 L				
DBW7	26303	591/37	591/39 L					
DBZT	25526	567/24 S	567/52 S	568/28	568/40	571/17 L		
		567/25 S	567/53 S	568/38	569/14			
DBZ1	25414	567/10	567/13 L					
DBZ3	25424	567/20	567/46 L					
DBZ4	25434	568/06	568/12 L					
DBZ6	25443	568/37 L	569/23					
DBZ7	25451	568/43	568/56 L					
DDUMP	25534	310/19	393/29	571/29 L	571/35	572/51	572/57	574/08
		331/22	394/24	571/31	571/38	572/56	573/15	
DDUMPA	25540	571/34	571/36 L					
DDUMPB	25555	572/02	572/06 L					
DDUMPC	25572	571/39	572/53 L					
DDUMPE	25553	571/48	572/01 L					
DDUMPF	25566	572/26	572/28 L					
DDUMPG	25557	572/08	572/10 L					
DDUMPJ	25551	571/49	571/52	571/54 L				

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DLAST4A	26064	584/07	584/13	L						
DLAST5	26067	584/11	584/16		584/21	L				
DLAST6	26072	583/40	584/27	L						
DLAST7	26075	583/43	584/35	L						
DLAST8	26100	584/34	584/42	L	584/56					
DLAST9	26105	584/48	584/54		584/57	L				
DLFLG	4061	76/02	L 167/02		170/22		173/30	539/57	S 547/49	S
		165/50	167/10	S	172/34		269/20	547/43	552/50	S
DLT	26166	247/36	331/42		394/40		587/48	588/10	589/20	
		331/35	393/34		587/45	L	588/04	589/10		
DLTA	26233	587/49	S 588/35		588/46		589/22	L		
DLTB	26234	588/26	S 588/55		589/23	L				
DLT0	26202	588/13	588/15	L						
DLT1	26211	588/33	L 588/52							
DLT2	26227	588/14	589/12	L						
DM	13337	233/31	299/43	L						
DSORT	26240	316/04	582/54		585/17		589/37	L 589/39	590/02	
DSORT1	26242	589/40	L 590/01							
DSORT2	26243	589/44	L 589/51							
DUP	13425	233/32	302/05	L						
DWORD	26252	256/26	261/21		262/05		263/10	264/10	265/06	267/32
		261/08	261/34		262/18		263/54	264/23	267/15	590/35
		261/08	261/34		262/18		263/54	264/23	267/15	559/15
DWORDC	26342	590/41	593/04	L						
DWORDP	26350	590/40	593/20	L						
DWORDP1	26370	593/54	594/02	L						
DWORDQ	26375	593/33	594/43	L						
DWORDX	26250	590/28	L 592/55		593/08		593/16	593/28	594/15	595/28
		590/39	592/57		593/10		593/25	594/01	595/09	
ECHO	12126	233/33	305/10	D						
EIF	14325	325/04	325/10		325/16		325/30	L		
EIFA	14332	325/33	S 325/42	L						
EIFB	14334	325/30	325/47	L						
EJECT	13535	232/33	305/32	L						
ELCNT	4063	76/04	L 167/36		540/08	S				
ELSE	12126	233/12	306/18	D						
END	13663	233/13	306/46		309/33	L 483/08				
ENDD	12126	232/34	319/37	D						
ENDIF	12126	233/14	320/14	D						
ENDM	12126	232/35	320/37	D						
ENDX	12126	233/34	321/05	D						
ENTREF	23545	327/26	525/13	L	525/18		554/11	563/30		
		357/13	525/15		525/45		561/16			
ENTREF1	23542	525/05	L 525/40							
ENTREF2	23543	525/09	L 525/37							
ENTRY	14263	233/35	322/04	L	323/13					
ENTRYC	14263	233/36	323/13	D						
ENT1	14266	322/10	L 322/14		322/27		322/32			
ENT3	14276	322/28	L							
ENT4	14277	322/25	322/30	L						
ENT5	14300	322/29	322/31	L						
ENT6	14301	322/12	322/33	L						
EQU	14311	233/37	234/25		323/37	L				
ERDIR	4117	76/24	L 316/30							
ERR	14312	233/38	324/04	L	325/43		325/48			
ERRLETS	4072	76/19	L 170/41		316/24		324/06			
ERRMI	14321	233/39	324/55	L						
ERRNG	14321	233/40	325/03	L						

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LINE	3673	75/48 L	173/34 S	312/14 S	314/28 S	317/42	529/26 S	535/27	541/13 S
		76/07	173/39	313/32 S	315/04 S	527/32 S	529/54 S	535/44 S	552/55 S
		164/26	183/48 S	313/39 S	315/13 S	528/25 S	531/10 S	536/23	
		165/13	183/55 S	314/02 S	315/16 S	528/35 S	531/47 S	537/06 S	
		165/57	187/22 S	314/14 S	316/37 S	528/38 S	532/21 S	540/53	
		170/25	187/31 S	314/19 S	317/35 S	528/54 S	535/01	540/54	
	LIST	15451	232/39	355/53 L					
	LISTER	7611	167/08	170/34	172/54	269/46	535/29	536/20	537/28
			167/13	172/05	247/22	397/12	535/30	536/25	537/33
			170/19 L	172/44	247/42	535/24	536/06	536/26	547/36
	LISTERF	7714	172/22 L	172/25	315/21	316/45			
	LISTERG	7720	172/33 L	252/46	261/35	263/11	264/24	280/48	299/13
			172/37	261/09	262/06	263/55	265/07	288/45	414/08
			172/45	261/22	262/19	264/11	280/32	294/57	415/51
	LISTL	7732	172/56 L	184/12	187/37	317/27	528/45	532/24	543/08
			173/13	186/35	313/57	356/01	531/22	542/29	
	LISTL1	7731	172/53 L	173/04					
	LIST2L	7737	173/12 L	173/18	314/31	527/40	531/49		
			173/15	310/11	317/46	529/28	541/32		
	LIT	15502	234/05	357/05 L					
	LIT1	15507	357/06	357/08	357/09	357/11	357/14 L		
	LLA	23563	269/16	269/35	292/32	525/53 L	526/07	526/10	561/05
	LLINE	4065	76/07 L	165/08 S	166/01	170/32	183/50 S	187/36 S	535/03 S
	LOC	15527	234/04	358/10 L					
	LOSTREF	4053	75/53 L	177/49 S	182/02	187/39	314/24		
			93/05	178/48	183/21 S	312/21	525/32		
	LPCNT	3602	75/33 L	171/50	183/57	305/34	397/04	533/07	
			166/23	181/43	186/46	315/32	397/18 S	540/10 S	
			167/30	181/50	292/42	315/49	401/17	547/25	
	LPCX	3603	75/34 L	525/19	547/29 S				
	LSG1	7724	172/35	172/38 L					
	LSG2	7727	172/42	172/44 L					
	LSLA	7662	171/41	171/48	172/07 L	172/12	561/33	561/41	
	LSLAL	5	171/48	172/12 D	561/41				
	LSLB	7667	171/05	172/14 L	175/50	538/33 S			
	LSL1	7622	170/23	170/38 L					
	LSL10	7657	171/34	171/49	172/02 L				
	LSL2	7625	170/44 L	170/50					
	LSL3	7626	170/44	170/47 L					
	LSL4	7636	171/09 L	171/15					
	LSL5	7640	171/16 L	171/22					
	LSL6	7645	171/31 L	171/33					
	LSL7	7647	170/21	170/53	171/38 L				
	LSL8	7651	171/42 L	171/47					
	LSL9	7654	171/39	171/50 L					
	LTX	7744	167/24	171/55	173/29 L	174/08			
	LTX1	7751	173/31	173/39 L					
	LTX2	7754	173/45 L	173/49	173/53				
	LTX3	7757	173/38	173/57 L					
	LTX4	7760	174/02 L	174/18					
	LTX5	7763	174/02	174/04 L					
	LTX6	7766	174/04	174/06 L					
	LXRF	3606	75/37 L	177/37	534/04 S	547/03			
	MACRO	12126	232/40	360/38 D					
	MACROE	12126	232/41	361/14 D					
	MAX	15626	234/06	362/39 L	362/47	368/20			
	MAXORG	3570	75/25 L	275/43	409/02 S	551/35 S	565/26	588/18	588/50
								589/09 S	

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PBN8	23657	528/43	528/45 L						
PBN9	23660	528/44	528/46 L						
PEP	23665	529/10 L	529/14	529/32	532/54				
PEP1	23677	529/29 L	531/23						
PEP2	23704	529/40 L	531/21						
PEP2A	23712	529/50	529/54 L						
PEP2B	23723	530/13	530/17 L						
PEP2C	23732	530/26	530/29 L						
PEP3	23735	530/34	530/38 L						
PEP3A	23741	530/46 L	530/49						
PEP4	23750	530/11	530/14	530/21	530/33	530/37	531/08 L		
PERIPH	12126	232/14	378/39 D						
PES	23757	531/31 L	531/33	531/55	532/55				
PES1	23770	531/51 L	532/25						
PES2	23776	532/09 L	532/23						
PET	10014	168/21	175/46 L	176/06	315/25				
PETA	10025	175/48 S	175/49	176/01	176/08 L				
PET1	10016	175/49 L	176/05						
PET2	10023	175/51	176/02 L						
PGCX	3604	75/35 L							
PLFLG	4062	76/03 L	165/55 S	538/16 S	546/55 S	552/49 S			
		164/21	535/07 S	540/24 S	547/24 S				
PLM	24005	247/06	532/33 L	533/45					
PLM1	24014	532/51 L	533/06						
PLM2	24026	533/03	533/07 L						
PLM3	24032	532/37	533/16 L						
PLM4	24034	533/21 L	533/31						
PLM5	24040	533/11	533/14	533/20	533/33 L				
PLO	24046	247/07	533/53 L	534/12					
PL01	24053	534/07 L	534/11						
PLT	24055	309/46	331/20	534/20 L	534/38	538/20			
PLT1	24076	534/45	535/01 L						
PLT10	24176	536/11	536/41	537/33 L					
PLT11	24177	536/19	537/34 L						
PLT12	24203	537/40	537/44 L						
PLT13	24211	537/54	537/56 L	538/03					
PLT14	24215	538/09 L	538/13						
PLT15	24217	537/47	538/14 L						
PLT16	24221	538/18 L							
PLT2	24110	535/19	535/24 L						
PLT3	24115	535/31 L	535/41	536/07					
PLT4	24127	535/47	535/57 L						
PLT5	24133	535/38	536/08 L						
PLT6	24135	535/15	535/23	536/16 L					
PLT7	24137	536/12	536/20 L						
PLT8	24147	536/34 L	537/29						
PLT9	24163	537/03	537/06 L						
PLT9A	24171	537/17	537/20 L						
POS	16212	234/12	379/40 L						
PPOP	12126	232/50	381/30 D						
PPU	12126	232/15	379/02 D						
PRS	24223	247/05	538/28 L	540/56					
PRS1	24226	538/34 L	538/36						
PRS4	24247	538/38	538/40	538/42	538/45	539/05	539/11	539/42 L	
PRS4A	24255	539/47	539/49	539/52 L					
PRS5	24271	540/14	540/19 L						
PRT	10036	177/07	177/36 L	177/38	317/55				

PRTX	10026	177/04	L	181/26	182/29	183/22
PRT1	10046	177/48		177/54	L	
PRT1A	10066	178/45	L	178/57		
PRT1B	10075	178/52		179/02	L	
PRT10	10125	179/55		180/19	L	
PRT11	10133	180/34	L	180/42	180/44	180/49
PRT12	10140	180/40		180/43	180/45	L
PRT13	10142	180/36		180/51	L	
PRT14	10145	181/03	L	181/21		
PRT15	10146	181/06	L	181/08		
PRT16	10152	181/04		181/18	L	
PRT16.1	10173	181/47		181/56	182/01	L
PRT17	10206	182/03		182/27	L	
PRT18	10211	182/35	L	183/10		
PRT1.1	10053	178/03		178/05	L	
PRT1.2	10055	178/04		178/06	L	
PRT2	10076	178/54		179/05	L	
PRT20	10214	182/43	L	183/06	183/09	
PRT21	10222	182/49		183/07	L	
PRT22	10224	182/39		183/14	L	
PRT23	10225	183/17	L	186/36	187/41	187/45
PRT24	10237	183/41		183/45	L	
PRT25	10252	184/04		184/06	184/10	L
PRT26	10253	184/09		184/12	L	
PRT27	10257	183/33		184/23	L	
PRT28	10261	184/29	L	184/32		
PRT30A	10276	184/54		185/06	L	
PRT31	10310	184/52		185/03	185/05	185/13 185/21 185/30 L
PRT32	10320	184/37		185/50	L	
PRT33	10321	185/48		185/52	L	
PRT34	10323	185/57	L	186/14	186/22	186/28 186/31
PRT35	10331	186/08		186/15	L	
PRT36	10336	186/16		186/25	L	
PRT37	10340	186/24		186/29	L	
PRT38	10343	186/02		186/33	L	
PRT39	10346	186/34		186/40	L	
PRT4	10104	179/17	L	179/18		
PRT40	10354	186/50		186/54	L	187/38
PRT41	10363	187/18	L	187/26		
PRT42	10367	187/15		187/29	L	187/34
PRT43	10372	187/28		187/36	L	
PRT44	10374	186/56		187/39	L	
PRT5	10107	179/16		179/19	L	
PRT7	10110	177/50		179/38	L	
PRT8	10114	179/48	L	179/53		
PRT9	10121	180/04	L	180/18		
PSN	24314	532/52		541/06	L	543/11
PSN1	24322	541/23	L	541/27		541/31
PSN2	24326	541/36	L	542/45		
PSN3	24342	541/51		542/05	L	
PSN4	24344	541/52		541/55	542/04	542/08 L
PSN5	24362	542/36		542/39	L	
PSN6	24365	542/38		542/46	L	
PSN7	24400	542/51		543/08	L	
PURGDEF	12126	232/51		382/03	D	
PURGMAC	12126	232/52		382/35	D	

P2TEMP	4066	76/09 L	247/31	256/21	298/23	376/37	396/55 S	531/37 S	550/08 S
		163/15	249/45 S	287/24 S	316/06 S	384/57 S	397/03	539/01 S	
		184/39 S	250/49	287/52 S	316/17	386/21	397/13	541/44 S	
		184/45	251/03	288/31	317/08	386/44	412/09 S	542/15	
		185/55 S	255/33 S	294/22 S	317/47	394/31 S	412/34	542/46	
		185/57	255/56	294/26	331/27	394/35	527/09 S	542/53	
		186/42 S	256/14 S	295/01	331/32	395/43 S	529/18 S	549/52 S	
		186/54	256/17	298/16 S	376/34 S	395/53	529/29	550/05 S	
P2TEMPA	4067	76/10 L	294/40	317/06 S	415/47 S	528/39	540/21	550/01 S	
		186/23	298/20 S	317/32	415/57	528/46	541/54	550/38 S	
		250/31	299/14	317/41	527/45	538/30 S	542/10 S	550/41	
P2TEMPB	4070	76/11 L	251/02	412/19 S	414/02	414/40	416/36	529/49	531/51
		250/26 S	316/28 S	413/42	414/16 S	415/16	416/53	531/08	
P2TEMPC	4071	76/12 L	317/24 S	317/28	412/47 S	412/54	415/38	529/37 S	529/40
QAL1	16321	383/56	384/11 L						
QAL2	16323	384/07	384/15 L						
QAL3	16326	384/17	384/23 L						
QNAME	3621	75/44 L	384/24 S	534/43 S	537/45 S				
QUAL	16313	232/53	383/54 L						
RBV	24403	259/26	543/21 L	543/28	543/55				
REFIO	4054	75/54 L	91/45 S	177/47	312/16	525/36	525/39		
REFLET	4055	75/55 L	253/23 S	255/09 S	337/11 S	342/13 S	540/43 S	563/29	
		250/25 S	253/37 S	322/07 S	337/15 S	344/38 S	558/06		
		251/01 S	253/44 S	322/36 S	342/07 S	344/42 S	558/14 S		
REP	16332	234/13	384/56 L						
REPC	16427	234/14	388/19 L						
REPI	16430	234/15	388/49 L						
RESORG	26413	376/36	563/47	588/32	592/56	595/42	596/30		
		551/37	566/48	590/45	595/38 L	595/43			
RESORG1	26424	595/46	596/12 L						
RIFA	4064	76/05 L	548/14	548/19	548/23	548/49 S			
RIF1	24561	548/14 L	548/53						
RIF2	24567	548/15	548/24 L						
RINT	24422	544/05 L	546/36	546/46	546/51				
RINTER	24511	247/13	247/53	546/50 L	547/34	547/42			
RINTRD	24575	544/06	548/51 L	549/13					
RINT1	24427	544/13	544/16 L						
RINT2	24431	544/19	544/22 L						
RINT3	24454	544/35	544/42	545/02	545/08	545/19 L			
RINT6	24501	546/17	546/19 L	546/23					
RIN1	24441	544/28	544/44 L						
RIN1A	24436	544/36 L	544/41						
RIN2	24444	544/26	544/52 L						
RIN3	24446	544/50	545/02 L						
RIN3A	24447	545/04 L	545/07						
RIN4	24451	545/03	545/10 L	545/17					
RIN5	24460	545/30 L	545/32	545/41	545/46	545/49			
RIN6	24461	545/28	545/33 L	545/42					
RIN7	24463	545/36	545/39 L						
RIN8	24465	545/39	545/43 L						
RIN9	24474	546/03 L	546/06						
RISA	24550	432/52	433/05	547/11	547/20	547/52 L	548/04		
RISAL	11	433/05	547/20	548/04 D					
RIS1	24507	546/46 L	546/48	547/35	547/41				
RIS2	24512	546/51 L	547/37						
RIS3	24524	547/14 L	547/19						
RIS4	24527	547/22 L							

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ZEVIT400	25057	554/56	556/52 L							
ZEVIT401	25065	556/57	557/03 L							
ZEVIT402	25063	556/55	556/56	557/01 L						
ZEVIT500	25100	554/46	554/48	557/31 L						
ZEVIT530	25114	557/35	558/01 L							
ZEVIT550	25133	558/21	558/35 L							
ZFOUP	25141	248/07	288/40	358/10	558/52 L	559/26	559/56	560/46	588/45	
		288/05	294/12	376/28	559/01	559/37	560/41	560/56		
ZFOUP1	25152	559/03	559/15 L							
ZFOUP2	25153	559/16 L								
ZFUALL	25166	309/45	331/19	393/27	394/19	559/52 L				
ZFUALT	25176	559/44	559/55 S	560/05	560/11 L					
ZFU1	25157	559/35 L	559/43	560/09						
ZLIST	12126	248/03	282/10	302/15	331/37	344/47	370/50	390/03	401/12	
		248/04	283/49	305/10	331/48	345/16	373/05	392/42	401/21	
		248/37	284/45	305/39	336/52	346/34	374/05	392/44	401/24	
		269/18	284/48	306/18	337/05	354/31	375/01	393/26	401/57	
		269/23	285/32	309/35	337/06	355/54	376/26	393/35	405/11	
		269/43 L	286/33	319/37	337/18	357/31	378/39	394/23	405/21	
		270/32	291/05	320/14	339/32	358/14	379/02	394/41	418/22	
		271/26	292/04	320/37	342/05	360/05	379/45	395/45	428/29	
		271/29	292/34	321/05	342/14	360/38	379/51	395/50	428/32	
		272/31	292/37	322/05	343/29	361/14	381/30	396/02	428/33	
		273/05	292/40	322/38	343/30	365/04	382/03	396/25		
		274/12	292/48	324/17	343/31	365/57	382/35	397/19		
		275/33	296/42	325/45	343/32	366/08	384/25	399/05		
		277/05	296/47	327/31	343/33	367/50	385/03	399/43		
		277/30	298/04	329/43	343/34	369/47	385/31	399/46		
		281/52	302/08	331/18	344/36	370/13	387/47	400/27		
ZLISTG	11321	252/04	256/44	262/31	265/26	274/30	275/41			
		252/46 L	258/18	263/23	266/50	274/40	417/07			
		254/28	261/47	264/36	267/40	274/43				
ZLIT1	25252	562/08 L	562/10	562/11	562/20	562/21				
ZLIT2	25254	562/14 L	562/19							
ZLLA	12125	269/35 L	358/21	376/38	376/41	427/49				
ZLST1	12130	269/44	269/46 L							
ZMACALL	12111	248/28	248/29	269/04 L						
ZMC	12021	253/07	266/15 L							
ZMCA	12105	266/24	268/41 L							
ZMCL1	12115	269/07	269/09	269/12 L						
ZMCL2	12120	269/11	269/15	269/17 L						
ZMC1	12027	266/28	266/30 L							
ZMC2	11321	266/50 D	268/42							
ZMC3	12036	266/55 L	267/48	268/30	268/43					
ZMC4	12040	267/06 L	268/39							
ZMC5	12042	266/56	267/01	267/13 L	268/12	268/38				
ZMC6	12056	267/25	267/35 L							
ZMC7	12061	267/46 L	268/44							
ZMC8	12073	268/16 L	268/45							
ZMSG	14222	314/44 S	314/57	315/11 S	315/19 S	315/20	319/12 L			
ZPP	11323	248/20	253/04 L							
ZPP1	11334	253/21	253/24 L							
ZPP1A	11342	253/35	253/38 L							
ZPP1B	11344	253/39	253/41 L							
ZPP100	11401	253/30	254/49 L							
ZPP101	11410	254/56	255/03	255/05	255/07 L					
ZPP102	11423	255/23	255/33 L							

ZPP102A	11431	255/39	255/44	255/47	L						
ZPP103	11435	255/50	255/54	L							
ZPP104	11437	255/17	255/20	256/02	L						
ZPP104A	11442	256/04	256/10	L							
ZPP105	11422	255/27	255/31	L							
ZPP106	11457	256/35	256/37	L							
ZPP21	11353	253/50	253/56	L							
ZPP22	11372	253/52	254/29	L							
ZPP23	11357	253/54	254/06	L							
ZPP24	11362	254/04	254/08	254/12	L	254/37	254/42	254/45			
ZPP25	11360	254/09	L	254/29	254/31						
ZPRLOC	25177	249/40	266/16	275/26	294/25	310/01	414/13	560/20	L	561/12	
		253/10	269/10	278/23	297/51	392/43	415/54	561/07	561/14		
		257/05	274/05	287/26	298/21	412/14	428/34	561/11	561/17		
ZPRLOCT	25233	560/39	S	560/42	561/19	L					
ZPRLOC1	25205	560/26	560/33	L							
ZPRLOC2	25207	560/32	560/35	560/37	L						
ZPRLOC3	25221	560/52	560/57	L							
ZPRLOC4	25217	560/49	560/53	L							
ZPRLOC5	25224	561/04	561/06	L							
ZP21A	11356	254/01	254/05	L							
ZREP	16333	384/57	L	388/20	388/50						
ZREPB	16353	385/21	385/32	L							
ZREPC	16364	385/23	385/52	L							
ZREPD	16366	385/26	386/02	L							
ZREPER	16351	385/18	385/28	L	385/35	385/44					
ZREPI	16370	385/24	386/09	L							
ZREPS	16372	385/27	386/16	L							
ZREPXX	16355	385/35	L	385/55	386/05	386/12	386/19				
ZREPXX1	16362	385/40	385/42	385/45	L						
ZREP1	16337	385/09	L	385/48							
ZREP10	16374	385/11	386/21	L							
ZREP11	16403	386/31	386/36	386/38	L						
ZREP12	16404	386/23	386/39	L							
ZREP13	16405	386/22	386/40	L							
ZREP14	16416	386/51	387/11	L							
ZREP15	16423	387/09	387/32	L							
ZTLIST	25234	305/32	396/49	561/29	L	561/45					
ZTLULIT	25246	557/10	561/56	L	562/29						
ZTLUSYM	25263	322/18	529/57	555/10	556/35	562/43	L	562/48	563/31		
ZTLUSYM1	25275	562/50	562/56	563/03	L						
ZTLUSYM3	25306	563/19	563/21	563/28	L						
ZTLUSYM6	25303	563/15	563/20	L							
ZTLU2	25270	562/45	562/49	L							
ZTLU2A	25273	562/53	562/57	L							
ZTLU4	25266	562/46	L								
ZTLU7	25301	563/16	L	563/24							
ZTL1	25240	561/35	L	561/40							
ZT5	11156	248/27	248/37	L							
ZUPLOC	25311	274/38	563/40	L	563/48						
ZUSR1	17226	409/07	409/16	L							
ZUSR1A	17225	409/09	409/15	L							
ZUSR2	17230	409/16	409/20	L							
ZUSR3	17233	409/10	409/13	409/18	409/26	409/28	L				
ZVFDA	17532	412/28	S	412/31	417/09	L					
ZVFD1	17327	412/15	L	415/53	415/55						
ZVFD2	17331	412/20	L	414/31							

SYMBOL QUALIFIER = DATA

AF	6563	137/39	L	138/46	144/47	154/52	155/19	155/32				
CCS	7262	155/44		156/18	156/44	159/17	159/42					
		156/03		156/31	157/02	159/21	L					
CCS1	7270	159/25		159/28	159/30	159/32	L					
CCS1.1	7273	159/36		159/41	L							
CCS2	7254	159/10	L	159/38								
CSA	7170	139/34		143/29	156/01	L						
CSC	7173	139/28		143/26	156/16	L						
CSH	7164	139/22		143/23	155/42	L						
CSL	7177	139/19		143/20	156/42	L						
CSR	7202	139/13		143/17	156/57	L						
CSZ	7175	139/10		143/14	156/29	L						
DCS	7136	139/11		139/14	139/20	139/23	139/29	139/35	154/33	L		
DCS1	7141	154/42	L	154/46								
DL	6562	137/38	L	149/46	157/20							
DO	6561	137/37	L	137/46	S	138/35	149/45	157/19				
DV	6541	137/16	L	142/33	S	143/38	144/23	S	145/51	147/09	147/37	155/05
EF	6547	137/21	L	145/31		148/21	149/43	150/11	S			
ERR	6603	138/30	L	143/43		145/11	146/13	149/21	151/40	155/16		
		138/53		143/44		145/14	148/48	149/54	154/51			
		140/57		144/45		145/17	149/03	150/13	155/08			
		142/21		145/04		145/20	149/16	151/19	155/11			
ES	6550	137/22	L									
ESC	7055	145/32		151/04	L							
EV	6551	137/23	L	145/53		146/17	S	146/52				
FC	6546	137/19	L	142/42	S	146/02						
FW	6564	137/40	L	158/12		158/47						
GCS	7204	155/49		156/08		156/21	156/34	156/47	157/05	157/19	L	
GCS1	7216	157/43	L	157/46								
GCS1A	7211	157/24		157/27		157/29	L					
GCS1B	7215	157/34		157/36		157/38	L					

1

SCV6	7015	148/24	148/28	148/33	L				
SCV7	7024	148/51	148/53	L					
SCV8	7026	148/53	148/55	148/57	L				
SCV9	7036	149/18	149/20	L					
SF	6552	137/25	L	145/22	S	155/48	S	158/45	159/23 S
SI	6540	137/15	L	138/10	S	149/47	160/26		
SS	6553	137/26	L						
SSC	7062	145/23	151/27	L					
SSV	7063	151/07	151/10	151/38	L				
SSV1	7067	151/43	151/48	L	152/02				
SSV2	7070	151/44	151/49	L					
SSV3	7074	151/51	151/52	152/04	L				
STC	7275	157/45	157/52	158/02		160/09	L	160/25	160/36
STCA	7312	160/20	161/20	L	162/45				
STCW	7307	95/43	96/14	160/40	L	283/25	283/46	309/21	310/43
STCX	7310	160/44	L	271/52	272/28				
STCZ	7311	95/39	96/11	160/48	L	283/20	283/43		
STC0	7276	95/45	S	160/15	L	272/30	S	283/48	S
		96/16	S	271/54	S	283/29	S	309/23	S
STC1	7274	160/05	L	160/30					
STC2	7301	160/19	160/25	L					
SV	6554	137/27	L	145/56	146/16	S	148/43	155/50	S
TPM	7075	147/41	147/57	152/16	L	152/52		156/49	S
TRS	6625	140/53	L	145/29	145/35	145/38		158/10	

SYMBOL QUALIFIER = COMCCPM

CPM1	10562	194/47	L	194/57
CPM=	10563	194/49	L	195/04

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ADDRESS LENGTH BINARY CONTROL CARDS.

0 0 IDENT AIDTEXT
0 END

IDENT AIDTEXT AIDTEXT 3
STEXT AIDTEXT 4

 ** REDEFINE *OBI BJ* TO BE ILLEGAL OPCODE. AIDTEXT 7

 'BB CPSYN OBB AIDTEXT 8
 AIDTEXT 9
 AIDTEXT 10

 PURGDEF OBB AIDTEXT 11

 OBB OPDEF I,J AIDTEXT 12

 0 ERR *OB_I B_J* REDEFINED FOR V AIDTEXT 13

 'B_I B_J AIDTEXT 14

 ENDM AIDTEXT 15
 AIDTEXT 16

 ** REDEFINE *RO BK* TO BE ILLEGAL OPCODE. AIDTEXT 18

 'OB CPSYN ROB AIDTEXT 19

 AIDTEXT 20
 AIDTEXT 21

 PURGDEF ROB AIDTEXT 22

 ROB OPDEF I AIDTEXT 23

 0 ERR *RO B_I* REDEFINED FOR V AIDTEXT 24

 'O B_I AIDTEXT 25

 ENDM AIDTEXT 26
 AIDTEXT 27

 ** REDEFINE *SB0 BJ+BK* TO BE ILLEGAL OPCODE. AIDTEXT 29

 #BB+B CPSYN SBB+B AIDTEXT 30

 AIDTEXT 31
 AIDTEXT 32

 PURGDEF SBB+B AIDTEXT 33

 SBB+B OPDEF I,J,K AIDTEXT 34

 0 ERRZR I *SB0 B_J+B_K* REDEFINED FOR V AIDTEXT 35

 #B_I B_J+B_K AIDTEXT 36

 ENDM AIDTEXT 37
 AIDTEXT 38

1412THE

** REDEFINE *SB0 BJ-BK* TO BE ILLEGAL OP CODE.

AIDTEXT 40

#BB-B CPSYN SBB-B

AIDTEXT 41

PURGDEF SBB-B

AIDTEXT 42

SBB-B OPDEF I,J,K

AIDTEXT 43

0 ERRZR I *SB0 B_J-B_K* REDEFINED FOR V

AIDTEXT 44

#B_I B_J-B_K

AIDTEXT 45

ENDM

AIDTEXT 46

AIDTEXT 47

AIDTEXT 48

AIDTEXT 49

** REDEFINE *SB0 -BJ+BK* TO BE ILLEGAL OP CODE.

AIDTEXT 51

#B-B+B CPSYN SB-B+B

AIDTEXT 52

PURGDEF SB-B+B

AIDTEXT 53

SB-B+B OPDEF I,J,K

AIDTEXT 54

0 ERRZR I *SB0 -B_J+B_K* REDEFINED FOR V

AIDTEXT 55

#B_I -B_J+B_K

AIDTEXT 56

AIDTEXT 57

AIDTEXT 58

AIDTEXT 59

AIDTEXT 60

** REDEFINE *SB0 BJ* TO BE ILLEGAL OP CODE.

AIDTEXT 62

#BB CPSYN SBB

AIDTEXT 63

PURGDEF SBB

AIDTEXT 64

SBB OPDEF I,J

AIDTEXT 65

0 ERRZR I *SB0 B_J* REDEFINED FOR V

AIDTEXT 66

#B_I B_J

AIDTEXT 67

AIDTEXT 68

AIDTEXT 69

AIDTEXT 70

AIDTEXT 71

** REDEFINE *SB0 -BJ* TO BE ILLEGAL OP CODE.

AIDTEXT 73

#B-B CPSYN SB-B

AIDTEXT 74

PURGDEF SB-B

AIDTEXT 75

SB-B OPDEF I,J

AIDTEXT 76

0 ERRZR I *SB0 -B_J* REDEFINED FOR V

AIDTEXT 77

#B_I -B_J

AIDTEXT 78

AIDTEXT 79

AIDTEXT 80

AIDTEXT 81

AIDTEXT 82

** REDEFINE *ERN D* TO BE ILLEGAL OPCODE.

AIDTEXT 84

#ER OPSYN ERN

AIDTEXT 85

PURGMAC ERN

AIDTEXT 86

ERN MACRO D

AIDTEXT 87

0 ERRNZ D *ERN _D* REDEFINED FOR V

AIDTEXT 88

#ER D

AIDTEXT 89

ENDM

AIDTEXT 90

AIDTEXT 91

AIDTEXT 92

AIDTEXT 93

** REDEFINE *RPN D* TO BE ILLEGAL OPCODE.

AIDTEXT 95

#RP OPSYN RPN

AIDTEXT 96

PURGMAC RPN

AIDTEXT 97

RPN MACRO D

AIDTEXT 98

0 ERR *RPN D* REDEFINED FOR V

AIDTEXT 99

#RP D

AIDTEXT 100

AIDTEXT 101

ENDM

AIDTEXT 102

AIDTEXT 103

AIDTEXT 104

** REDEFINE *PSN D* TO BE ILLEGAL OPCODE IF D.NE.0.

AIDTEXT 106

#SN OPSYN PSN

AIDTEXT 107

PURGMAC PSN

AIDTEXT 108

PSN MACRO D

AIDTEXT 109

0 ERRNZ D *PSN _D* REDEFINED FOR V

AIDTEXT 110

#SN D

AIDTEXT 111

AIDTEXT 112

AIDTEXT 113

ENDM

AIDTEXT 114

AIDTEXT 115

** REDEFINE *AJM M,D* TO BE ILLEGAL OPCODE IF D.GE.40B.

AIDTEXT 117

#AJ OPSYN AJM

AIDTEXT 118

PURGMAC AJM

AIDTEXT 119

AJM MACRO M,D

AIDTEXT 120

0 ERRPL D-40B *AJM _M,_D* REDEFINED FOR V

AIDTEXT 121

#AJ M,D

AIDTEXT 122

AIDTEXT 123

AIDTEXT 124

AIDTEXT 125

ENDM

AIDTEXT 126

** REDEFINE *IJM M,D* TO BE ILLEGAL OPCODE IF D.GE.40B.

AIDTEXT 128

#IJ OPSYN IJM

AIDTEXT 129

PURGMAC IJM

AIDTEXT 130

IJM MACRO M,D
0 ERRPL D-40B *IJM _M,_D* REDEFINED FOR V
#IJ M,D

AIDTEXT 131

AIDTEXT 132

AIDTEXT 133

AIDTEXT 134

AIDTEXT 135

AIDTEXT 136

ENDM

AIDTEXT 137

** REDEFINE *FJM M,D* TO BE ILLEGAL OPCODE IF D.GE.40B.

AIDTEXT 139

#FJ OPSYN FJM

AIDTEXT 140

PURGMAC FJM

AIDTEXT 141

AIDTEXT 142

FJM MACRO M,D
0 ERRPL D-40B *FJM _M,_D* REDEFINED FOR V
#FJ M,D
ENDM

AIDTEXT 143

AIDTEXT 144

AIDTEXT 145

AIDTEXT 146

AIDTEXT 147

AIDTEXT 148

** REDEFINE *EJM M,D* TO BE ILLEGAL OPCODE IF D.GE.40B.

AIDTEXT 150

#EJ OPSYN EJM

AIDTEXT 151

PURGMAC EJM

AIDTEXT 152

AIDTEXT 153

AIDTEXT 154

EJM MACRO M,D
0 ERRPL D-40B *EJM _M,_D* REDEFINED FOR V
#EJ M,D
ENDM

AIDTEXT 155

AIDTEXT 156

AIDTEXT 157

AIDTEXT 158

AIDTEXT 159

0 END

AIDTEXT 161

42000B CM STORAGE USED 159 STATEMENTS 0 SYMBOLS
PARALLEL CPU ASSEMBLY 0.057 SECONDS 0 REFERENCES

1412THE

ADDRESS LENGTH BINARY CONTROL CARDS.

0 0
0 (1)

IDENT NADTEXT
END

IDENT NADTEXT
BCU
STEXT

NADTEXT 3
NADTEXT 4
NADTEXT 5

* NAD MACRO PROTOTYPES.
DON CROUSE (04,15,81)

NADTEXT 8
NADTEXT 9

**
* NADOP - DEFINE BC INSTRUCTION MACRO.
* NADOP NAME,CTL,VAL
* ENTRY (NAME) = MNEMONIC NAME.

NADTEXT 11
NADTEXT 12
NADTEXT 13

* (CTL) = 0 - 4-BIT ADDRESS. (SAB)
* 1 - (16 - 4-BIT) ADDRESS. (SLC)
* 2 - (15 - 4-BIT) ADDRESS. (TAB)
* 3 - 8-BIT ADDRESS. (ADN)
* 4 - 9-BIT RELATIVE ADDRESS. (UJR)
* 5 - 4-BIT CHANNEL AND NO ADDRESS. (IAN)
* 6 - 8-BIT ADDRESS AND OPTIONAL
* INDEXING. (LDD)
* 7 - 4-BIT CHANNEL AND 4-BIT ADDRESS. (INT)
* 8 - 16 BIT INSTRUCTION,NO ADDRESS (JFA)
* 9 - 8 BIT ADDRESS BACKWARD ONLY (RTB)
* 10 - 12-BIT ADDRESS. (FNA)
* 11 - 2 16-BIT ADDRESS I/O. (IAM)
* WITH 2 INSTRUCTION PARAMETERS.
* 12 - 2 16-BIT ADDRESS. (TST)
* WITH 3 INSTRUCTION PARAMETERS.
* 13 - 7 BIT ADDRESS (BIT 8 SET = BACKWARD) (L1R)
* (BIT 8 ZERO = FORWARD)
* 14 - 16 BIT INSTRUCTION WITH 16 BIT
* ADDRESS. (LJM)
* 15 - 16 BIT INSTRUCTION WITH 3 16 BIT
* ADDRESSES (QGT)
* 16 - 4 BIT ADDRESS AND 15-4 BIT FLAG. (SCM)
* 17 - 16 BIT INSTRUCTION AND 16 BIT RELATIVE
* FORWARD ADDRESS. (CCU)

NADTEXT 14
NADTEXT 15
NADTEXT 16
NADTEXT 17
NADTEXT 18
NADTEXT 19
NADTEXT 20
NADTEXT 21
NADTEXT 22
NADTEXT 23
NADTEXT 24
NADTEXT 25
NADTEXT 26
NADTEXT 27
NADTEXT 28
NADTEXT 29
NADTEXT 30
NADTEXT 31
NADTEXT 32
NADTEXT 33
NADTEXT 34
NADTEXT 35
NADTEXT 36
NADTEXT 37

* (VAL) = 16-BIT OPERATION CODE VALUE.

NADTEXT 38
NADTEXT 39

*
PURGMAC NADOP

NADTEXT 40
NADTEXT 41
NADTEXT 42

NADOP MACRO NAME,CTL,VAL PERIPHERAL MACHINE CODES
NAME NDOP CTL,0#_VAL
ENDM

NADTEXT 43
NADTEXT 44
NADTEXT 45
NADTEXT 46

NADTEXT 48

NADTEXT	50
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NADTEXT	52
NADTEXT	50

NADTEXT	54
NADTEXT	55

NADTEXT	56
NADTEXT	57

NADTEXT	38
NADTEXT	59

NADTEXT	80
NADTEXT	61

NADTEXT	62
NADTEXT	63

NADTEXT	65
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NADTEXT 67

NADTEXT 69

NADTEXT	71
NADTEXT	70

NADTEXT	73
NADTEXT	74

NADTEXT	75
NADTEXT	76

NADTEXT	77
NADTEXT	78

NADTEXT	79
NADTEXT	80

NADTEXT	81
NADTEXT	82

NADTEXT	84
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NADTEXT 87

NADTEXT	89
NADTEXT	89

NADTEXT1	91
NADTEXT2	92

NADTEXT	93
NADTEXT	94

NADTEXT	93
NADTEXT	96

NADTEXT	97
NADTEXT	98

NADTEXT 99

	0	NADOP	E1D,6,2000	NADTEXT	101	
	0	NADOP	EN1,3,2000	NADTEXT	102	
	0	NADOP	IN1,3,2100	NADTEXT	103	
1	0	NADOP	EI1,3,2200	NADTEXT	104	1
2	0	NADOP	E1R,4,2300	NADTEXT	105	2
3	0	NADOP	E1I,6,2400	NADTEXT	106	3
4	0	NADOP	LB1,6,2400	NADTEXT	107	4
5	0	NADOP	LI1,6,2400	NADTEXT	108	5
6	0	NADOP	E2D,6,2800	NADTEXT	109	6
7	0	NADOP	EN2,3,2800	NADTEXT	110	7
8	0	NADOP	EI2,3,2900	NADTEXT	111	8
9	0	NADOP	IN2,3,2A00	NADTEXT	112	9
10	0	NADOP	E2R,4,2B00	NADTEXT	113	10
11	0	NADOP	E2I,6,2C00	NADTEXT	114	11
12	0	NADOP	LB2,6,2C00	NADTEXT	115	12
13	0	NADOP	LI2,6,2C00	NADTEXT	116	13
14						14
15						15
16	0	NADOP	T1D,6,3000	NADTEXT	118	16
17	0	NADOP	T1R,4,3300	NADTEXT	119	17
18	0	NADOP	T1I,6,3400	NADTEXT	120	18
19	0	NADOP	T2D,6,3800	NADTEXT	121	19
20	0	NADOP	T2R,4,3B00	NADTEXT	122	20
21	0	NADOP	T2I,6,3C00	NADTEXT	123	21
22						22
23						23
24	0	NADOP	LDD,6,4000	NADTEXT	125	24
25	0	NADOP	LDR,4,4300	NADTEXT	126	25
26	0	NADOP	LDI,6,4400	NADTEXT	127	26
27	0	NADOP	LCD,6,4800	NADTEXT	128	27
28	0	NADOP	LCR,4,4B00	NADTEXT	129	28
29	0	NADOP	LCI,6,4C00	NADTEXT	130	29
30						30
31						31
32	0	NADOP	LUD,6,5000	NADTEXT	132	32
33	0	NADOP	LUR,4,5300	NADTEXT	133	33
34	0	NADOP	LUI,6,5400	NADTEXT	134	34
35	0	NADOP	LLD,6,5800	NADTEXT	135	35
36	0	NADOP	LLR,4,5B00	NADTEXT	136	36
37	0	NADOP	LLI,6,5C00	NADTEXT	137	37
38						38
39						39
40						40
41						41
42						42
43						43
44						44
45						45
46						46
47						47
48						48
49						49
50						50
51						51
52						52
53						53
54						54
55						55
56						56
57						57
58						58
59						59
60						60

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	0	NADOP	ADD,6,6000	NADTEXT	139	
	0	NADOP	ADR,4,6300	NADTEXT	140	
	0	NADOP	ADI,6,6400	NADTEXT	141	
1	0	NADOP	SBD,6,6800	NADTEXT	142	1
2	0	NADOP	SBR,4,6B00	NADTEXT	143	2
3	0	NADOP	SBI,6,6C00	NADTEXT	144	3
4						4
5						5
6	0	NADOP	LMD,6,7000	NADTEXT	146	6
7	0	NADOP	LMR,4,7300	NADTEXT	147	7
8	0	NADOP	LMI,6,7400	NADTEXT	148	8
9	0	NADOP	LPD,6,7800	NADTEXT	149	9
10	0	NADOP	LPR,4,7B00	NADTEXT	150	10
11	0	NADOP	LPI,6,7C00	NADTEXT	151	11
12						12
13						13
14	0	NADOP	RAD,6,8000	NADTEXT	153	14
15	0	NADOP	RAR,4,8300	NADTEXT	154	15
16	0	NADOP	RAI,6,8400	NADTEXT	155	16
17	0	NADOP	AOD,6,8800	NADTEXT	156	17
18	0	NADOP	AOR,4,8B00	NADTEXT	157	18
19	0	NADOP	AOI,6,8C00	NADTEXT	158	19
20						20
21						21
22	0	NADOP	RUD,6,9000	NADTEXT	160	22
23	0	NADOP	RUR,4,9300	NADTEXT	161	23
24	0	NADOP	RUI,6,9400	NADTEXT	162	24
25	0	NADOP	RLD,6,9800	NADTEXT	163	25
26	0	NADOP	RLR,4,9B00	NADTEXT	164	26
27	0	NADOP	RLI,6,9C00	NADTEXT	165	27
28						28
29						29
30	0	NADOP	STD,6,A000	NADTEXT	167	30
31	0	NADOP	STR,4,A300	NADTEXT	168	31
32	0	NADOP	STI,6,A400	NADTEXT	169	32
33	0	NADOP	CLD,6,A800	NADTEXT	170	33
34	0	NADOP	CLR,4,AB00	NADTEXT	171	34
35	0	NADOP	CLI,6,AC00	NADTEXT	172	35
36						36
37						37
38	0	NADOP	SJD,6,B000	NADTEXT	174	38
39	0	NADOP	SJR,4,B300	NADTEXT	175	39
40	0	NADOP	SJI,6,B400	NADTEXT	176	40
41	0	NADOP	UJD,6,B800	NADTEXT	177	41
42	0	NADOP	UJR,4,BB00	NADTEXT	178	42
43	0	NADOP	UJI,6,BC00	NADTEXT	179	43
44						44
45						45
46						46
47						47
48						48
49						49
50						50
51						51
52						52
53						53
54						54
55						55
56						56
57						57
58						58
59						59
60						60

1412THE

	0	NADOP	ZJD,6,C000	NADTEXT	181	
	0	NADOP	ZJR,4,C300	NADTEXT	182	
	0	NADOP	ZJI,6,C400	NADTEXT	183	
1	0	NADOP	NJD,6,C800	NADTEXT	184	1
2	0	NADOP	NJR,4,CB00	NADTEXT	185	2
3	0	NADOP	NJI,6,CC00	NADTEXT	186	3
4						4
5						5
6	0	NADOP	PJD,6,D000	NADTEXT	188	6
7	0	NADOP	PJR,4,D300	NADTEXT	189	7
8	0	NADOP	PJI,6,D400	NADTEXT	190	8
9	0	NADOP	MJD,6,D800	NADTEXT	191	9
10	0	NADOP	MJR,4,DB00	NADTEXT	192	10
11	0	NADOP	MJI,6,DC00	NADTEXT	193	11
12						12
13						13
14	0	NADOP	TJD,6,E000	NADTEXT	195	14
15	0	NADOP	TJR,4,E300	NADTEXT	196	15
16	0	NADOP	TJI,6,E400	NADTEXT	197	16
17	0	NADOP	FJD,6,E800	NADTEXT	198	17
18	0	NADOP	FJR,4,EB00	NADTEXT	199	18
19	0	NADOP	FJI,6,EC00	NADTEXT	200	19
20						20
21						21
22	0	NADOP	XIS,3,F000	NADTEXT	202	22
23	0	NADOP	RIP,3,F100	NADTEXT	203	23
24	0	NADOP	EIN,3,F200	NADTEXT	204	24
25	0	NADOP	DIN,3,F300	NADTEXT	205	25
26	0	NADOP	RTI,3,F400	NADTEXT	206	26
27	0	NADOP	RTB,9,F500	NADTEXT	207	27
28	0	NADOP	CCU,17,F600	NADTEXT	208	28
29	0	NADOP	CCL,17,F601	NADTEXT	209	29
30	0	NADOP	EIC,3,F700	NADTEXT	210	30
31	0	NADOP	L1R,13,F800	NADTEXT	211	31
32	0	NADOP	L2R,13,F900	NADTEXT	212	32
33	0	NADOP	LJM,14,FA00	NADTEXT	213	33
34	0	NADOP	CAS,3,FA00	NADTEXT	214	34
35	0	NADOP	QPT,12,FB00	NADTEXT	215	35
36	0	NADOP	QPB,12,FB01	NADTEXT	216	36
37	0	NADOP	QB2,12,FB11	NADTEXT	217	37
38	0	NADOP	QB1,12,FB21	NADTEXT	218	38
39	0	NADOP	QB3,12,FB31	NADTEXT	219	39
40	0	NADOP	QGT,15,FB02	NADTEXT	220	40
41	0	NADOP	QG2,15,FB12	NADTEXT	221	41
42	0	NADOP	QG1,15,FB22	NADTEXT	222	42
43	0	NADOP	QG3,15,FB32	NADTEXT	223	43
44	0	NADOP	QCL,12,FB03	NADTEXT	224	44
45	0	NADOP	PSM,3,FD00	NADTEXT	225	45
46	0	NADOP	POM,3,FE00	NADTEXT	226	46
47	0	NADOP	RID,8,FF00	NADTEXT	227	47
48	0	NADOP	JFA,8,FF01	NADTEXT	228	48
49	0	NADOP	JFA1,8,FF02	NADTEXT	229	49
50						50
51						51
52						52
53						53
54						54
55						55
56						56
57						57
58						58
59						59
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1412THE

ADDRESS		LENGTH	BINARY CONTROL CARDS.						
1	0	12066	IDENT	CDCM					
2	12066		END	CDCM					
4			BLOCKS	TYPE	ADDRESS	LENGTH			
6			PROGRAM*	LOCAL	0	12052			
7			LITERALS*	LOCAL	12052	14			
10			ENTRY POINTS.						
12			CDCM	37+					
15			EXTERNAL SYMBOLS.						
17			DXB=	MSG=	UPC=	RDH=	WTO=	CIO=	CMM.GFS
18			SYS=	SFN=	WTH=	CPM=	WTW=	RDW=	CMM.GLV
22									
23			IDENT	CDCM				CDCM	2
24								CDCM	3
25			COMMENT	CDCM V1.0 - CHECK DANGEROUS CODE MODIFICATION.				CDCM	5
31									
37									
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1412THE

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		*	*****		CDCMOPT	47
		*	* INTLTH		* CDCMOPT	48
		*	*		* CDCMOPT	49
1		*	* LENGTH OF INTERMEDIATE FILE HEADER + REFERENCE WORDS.		* CDCMOPT	50
2		*	* MAY NOT BE LESS THAN 2.		* CDCMOPT	51
3		*	* NUMBER OF REFERENCE WORDS = INTLTH - 1		* CDCMOPT	52
4		*	* TOTAL LENGTH OF EACH INT. ENTRY = INTLTH + LINELTH		* CDCMOPT	53
5	3	INTLTH	EQU 3		* CDCMOPT	54
6						
7						
8						
9						
10		*	*****		CDCMOPT	56
11		*	* LINELTH		* CDCMOPT	57
12		*	*		* CDCMOPT	58
13		*	* MAXIMUM LENGTH IN CM WORDS OF SOURCE LINES READ FROM		* CDCMOPT	59
14		*	* THE COMPILE FILE AND ALSO THE AMOUNT STORED IN THE		* CDCMOPT	60
15		*	* INTERMEDIATE FILE. SHOULD NOT HAVE TO BE CHANGED,		* CDCMOPT	61
16		*	* BECAUSE 170 PRODUCTS NORMALLY HAVE A COMPILE FILE IN		* CDCMOPT	62
17		*	* WHICH THE UPDATE SEQUENCE NUMBER EXTENDS TO COLUMN 80.		* CDCMOPT	63
18	11	LINELTH	EQU 9		* CDCMOPT	64
19		*	*****		CDCMOPT	65
20						
21						
22						
23						
24		*	*****		CDCMOPT	67
25		*	* MAXC		* CDCMOPT	68
26		*	*		* CDCMOPT	69
27		*	* LARGEST AMOUNT OF CM THAT WILL BE USED FOR THE		* CDCMOPT	70
28		*	* INTERMEDIATE FILE. IF CM IS USED, IT IS MAINTAINED		* CDCMOPT	71
29		*	* BY USE OF A CMM VARIABLE-POSITION BLOCK. IF IT		* CDCMOPT	72
30		*	* OVERFLOWS, THEN THE ENTIRE WORKSPACE IS COPIED TO		* CDCMOPT	73
31		*	* MASS-STORAGE, BUT WHEN IT IS SHRUNK AND RE-WRITTEN,		* CDCMOPT	74
32		*	* IT WILL AGAIN BE STORED IN CM, SINCE MOST PROGRAMS		* CDCMOPT	75
33		*	* WILL NOT INVOLVE WORKSPACE OVERFLOW. THE VALUE FOR		* CDCMOPT	76
34		*	* *MAXC* SHOULD BE LIMITED SO AS NOT TO PLACE AN UNDUE		* CDCMOPT	77
35		*	* BURDEN ON THE SYSTEM - PROBABLY NO MORE THAN 200000B.		* CDCMOPT	78
36		*	* NOTE THAT IF A LARGER AMOUNT OF LCM CAN BE OBTAINED,		* CDCMOPT	79
37		*	* THEN LCM AND NOT CM WILL BE USED FOR THE WORKSPACE.		* CDCMOPT	80
38	140000	MAXC	EQU 140000B		* CDCMOPT	81
39		*	*****		CDCMOPT	82
40						
41						
42						
43						
44		*	*****		CDCMOPT	84
45		*	* MAXL		* CDCMOPT	85
46		*	*		* CDCMOPT	86
47		*	* LARGEST AMOUNT OF LCM THAT WILL BE USED FOR THE		* CDCMOPT	87
48		*	* INTERMEDIATE FILE. LCM IS USED IN PREFERENCE TO CM		* CDCMOPT	88
49		*	* FOR THE WORKSPACE ACCORDING TO THE ALGORITHM		* CDCMOPT	89
50		*	* DESCRIBED IN THE ROUTINE *CWS*. IF THE WORKSPACE		* CDCMOPT	90
51		*	* OVERFLOWS AVAILABLE LCM, THEN THE ENTIRE WORKSPACE IS		* CDCMOPT	91
52		*	* COPIED TO MASS-STORAGE, BUT EACH TIME IT IS SHRUNK		* CDCMOPT	92
53		*	* AND RE-WRITTEN, THE STORING IN LCM IS RESUMED.		* CDCMOPT	93
54	200000	MAXL	EQU 200000B		* CDCMOPT	94
55						
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1412THE

* ***** CDCMOPT 95



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65 ** CONCATENATION MARK (DISPLAY CODE).
CONCAT EQU 65B PRINT 1 RIGHT-ARROW OR PRINT 2 UNDERSCORE

CDCMOPT 97
CDCMOPT 98
CDCMOPT 99

36 ** DEFAULT STARTING COMMENT COLUMN.

DEFCOL EQU 30D

CDCMOPT 100
CDCMOPT 101
CDCMOPT 102
CDCMOPT 103
CDCMOPT 104
CDCMOPT 105

64 ** MICRO SUBSTITURION MARK (DISPLAY CODE).

MICMARK EQU 64B PRINT 1 NOT-EQUAL OR PRINT 2 DOUBLE-QOUTE

CDCMOPT 106
CDCMOPT 107
CDCMOPT 108
CDCMOPT 109
CDCMOPT 110
CDCMOPT 111

SST
B1=1

CDCM 7
CDCM 8
CDCM 9

1412THE

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**          FORMAT OF INTERMEDIATE FILE.          CDCM      11
*          CDCM      12
*          CDCM      13
*          THE LENGTH OF INTERMEDIATE ENTRIES IS DETERMINED BY THE
*          CDCM      14
*          SYMBOLS *INTLTH* AND *LINELTH*.  BOTH ARE DEFINED IN
*          CDCM      15
*          COMDECK *CDCMOPT*.          CDCM      16
*          CDCM      17
*          WORD 0 = HEADER WORD:          CDCM      18
*          CDCM      19
*          1/F,50/0,9/QI          CDCM      20
*          CDCM      21
*          CDCM      22
*          WORDS 1 -> INTLTH = REFERENCE WORDS:          CDCM      23
*          CDCM      24
*          1/E,1/0,1/G,9/Q,48/SYM          CDCM      25
*          CDCM      26
*          CDCM      27
*          CDCM      28
*          WORDS INTLTH+1 -> INTLTH+LINELTH = LINE IMAGE WORDS:          CDCM      29
*          CDCM      30
*          CONTENTS OF LINE IMAGE          CDCM      31
*          CDCM      32
*          CDCM      33
*          WHERE F      = 1 IF THE STATEMENT IS TO BE LISTED.          CDCM      34
*          CDCM      35
*          QI      = QUALIFIER INDEX OF THE QUAL BLOCK CONTAINING THE
*          CDCM      36
*          INSTRUCTION.  ZERO IF IN THE GLOBAL BLOCK.          CDCM      37
*          CDCM      38
*          E      = 1 IF SYMBOL IS AN EXTERNAL.          CDCM      39
*          CDCM      40
*          G      = 1 IF SYMBOL IS EXPLICITLY QUALIFIED.          CDCM
*          Q      = QUAL INDEX OF SYMBOL (0 IF EXPLICIT GLOBAL QUALIFIER).          CDCM
*          SYM      = NAME OF A SYMBOL RELATED TO THE STORE  (OR ZERO).          CDCM
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**				MANAGED TABLES.	CDCM	42
*					CDCM	43
*					CDCM	44
*				THESE TABLES ARE KEPT AS CMM VARIABLE-POSITION BLOCKS. FOR	CDCM	45
*				A DESCRIPTION OF THE TABLE POINTERS, SEE ROUTINE *ADW*.	CDCM	46
**				O.ENT - ENTRY POINT NAMES.	CDCM	48
*					CDCM	49
*				ENTRY = 1 WORD.	CDCM	50
*					CDCM	51
*				VFD 42/NAME,18/0	CDCM	52
*					CDCM	53
*				NAME = ENTRY POINT NAME, LEFT JUSTIFIED ZERO FILL.	CDCM	54
					CDCM	55
0	0000000000000000000000	O.ENT	VFD	30/0,30/0 WORD 0 - CMM POINTER WORD	CDCM	56
1	0000000000000000000000		VFD	42/0,18/0 WORD 1 - USER LENGTH	CDCM	57
2	0000000000000000000200		VFD	42/0,18/200B WORD 2 - INCREASE AMOUNT	CDCM	58
**				O.EXT - EXTERNAL NAMES.	CDCM	60
*					CDCM	61
*				ENTRY = 1 WORD.	CDCM	62
*					CDCM	63
*				VFD 42/NAME,18/0	CDCM	64
*					CDCM	65
*				NAME = EXTERNAL NAME, LEFT JUSTIFIED ZERO FILL.	CDCM	66
					CDCM	67
3	0000000000000000000000	O.EXT	VFD	30/0,30/0 WORD 0 - CMM POINTER WORD	CDCM	68
4	0000000000000000000000		VFD	42/0,18/0 WORD 1 - USER LENGTH	CDCM	69
5	0000000000000000000200		VFD	42/0,18/200B WORD 2 - INCREASE AMOUNT	CDCM	70
**				O.LOC - LOCATION SYMBOLS.	CDCM	72
*					CDCM	73
*				ENTRY = 1 WORD.	CDCM	74
*					CDCM	75
*				VFD 1/E,2/0,9/Q,48/NAME	CDCM	76
*					CDCM	77
*				E = 1 IF SYMBOL IS AN ENTRY POINT.	CDCM	78
*				Q = NZ - QUALIFIER INDEX (INDEX INTO *O.QUL*).	CDCM	79
*				0 - UNQUALIFIED SYMBOL.	CDCM	80
*				NAME = LOCATION SYMBOL NAME.	CDCM	81
					CDCM	82
6	0000000000000000000000	O.LOC	VFD	30/0,30/0 WORD 0 - CMM POINTER WORD	CDCM	83
7	0000000000000000000000		VFD	42/0,18/0 WORD 1 - USER LENGTH	CDCM	84
10	0000000000000000000010		VFD	42/0,18/10B WORD 2 - INCREASE AMOUNT	CDCM	85

** O.QUL - QUALIFIER NAMES. CDCM 87
* CDCM 88
* CONTAINS ONE ENTRY FOR EACH UNIQUE QUALIFIER NAME IN THE CDCM 89
* PROGRAM. THE TABLE IS EMPTY IF NO QUALIFIERS ARE PRESENT. CDCM 90
* CDCM 91
* ENTRY = 1 WORD. CDCM 92
* CDCM 93
* VFD 48/NAME,12/0 CDCM 94
* CDCM 95
* NAME = QUALIFIER NAME. CDCM 96
* CDCM 97
11 000000000000000000000000 O.QUL VFD 30/0,30/0 WORD 0 - CMM POINTER WORD CDCM 98
12 000000000000000000000000 VFD 42/0,18/0 WORD 1 - USER LENGTH CDCM 99
13 000000000000000000000010 VFD 42/0,18/10B WORD 2 - INCREASE AMOUNT CDCM 100

** O.QUS - QUALIFIER STACK. CDCM 102
* CDCM 103
* LENGTH DEPENDS ON THE CURRENT SELECTION OF QUALIFIERS IN CDCM 104
* EFFECT AT ANY GIVEN TIME FOR THE CURRENT PROGRAM. CDCM 105
* CDCM 106
* ENTRY = 1 WORD. CDCM 107
* CDCM 108
* VFD 51/0,9/QI CDCM 109
* CDCM 110
* QI = QUALIFIER INDEX = INDEX INTO *O.QUL*. CDCM 111
* ZERO IF QUALIFIER IN EFFECT IS THE GLOBAL BLOCK. CDCM 112
CDCM 113
14 000000000000000000000000 O.QUS VFD 30/0,30/0 WORD 0 - CMM POINTER WORD CDCM 114
15 000000000000000000000000 VFD 42/0,18/0 WORD 1 - USER LENGTH CDCM 115
16 000000000000000000000010 VFD 42/0,18/10B WORD 2 - INCREASE AMOUNT CDCM 116

1412THE

** GLOBAL VALUES.

CDCM	118
CDCM	119
CDCM	120
CDCM	121
CDCM	122
CDCM	123
CDCM	124
CDCM	125
CDCM	126
CDCM	127
CDCM	128
CDCM	129
CDCM	130
CDCM	131
CDCM	132
CDCM	133
CDCM	134
CDCM	135
CDCM	136
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CDCM	162

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1412THE

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** CDCM - MAIN LOOP.
*

CDCM	164
CDCM	165
CDCM	166
CDCM	167
CDCM	168
CDCM	169
CDCM	170
CDCM	171
CDCM	172
CDCM	173
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CDCM	175
CDCM	176
CDCM	177
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CDCM	179
CDCM	180
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CDCM	213
CDCM	214
CDCM	215
CDCM	216
CDCM	217
CDCM	218
CDCM	219
CDCM	220

37	6110000001	CDCM	ENTRY	CDCM	MAIN *CDCM* ENTRY POINT
	0100011637 +		RJ	/SCO/SCO	SET CONTROL STATEMENT OPTIONS
40	0100001260 +		RJ	CWS	COMPUTE WORK SPACE SIZE
41	0100001421 +		RJ	INF	INITIALIZE FILES
		**			PASS 1. CONSISTS OF READING THE COMPILE FILE AND BUILDING
		*			TABLES. MOST OF THE WORK IS DONE IN PASS 1, BECAUSE IT ALSO
		*			CONSISTS OF READING THE INTERMEDIATE FILE AS CREATED FOR
		*			EACH PROGRAM AND SHRINKING IT OF ALL ENTRIES WHICH ARE
		*			NEITHER IN LOCATION TABLE *O.LOC* NOR CONTAIN ONE OR MORE
		*			REFERENCES TO EXTERNALS.
		*			
42	0100001462 +	CD10	RJ	NXTLINE	READ NEXT LINE
43	0311000045 +		NZ	X1,CD20	IF EOF - PASS 1 COMPLETE
	0100000257 +		RJ	PCS	PROCESS CURRENT STATEMENT
44	0400000042 +		EQ	CD10	PASS 1 LOOP
		**			PASS 2. CONSISTS OF MAKING ONE FINAL CHECK THROUGH THE
		*			INTERMEDIATE FILE FOR ENTRIES TO BE LISTED DUE TO MATCHING
		*			ENTRY POINTS/EXTERNALS AND THEN WRITING THE LIST OUTPUT.
		*			
45	0100001343 +	CD20	RJ	RWF	REWIND INTERMEDIATE FILE
46	0100001312 +	CD21	RJ	RIF	READ INTERMEDIATE FILE
47	0311000072 +		NZ	X1,CD50	IF COMPLETED
	5130001327 +		SA3	INTENT	
50	0333000063 +		MI	X3,CD26	IF THIS ENTRY TO BE LISTED
		*			MAKE FINAL CHECK FOR A MATCH WITH AN *O.LOC* ENTRY IN ORDER
		*			TO PICK UP THOSE ENTRIES WHICH REFERENCE EXTERNALS.
	66510		SB5	B1	INDEX FOR WORD WITHIN ENTRY
51	6160000003		SB6	INTLTH	MAXIMUM INDEX + 1
52	5125001327 +	CD22	SA2	B5+INTENT	NEXT SYMBOL (IF ZERO)
	0312000055 +		NZ	X2,CD24	IF A SYMBOL PRESENT
53	66551	CD23	SB5	B5+B1	ADVANCE INDEX
	0756000052 +		LT	B5,B6,CD22	LOOP FOR NUMBER OF SYMBOLS POSSIBLE (2)
54	0400000046 +		EQ	CD21	DO NOT LIST THIS ENTRY
		*			SEARCH *O.LOC* FOR CURRENT SYMBOL NAME.
55	5110000006 +	CD24	SA1	O.LOC	FWA OF *O.LOC*
	10722		BX7	X2	
	54311		SA3	A1+B1	LENGTH OF *O.LOC*
56	36413		IX4	X1+X3	(B4) = LWA+1 *O.LOC*
	0303000053 +		ZR	X3,CD23	IF *O.LOC* EMPTY
	63440		SB4	X4	
57	56540		SA5	B4	SAVE (LWA+1)
	56740		SA7	B4	STORE TARGET AT (LWA+1)
	5241777776		SA4	X1-1	FIRST - 1 ENTRY
60	54441	CD25	SA4	A4+B1	NEXT ENTRY

13342		BX3	X4-X2		CDCM	221
0313000060 +		NZ	X3,CD25	LOOP UNTIL MATCH	CDCM	222
61 10655		BX6	X5	RESTORE (LWA+1)	CDCM	223
64340		SB3	A4		CDCM	224
56640		SA6	B4		CDCM	225
62 0434000053 +		EQ	B3,B4,CD23	IF SYMBOL NOT FOUND	CDCM	226
					CDCM	227
	*			SYMBOL MATCHES WITH AN *O.LOC* ENTRY. THIS ENTRY WAS FOR A	CDCM	228
	*			REFERENCE TO AN EXTERNAL.	CDCM	229
					CDCM	230
	*			LIST THE SOURCE LINE REPRESENTED BY THIS ENTRY, PROVIDED	CDCM	231
	*			LIST OUTPUT WAS SELECTED AND THE PRINT LIMIT HAS NOT BEEN	CDCM	232
	*			EXCEEDED.	CDCM	233
					CDCM	234
63 5120000022 +	CD26	SA2	PRINTCT	ADVANCE NUMBER OF LINES LISTED	CDCM	235
73621		SX6	X2+B1		CDCM	236
54620		SA6	A2		CDCM	237
64 5150000020 +		SA5	LFNL		CDCM	238
0305000046 +		ZR	X5,CD21	IF NO LIST OUTPUT	CDCM	239
65 5110000021 +		SA1	LOOPT		CDCM	240
0311000046 +		NZ	X1,CD21	IF SHORT LISTING SELECTED	CDCM	241
66 5130000023 +		SA3	PRINTL	CHECK IF PRINT LIMIT EXCEEDED	CDCM	242
37436		IX4	X3-X6		CDCM	243
67 0334000046 +		MI	X4,CD21	IF PRINT LIMIT EXCEEDED	CDCM	244
6160001332 +		SB6	INTENT+INTLTH	FWA OF LINE IMAGE	CDCM	245
70 6170000011		SB7	LINELTH		CDCM	246
0100001520 +		RJ	WRLINE	WRITE LINE	CDCM	247
71 0400000046 +		EQ	CD21	LOOP	CDCM	248
					CDCM	249
72 5140000020 +	CD50	SA4	LFNL		CDCM	250
0304000074 +		ZR	X4,CD51	IF NO LIST OUTPUT	CDCM	251
73 0100001475 +		RJ	WRITEX	COMPLETE OUTPUT FILE	CDCM	252
					CDCM	253
74 7110000104 +	CD51	MESSAGE	CDDFM1,,RCL	*CDCM COMPLETE* DAYFILE MESSAGE	CDCM	254
76 5110000022 +		SA1	PRINTCT		CDCM	255
0100000000 X		RJ	=XCDD=	CONVERT TO DECIMAL DISPLAY	CDCM	256
77 5120000106 +		SA2	CDDFM2		CDCM	257
20622		LX6	3*6	SHIFT COUNT LEFT 3 PLACES AND MERGE	CDCM	258
43152		MX1	-3*6	WITH MESSAGE	CDCM	259
100 11616		BX6	X1*X6		CDCM	260
12626		BX6	X2*X6		CDCM	261
54620		SA6	A2		CDCM	262
74160		MESSAGE	A6,,RCL	ISSUE LINE COUNT DAYFILE MESSAGE	CDCM	263
102 7160247021		ENDRUN		ALL DONE - RETURN TO SYSTEM	CDCM	264
					CDCM	265
104 55030403155503171520	CDDFM1	DATA	C* CDCM COMPLETE*		CDCM	266
106 00000000000000550317	CDDFM2	DATA	3R CO,C*DE-MODIFICATION LINES*		CDCM	267

**	ANT - ADD NAME TO TABLE.	CDCM	269
*		CDCM	270
*	ADDS A NAME TO A MANAGED TABLE IF NOT ALREADY PRESENT.	CDCM	271
*		CDCM	272
*	ENTRY (X1) = NAME, LEFT JUSTIFIED, ZERO FILL.	CDCM	273
*	(B1) = 1.	CDCM	274
*	(A2) = TABLE POINTER.	CDCM	275
*		CDCM	276
*	EXIT (X1) = NAME, LEFT JUSTIFIED, ZERO FILL.	CDCM	277
*		CDCM	278
*	USES X - 2, 3, 4, 6, 7.	CDCM	279
*	B - 4, 5, 6, 7.	CDCM	280
*	A - 1, 2, 3, 4, 5, 6, 7.	CDCM	281
*		CDCM	282
*	CALLS ADW=.	CDCM	283
		CDCM	284
		CDCM	285
112	0400400112 + ANT EQ **1S17 ENTRY / EXIT	CDCM	286
113	54321 SA3 A2+B1	CDCM	287
	0303000120 + ZR X3,ANT2 IF TABLE EMPTY, GO ADD	CDCM	288
	63520 SB5 X2 (B5) = FWA TABLE	CDCM	289
114	53435 SA4 B5+X3 SAVE (LWA+1)	CDCM	290
	10744 BX7 X4	CDCM	291
	64740 SB7 A4 (B7) = LWA+1	CDCM	292
	10611 BX6 X1	CDCM	293
115	54640 SA6 A4 SET TARGET VALUE AT LWA+1	CDCM	294
	5145777776 SA4 B5-1 FIRST-1 ENTRY	CDCM	295
116	54441 ANT1 SA4 A4+B1 SEARCH LOOP	CDCM	296
	13464 BX4 X6-X4	CDCM	297
	0314000116 + NZ X4,ANT1 LOOP UNTIL HIT	CDCM	298
117	64640 SB6 A4	CDCM	299
	56770 SA7 B7 RESTORE (LWA+1)	CDCM	300
	0567000112 + NE B6,B7,ANT IF NAME ALREADY IN TABLE, EXIT	CDCM	301
120	0100001206 + ANT2 RJ ADW ADD WORD TO TABLE	CDCM	302
	(A2) = TABLE POINTER, (X1) = WORD	CDCM	303
121	0400000112 + EQ ANT RETURN	CDCM	304

1412THE

** CRT - CLEAR REGISTER TABLE.

CDCM 306

*

CDCM 307

* CLEARS THE REGISTER TABLE *OR.REG*. THIS CAUSES CDCM TO
* FORGET ANY PREVIOUS REFERENCES TO ADDRESSES IN ANY OF THE
* REGISTERS. CALLED AT THE BEGINNING OF EACH PROGRAM UNIT
* (*IDENT* STATEMENT), AND AFTER AN UNCONDITIONAL JUMP IF THE
* *JP* OPTION IS SELECTED.

CDCM 308
CDCM 309
CDCM 310
CDCM 311

*

CDCM 312

*

CDCM 313

* ENTRY (B1) = 1.

CDCM 314

*

CDCM 315

* EXIT NONE.

CDCM 316

*

CDCM 317

* USES X - 6.

CDCM 318

* B - 6, 7.

CDCM 319

* A - 6.

CDCM 320

CDCM 321

CDCM 322

122 0400400122 + CRT EQ **1S17 ENTRY / EXIT

CDCM 323

123 66600

SB6

B0

CDCM 324

6170000060

SB7

LE.REG

CDCM 325

43600

MX6

0

CDCM 326

124 5166011637 + CRT1

SA6

B6+OR.REG

CDCM 327

66661

SB6

B6+B1

CDCM 328

125 0767000124 +

LT

B6,B7,CRT1 LOOP

CDCM 329

0400000122 +

EQ

CRT

RETURN

CDCM 330

1412THE

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**      FBF - FIND BEGINNING OF FIELD.      CDCM      332
*      CDCM      333
*      SCANS FORWARD TO THE NEXT NON-BLANK IN THE STRING BUFFER. CDCM      334
*      CDCM      335
*      ENTRY  (B1) = 1.      CDCM      336
*      *NEXTCOL* POINTS TO A CHARACTER IN THE STRING BUFFER. CDCM      337
*      CDCM      338
*      EXIT   (X6) = *NEXTCOL* = COLUMN NUMBER OF FIRST ENCOUNTERED CDCM      339
*      NON-BLANK CHARACTER.  MAY NOT HAVE CHANGED. CDCM      340
*      CDCM      341
*      USES   X - 1, 2, 3, 6. CDCM      342
*      B - NONE. CDCM      343
*      A - 1, 2, 6. CDCM      344
CDCM      345
CDCM      346

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126 0400200126 + FBF EQ **1S16 ENTRY / EXIT CDCM 347
127 5110000256 + SA1 NEXTCOL CDCM 348
5221011715 + SA2 X1+OR.LINE-2 INITIALIZE FETCH CDCM 349
130 7160000055 SX6 1R BLANK CDCM 350
74321 SX3 A2+B1 ADDRESS OF FIRST CHAR FETCHED CDCM 351
131 54221 FBF1 SA2 A2+B1 NEXT CHAR CDCM 352
37262 IX2 X6-X2 CDCM 353
0302000131 + ZR X2,FBF1 LOOP ON BLANK CDCM 354
132 74220 SX2 A2 CDCM 355
37623 IX6 X2-X3 CDCM 356
36616 IX6 X1+X6 ADVANCE COLUMN POINTER CDCM 357
54610 SA6 A1 CDCM 358
133 0400000126 + EQ FBF RETURN CDCM 359

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1412THE

CDCM 361

CDCM 362

CDCM	363
CDCM	364
CDCM	365
CDCM	366

CDCM	367
CDCM	368
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CDCM	410

CDCM	412
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CDCM	413
CDCM	414
CDCM	415
CDCM	416
CDCM	417

141	0302000143 +	ZR	X2,GSE1	IF =Y	CDCM	418
	7222000001	R=	X2,X2+1RY-1RX		CDCM	419
142	0312000176 +	NZ	X2,GSE17	IF NEITHER =X NOR =Y, TYPE 4	CDCM	420
143	0100000251 +	RJ	GSN	GET NEXT CHAR	CDCM	421
144	7221777744	R=	X2,X1-1RZ-1		CDCM	422
	0322000174 +	PL	X2,GSE16	FIRST CHAR MUST BE ALPHA FOR EXTERNAL NAME	CDCM	423
145	0301000174 +	ZR	X1,GSE16		CDCM	424
					CDCM	425
	*			FORM NAME FOR EXTERNAL. ANY OF THE FOLLOWING CHARACTERS	CDCM	426
	*			WILL SIGNAL THE END OF THE NAME: + - * / (BLANK) , (CARAT)	CDCM	427
					CDCM	428
	6170000066	SB7	54	SHIFT COUNT FOR FIRST CHAR	CDCM	429
146	22471	LX4	X1,B7	FIRST CHAR OF NAME	CDCM	430
	76610	SX6	B1	CURRENT NAME LENGTH	CDCM	431
	5160000255 +	SA6	ITEMLTH		CDCM	432
147	6177777771	SB7	B7-6	SHIFT COUNT FOR NEXT CHAR	CDCM	433
	0100000251 +	RJ	GSN	GET NEXT CHAR	CDCM	434
150	7221777732	R=	X2,X1-1R+		CDCM	435
	0332000155 +	MI	X2,GSE3	IF CHAR LEGAL FOR NAME	CDCM	436
151	7222777773	R=	X2,X2+1R+-1R/-1		CDCM	437
	0332000160 +	MI	X2,GSE4	IF ANY OF + - * /	CDCM	438
152	7221777721	R=	X2,X1-1R,		CDCM	439
	0302000160 +	ZR	X2,GSE4	IF ,	CDCM	440
153	7222000001	R=	X2,X2+1R,-1R		CDCM	441
	0302000160 +	ZR	X2,GSE4	IF (BLANK)	CDCM	442
154	7221777701	R=	X2,X1-1R^		CDCM	443
	0302000160 +	ZR	X2,GSE4	IF (CARAT)	CDCM	444
155	22171	LX1	X1,B7	POSITION CHAR	CDCM	445
	5120000255 +	SA2	ITEMLTH	ADVANCE NAME LENGTH	CDCM	446
	73721	SX7	X2+B1		CDCM	447
156	54720	SA7	A2		CDCM	448
	12441	BX4	X4+X1		CDCM	449
	7237777767	SX3	X7-8	CHECK 7-CHAR MAX LENGTH FOR EXTERNAL NAMES	CDCM	450
157	0323000173 +	PL	X3,GSE15	IF NAME TOO LONG, RETURN TYPE 4 - UNDEF	CDCM	451
	0400000147 +	EQ	GSE2	LOOP FOR NAME	CDCM	452
					CDCM	453
	*			TYPE 3 RETURN - EXTERNAL NAME.	CDCM	454
					CDCM	455
160	10211	BX2	X1	(X2) = CHARACTER FOLLOWING NAME	CDCM	456
	6120000003	R=	B2,3		CDCM	457
	22104	LX1	X4	(X1) = NAME	CDCM	458
161	0400000134 +	EQ	GSE	RETURN	CDCM	459
					CDCM	460
	*			CHECK REMAINING POSSIBLE FIRST CHARS.	CDCM	461
					CDCM	462
162	10311	BX3	X1	SAVE 1ST CHAR	CDCM	463
	7221777730	R=	X2,X1-1R*		CDCM	464
163	0302000171 +	ZR	X2,GSE12	IF FIRST CHAR IS *	CDCM	465
	7221777731	R=	X2,X1-1R-		CDCM	466
164	0302000171 +	ZR	X2,GSE12	IF FIRST CHAR IS -	CDCM	467
	7221777732	R=	X2,X1-1R+		CDCM	468
165	0302000171 +	ZR	X2,GSE12	IF FIRST CHAR IS +	CDCM	469
	7221777727	R=	X2,X1-1R/		CDCM	470
166	0312000200 +	NZ	X2,GSE19	IF FIRST CHAR NOT / GO CHECK FOR SYMBOL	CDCM	471
					CDCM	472
	*			/ IS FIRST CHAR.	CDCM	473
					CDCM	474

167	6120000002	0100000251 +	RJ	GSN	GET NEXT CHAR	CDCM	475
			SB2	2	SET FOR QUALIFIER	CDCM	476
		0400000201 +	EQ	GSE20	GO CHECK FOR SYMBOL AFTER /	CDCM	477
						CDCM	478
			*		TYPE 4 RETURN CASES.	CDCM	479
						CDCM	480
170	0521000172 +	GSE11	NE	B2,B1,GSE13	IF QUALIFIER, TWO CHARS ALREADY FETCHED	CDCM	481
171	0100000251 +	GSE12	RJ	GSN	GET NEXT CHAR	CDCM	482
172	10211	GSE13	BX2	X1	(X2) = 2ND CHAR	CDCM	483
	10133		BX1	X3	(X1) = 1ST CHAR	CDCM	484
	0400000177 +		EQ	GSE18	ISSUE TYPE 4 RETURN	CDCM	485
						CDCM	486
173	77101	GSE15	SX1	-B1	UNDEFINED RETURN	CDCM	487
	77201		SX2	-B1		CDCM	488
	0400000177 +		EQ	GSE18		CDCM	489
						CDCM	490
174	5110000256 +	GSE16	SA1	NEXTCOL	BACK UP ONE COLUMN	CDCM	491
	7261777776		SX6	X1-1		CDCM	492
175	54610		SA6	A1		CDCM	493
176	10133	GSE17	BX1	X3	(X1) = 1ST CHAR FETCHED	CDCM	494
	10244		BX2	X4	(X2) = 2ND CHAR FETCHED	CDCM	495
177	6120000004	GSE18	SB2	4		CDCM	496
	0400000134 +		EQ	GSE	RETURN	CDCM	497
						CDCM	498
		*			CHECK FOR LEGAL FIRST CHAR FOR A SYMBOL NAME. ANY CHAR IS	CDCM	499
		*			LEGAL EXCEPT (COLON) (NUMERIC) + - * / \$ = (BLANK) , (CARAT)	CDCM	500
						CDCM	501
200	66210	GSE19	SB2	B1	(B2) = 1 FOR SYMBOL	CDCM	502
201	0301000170 +	GSE20	ZR	X1,GSE11	IF FIRST CHAR IS COLON	CDCM	503
	7221777744		R=	X2,X1-1R0		CDCM	504
202	0332000215 +		MI	X2,GSE21	ALPHA - LEGAL 1ST CHAR	CDCM	505
	7222777765		R=	X2,X2+1R0-1R9-1		CDCM	506
203	0332000170 +		MI	X2,GSE11	NUMERIC NOT LEGAL	CDCM	507
	7221777732		R=	X2,X1-1R+		CDCM	508
204	0302000170 +		ZR	X2,GSE11	+ NOT LEGAL	CDCM	509
	7221777731		R=	X2,X1-1R-		CDCM	510
205	0302000170 +		ZR	X2,GSE11	- NOT LEGAL	CDCM	511
	7221777730		R=	X2,X1-1R*		CDCM	512
206	0302000170 +		ZR	X2,GSE11	* NOT LEGAL	CDCM	513
	7221777727		R=	X2,X1-1R/		CDCM	514
207	0302000170 +		ZR	X2,GSE11	/ NOT LEGAL	CDCM	515
	7221777724		R=	X2,X1-1R\$		CDCM	516
210	0302000170 +		ZR	X2,GSE11	\$ NOT LEGAL	CDCM	517
	7221777723		R=	X2,X1-1R=		CDCM	518
211	0302000170 +		ZR	X2,GSE11	= NOT LEGAL	CDCM	519
	7221777722		R=	X2,X1-1R		CDCM	520
212	0302000170 +		ZR	X2,GSE11	(BLANK) NOT LEGAL	CDCM	521
	7221777721		R=	X2,X1-1R,		CDCM	522
213	0302000170 +		ZR	X2,GSE11	, NOT LEGAL	CDCM	523
	7221777701		R=	X2,X1-1R^		CDCM	524
214	0302000170 +		ZR	X2,GSE11	(CARAT) NOT LEGAL	CDCM	525
						CDCM	526
		*			FORM SYMBOL NAME. REMAINING CHARS MAY BE ANYTHING EXCEPT	CDCM	527
		*			+ - * / (BLANK) , (CARAT)	CDCM	528
						CDCM	529
215	76610	GSE21	SX6	B1	STARTING SYMBOL LENGTH	CDCM	530
	5160000255 +		SA6	ITEMLTH		CDCM	531

216	6170000066		SB7	54	STARTING CHAR SHIFT COUNT	CDCM	532
	43400		MX4	0	(X4) = SYMBOL	CDCM	533
217	22171	GSE22	LX1	X1,B7	SHIFT CHAR TO POSITION	CDCM	534
	12441		BX4	X4+X1	ADD CHAR TO SYMBOL	CDCM	535
	6177777771		SB7	B7-6	ADVANCE SHIFT COUNT FOR NEXT CHAR	CDCM	536
220	0100000251 +		RJ	GSN	GET NEXT CHAR	CDCM	537
221	7221777732		R=	X2,X1-1R+		CDCM	538
	0332000226 +		MI	X2,GSE23	LEGAL CHAR IF COLON OR ALPHANUMERIC	CDCM	539
222	7221777726		R=	X2,X1-1R/-1		CDCM	540
	0332000231 +		MI	X2,GSE30	AT END OF SYMBOL IF + - * OR /	CDCM	541
223	7221777722		R=	X2,X1-1R		CDCM	542
	0302000231 +		ZR	X2,GSE30	AT END OF SYMBOL IF (BLANK)	CDCM	543
224	7221777721		R=	X2,X1-1R,		CDCM	544
	0302000231 +		ZR	X2,GSE30	AT END OF SYMBOL IF ,	CDCM	545
225	7221777701		R=	X2,X1-1R^		CDCM	546
	0302000231 +		ZR	X2,GSE30	AT END OF SYMBOL IF (CARAT)	CDCM	547
226	5120000255 +	GSE23	SA2	ITEMLTH	ADVANCE SYMBOL LENGTH	CDCM	548
	73621		SX6	X2+B1		CDCM	549
	54620		SA6	A2		CDCM	550
227	7236777766		SX3	X6-9	CHECK 8-CHAR MAX LENGTH	CDCM	551
	0333000217 +		MI	X3,GSE22	IF SYMBOL NOT TOO LONG	CDCM	552
230	0400000173 +		EQ	GSE15	TYPE 4 RETURN - UNDEFINED	CDCM	553
						CDCM	554
		*			DETERMINE IF SYMBOL NAME IS ALSO A LEGAL REGISTER NAME.	CDCM	555
		*			(X1) = TERMINATING CHAR; (X4) = SYMBOL NAME.	CDCM	556
						CDCM	557
231	63710	GSE30	SB7	X1	SAVE TERMINATING CHAR	CDCM	558
	43766		MX7	-6	CHAR MASK	CDCM	559
	0521000250 +		NE	B2,B1,GSE40	IF QUALIFIER, DO NOT CHECK FOR REGISTER	CDCM	560
232	5120000255 +		SA2	ITEMLTH		CDCM	561
	7222777775		SX2	X2-2	(X2) = 0 IF LENGTH = 2, 1 IF LENGTH = 3	CDCM	562
233	0302000235 +		ZR	X2,GSE31	IF LENGTH = 2	CDCM	563
	7232777776		SX3	X2-1		CDCM	564
234	0313000250 +		NZ	X3,GSE40	IF LENGTH .NE. 2 OR 3 - NOT REGISTER	CDCM	565
235	10344	GSE31	BX3	X4		CDCM	566
	20306		LX3	6	GET FIRST CHAR	CDCM	567
	15137		BX1	-X7*X3		CDCM	568
	66600		SB6	B0	SET FOR A-REG NAME	CDCM	569
236	7211777776		R=	X1,X1-1RA		CDCM	570
	0301000242 +		ZR	X1,GSE32	IF FIRST CHAR = A	CDCM	571
237	6160000010		SB6	8	SET FOR B-REG NAME	CDCM	572
	7211777776		R=	X1,X1+1RA-1RB		CDCM	573
240	0301000242 +		ZR	X1,GSE32	IF FIRST CHAR = B	CDCM	574
	6160000020		SB6	16	SET FOR X-REG NAME	CDCM	575
241	7211777751		R=	X1,X1+1RB-1RX		CDCM	576
	0311000250 +		NZ	X1,GSE40	FIRST CHAR NOT A, B, OR X - NOT REGISTER	CDCM	577
242	0302000244 +	GSE32	ZR	X2,GSE33	IF LENGTH = 2	CDCM	578
	20306		LX3	6	CHECK 2ND CHAR FOR .	CDCM	579
	15137		BX1	-X7*X3		CDCM	580
243	7211777720		R=	X1,X1-1R.		CDCM	581
	0311000250 +		NZ	X1,GSE40	IF NOT A.N, B.N, OR X.N FORM	CDCM	582
244	20306	GSE33	LX3	6	GET LAST (2ND OR 3RD) CHAR TO CHECK 0-7	CDCM	583
	15137		BX1	-X7*X3		CDCM	584
	7221777744		R=	X2,X1-1R0		CDCM	585
245	0332000250 +		MI	X2,GSE40	IF LAST CHAR NOT NUMERIC - NOT REGISTER	CDCM	586
	7232777767		R=	X3,X2-8		CDCM	587
246	0323000250 +		PL	X3,GSE40	IF LAST CHAR NOT 0-7 - NOT REGISTER	CDCM	588

CDCM	589
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CDCM	616
CDCM	617

SB2	B0	
EQ	GSE	RETURN

GSE40	BX1	X4	(X1) = SYMBOL NAME
	SX2	B7	(X2) = TERMINATING CHAR
	EQ	GSE	RETURN

GSN	EQ	*+1S17	ENTRY / EXIT
	SA2	NEXTCOL	NEXT COLUMN NUMBER (1 IS FIRST)
	SA1	X2+OR.LINE-1	NEXT CHAR
	SX6	X2+B1	ADVANCE COLUMN

SA1	X2+OR.LINE-1	NEXT CHAR
SX6	X2+B1	ADVANCE COLUMN
SA6	A2	
EQ	GSN	RETURN

COMCOL	CON	DEFCOL	STARTING COMMENTS COLUMN
ITMLTH	CON	0	SYMBOL LENGTH IN CHARACTERS
NEXTCOL	CON	0	NEXT COLUMN TO FETCH

	**	PCS - PROCESS CURRENT STATEMENT.			CDCM	619
	*				CDCM	620
	*	THE CURRENT SOURCE LINE IS EXAMINED, AND INFORMATION IS			CDCM	621
1	*	STORED ACCORDING TO THE TYPE OF LINE.			CDCM	622
2	*				CDCM	623
3	*	1) IF THE STATEMENT HAS A LOCATION SYMBOL, AND IF EITHER THE			CDCM	624
4	*	OP-CODE FOR THIS STATEMENT OR FOR THE PREVIOUS STATEMENT			CDCM	625
5	*	IS THAT OF AN EXECUTABLE INSTRUCTION, THEN AN *O.LOC* TABLE			CDCM	626
6	*	ENTRY IS CREATED CONTAINING THE LOCATION SYMBOL.			CDCM	627
7	*				CDCM	628
8	*	2) TABLE *OR.REG* IS MAINTAINED WITH THE MOST-RECENT VALUES			CDCM	629
9	*	OF SYMBOLS FOR THE RESULT REGISTER (IF THERE IS ONE) OF			CDCM	630
10	*	THIS STATEMENT. THE NUMBER OF SYMBOLS THAT MAY BE SAVED			CDCM	631
11	*	PER REGISTER IS CONTROLLED BY THE SYMBOL *PCSNVAL*.			CDCM	632
12	*				CDCM	633
13	*	3) IF THE STATEMENT IS THAT OF A STORE INSTRUCTION (SA6, SA7,			CDCM	634
14	*	OR EQUIVALENT), THEN AN INTERMEDIATE FILE ENTRY IS CREATED			CDCM	635
15	*	CONTAINING THE CURRENT SYMBOL NAMES HELD IN THE			CDCM	636
16	*	CORRESPONDING *OR.REG* ENTRY FOR A6 OR A7. THE LINE IMAGE			CDCM	637
17	*	IS STORED WITH THE ENTRY.			CDCM	638
18	*				CDCM	639
19	*				CDCM	640
20	*	ENTRY CURRENT STATEMENT IS IN THE STRING BUFFER.			CDCM	641
21	*				CDCM	642
22	*	EXIT ALL TABLES UPDATED ACCORDINGLY.			CDCM	643
23	*				CDCM	644
24	*	USES ALL REGISTERS.			CDCM	645
25					CDCM	646
26					CDCM	647
27	257	0400400257 + PCS EQ **1S17 ENTRY / EXIT			CDCM	648
28					CDCM	649
29	*	MOVE LINE IMAGE INTO ONE CHAR PER WORD STRING BUFFER.			CDCM	650
30					CDCM	651
31	260	5120011716 + SA2 OR.LINE-1 INITIALIZE STORE POINTER			CDCM	652
32		66200 SB2 B0 CHAR/WORD COUNT			CDCM	653
33		10622 BX6 X2			CDCM	654
34	261	6130000012 SB3 10 CHAR/WORD MAX			CDCM	655
35		54620 SA6 A2			CDCM	656
36		43066 MX0 -6			CDCM	657
37	262	5110001332 + SA1 ILINE GET FIRST WORD			CDCM	658
38		7130000065 SX3 CONCAT			CDCM	659
39	263	6071000011 SB7 A1+LINELTH			CDCM	660
40	264	20106 PCS1 LX1 6 EXTRACT AND STORE NEXT CHARACTER			CDCM	661
41		66221 SB2 B2+B1			CDCM	662
42		15610 BX6 -X0*X1			CDCM	663
43		37763 IX7 X6-X3			CDCM	664
44	265	0307000266 + ZR X7,PCS2 IF CONCATENATION CHAR			CDCM	665
45		54661 SA6 A6+B1			CDCM	666
46	266	0723000264 + PCS2 LT B2,B3,PCS1 LOOP FOR CURRENT WORD			CDCM	667
47		54111 SA1 A1+B1 GET NEXT WORD			CDCM	668
48		66200 SB2 B0 RESET CHAR/WORD COUNT			CDCM	669
49	267	64610 SB6 A1 CHECK IF DONE			CDCM	670
50		0767000264 + LT B6,B7,PCS1 IF NOT DONE			CDCM	671
51		76610 SX6 B1 SET TO FIRST COLUMN IN STRING BUFFER			CDCM	672
52	270	5160000256 + SA6 NEXTCOL			CDCM	673
53					CDCM	674
54	*	INITIALIZE TEMPORARY AREA FOR NEW STATEMENT.			CDCM	675
55						
56						
57						
58						
59						
60						

		43700		MX7	0	CLEAR OUT TEMPORARY AREA	CDCM	676
	271	6120000516 +		SB2	PCSA		CDCM	677
		6130000531 +		SB3	PCSZ		CDCM	678
	272	56720	PCS3	SA7	B2		CDCM	679
		66221		SB2	B2+B1		CDCM	680
		0723000272 +		LT	B2,B3,PCS3		CDCM	681
			*		PROCESS LOCATION FIELD.		CDCM	682
							CDCM	683
							CDCM	684
	273	0100000126 +		RJ	FBF	FIND BEGINNING OF FIELD	CDCM	685
	274	7216777774		SX1	X6-3		CDCM	686
		10066		BX0	X6	(X0) = COLUMN NUMBER FROM *FBF*	CDCM	687
	275	0321000305 +		PL	X1,PCS11	IF COLUMN .GT. 3, NO LOCATION FIELD	CDCM	688
		0100000134 +		RJ	GSE	GET STATEMENT ELEMENT	CDCM	689
	276	5140000511 +		SA4	PCSID		CDCM	690
		0314000305 +		NZ	X4,PCS11	IF EXPECTING *IDENT* STATEMENT	CDCM	691
	277	0521000301 +		NE	B2,B1,PCS10	IF LOCATION FIELD NOT A SYMBOL	CDCM	692
		10611		BX6	X1	SAVE LOCATION SYMBOL	CDCM	693
	300	5160000522 +		SA6	PCSLOC		CDCM	694
	301	0100000126 +	PCS10	RJ	FBF	FIND BEGINNING OF FIELD	CDCM	695
	302	5120000254 +		SA2	COMCOL		CDCM	696
		37362		IX3	X6-X2		CDCM	697
	303	0333000307 +		MI	X3,PCS20	IF OP-CODE PRESENT	CDCM	698
			*		LOCATION FIELD, BUT NO OP-CODE. SET OP-CODE TO *CON*.		CDCM	699
							CDCM	700
							CDCM	701
							CDCM	702
	304	10711		SA1	=0LCON	SET OPCODE = *CON*	CDCM	703
		0400000334 +		BX7	X1		CDCM	704
				EQ	PCS24	ENTER OP-CODE PROCESSING	CDCM	705
			*		NO LOCATION FIELD. CHECK IF OPCODE PRESENT.		CDCM	706
							CDCM	707
							CDCM	708
	305	5120000254 +	PCS11	SA2	COMCOL		CDCM	709
		37302		IX3	X0-X2		CDCM	710
	306	0323000510 +		PL	X3,PCS90	IF NO OPCODE, LINE IS COMMENT OR ERRONEOUS	CDCM	711
			*		PROCESS OPCODE FIELD.		CDCM	712
							CDCM	713
							CDCM	714
	307	0100000134 +	PCS20	RJ	GSE	GET STATEMENT ELEMENT	CDCM	715
	310	0521000510 +		NE	B2,B1,PCS90	IF NOT SYMBOL	CDCM	716
		5130000511 +		SA3	PCSID		CDCM	717
	311	0303000314 +		ZR	X3,PCS21	IF NOT SKIPPING TO *IDENT* STATEMENT	CDCM	718
		5140012053 +		SA4	=0LIDENT		CDCM	719
	312	13414		BX4	X1-X4		CDCM	720
		43600		MX6	0		CDCM	721
		0314000510 +		NZ	X4,PCS90	IF NOT *IDENT*, SKIP STATEMENT	CDCM	722
	313	54630		SA6	A3	CLEAR *IDENT* FLAG	CDCM	723
	314	10711	PCS21	BX7	X1	(X7) = OPCODE	CDCM	724
		5170000523 +		SA7	PCS0C	STORE ORIGINAL OPCODE	CDCM	725
			*		CHECK IF OPCODE HAS A RESULT REGISTER (E.G. BX6, SB.7).		CDCM	726
							CDCM	727
							CDCM	728
		43330		MX3	4*6		CDCM	729
	315	15613		BX6	-X3*X1		CDCM	730
		43066		MX0	-6	(X0) = CHAR MASK	CDCM	731
		0316000334 +		NZ	X6,PCS24	IF LONGER THAN 4 CHARS, NO REGISTER	CDCM	732

316	20130		LX1	4*6	POSITION TO CHAR 4	CDCM	733
	15310		BX3	-X0*X1		CDCM	734
	20166		LX1	-1*6	POSITION TO CHAR 3	CDCM	735
317	0303000322 +		ZR	X3,PCS22	IF OP CODE NO MORE THAN 3 CHARS LONG	CDCM	736
	15210		BX2	-X0*X1		CDCM	737
320	7232777720		R=	X3,X2-1R.		CDCM	738
	0313000334 +		NZ	X3,PCS24	IF 3RD CHAR NOT ., NO REGISTER	CDCM	739
321	20106		LX1	1*6	POSITION TO CHAR 4	CDCM	740
322	15310	PCS22	BX3	-X0*X1		CDCM	741
	7263777744		R=	X6,X3-1R0	(X6) = REGISTER NUMBER (IF A REGISTER)	CDCM	742
323	0336000334 +		MI	X6,PCS24	IF 3RD OR 4TH CHAR NOT NUMERIC	CDCM	743
	7236777767		R=	X3,X6-8		CDCM	744
324	0323000334 +		PL	X3,PCS24	IF 3RD OR 4TH CHAR NOT 0-7, NOT REGISTER	CDCM	745
	10177		BX1	X7	ORIGINAL OP CODE	CDCM	746
	20114		LX1	2*6	POSITION TO CHAR 2	CDCM	747
325	15110		BX1	-X0*X1		CDCM	748
	7221777776		R=	X2,X1-1RA		CDCM	749
326	0302000332 +		ZR	X2,PCS23	IF A-REGISTER	CDCM	750
	7266000010		R=	X6,X6+8	SET FOR REGISTER INDEX OF B-REG	CDCM	751
327	7222777776		R=	X2,X2+1RA-1RB		CDCM	752
	0302000332 +		ZR	X2,PCS23	IF B-REGISTER	CDCM	753
330	7266000010		R=	X6,X6+8	SET FOR REGISTER INDEX OF X-REG	CDCM	754
	7222777751		R=	X2,X2+1RB-1RX		CDCM	755
331	0312000334 +		NZ	X2,PCS24	IF NOT REGISTER	CDCM	756
332	5160000524 +	PCS23	SA6	PCSR	SAVE REGISTER INDEX (0-23)	CDCM	757
	43414		MX4	2*6	REMOVE CHARS 3-4 OF OP CODE INVOLVING	CDCM	758
	11774		BX7	X7*X4	RESULT REGISTER AND REPLACE WITH	CDCM	759
333	7130000033		SX3	1R0	REGISTER NUMBER OF 0	CDCM	760
	20352		LX3	7*6		CDCM	761
	12773		BX7	X7+X3		CDCM	762
						CDCM	763
		*			FIND OP CODE IN INSTRUCTION TABLE AND SET CHARACTERISTICS.	CDCM	764
						CDCM	765
334	5120000746 +	PCS24	SA2	PCSTT	TARGET LOCATION IN INSTRUCTION TABLE	CDCM	766
	53720		SA7	X2	STORE OP CODE FOR TABLE SEARCH	CDCM	767
	66211		R=	B2,2	(B2) = 2	CDCM	768
335	63420		SB4	X2	(B4) = ADDR OF TARGET VALUE	CDCM	769
	5140000527 +		SA4	PCSITAB-2	FIRST-1 TABLE ENTRY	CDCM	770
336	54442	PCS25	SA4	A4+B2	NEXT ENTRY	CDCM	771
	13347		BX3	X4-X7		CDCM	772
	0313000336 +		NZ	X3,PCS25	LOOP UNTIL MATCH	CDCM	773
337	64340		SB3	A4		CDCM	774
	0434000510 +		EQ	B3,B4,PCS90	IF NOT IN TABLE	CDCM	775
	54141		SA1	A4+B1	2ND WORD OF ENTRY	CDCM	776
						CDCM	777
		*			ENTER PROCESSOR IF AN ADDRESS IS PRESENT.	CDCM	778
						CDCM	779
340	63710		SB7	X1		CDCM	780
	0470000342 +		ZR	B7,PCS26	IF NO PROCESSOR	CDCM	781
341	0277000000		JP	B7	ENTER PROCESSOR	CDCM	782
						CDCM	783
342	0321000510 +	PCS26	PL	X1,PCS90	IF OP CODE DOES NOT RESULT IN ANY CODE	CDCM	784
					(EXECUTABLE OR NON-EXECUTABLE)	CDCM	785
	5120000512 +		SA2	PCSCLC	SET PREVIOUS EXEC CODE FLAG = CURRENT / 2	CDCM	786
343	23612		AX6	X2,B1	(= 0 IF LAST INST. WAS UNCONDITIONAL JUMP)	CDCM	787
	20101		LX1	1		CDCM	788
	5160000513 +		SA6	PCSPLC		CDCM	789

344	43600		MX6	0	CURRENT EXEC CODE FLAG = 0	CDCM	790
	54620		SA6	A2		CDCM	791
	76610		SX6	B1		CDCM	792
	76711		R=	X7,2		CDCM	793
345	0321000450 +		PL	X1,PCS80	IF OPCODE IS NOT AN EXECUTABLE INSTRUCTION	CDCM	794
	54720		SA7	A2	CURRENT EXEC CODE FLAG = 2	CDCM	795
	20101		LX1	1		CDCM	796
346	0321000450 +		PL	X1,PCS80	IF NO RESULT REGISTER FOR THIS OPCODE	CDCM	797
	5160000525 +		SA6	PCSRCG	SET RESULT REGISTER FLAG	CDCM	798
347	20101		LX1	1		CDCM	799
	43700		MX7	0		CDCM	800
	0321000355 +		PL	X1,PCS31	IF INSTRUCTION YIELDS RESULT REGISTER WITH	CDCM	801
					A MEANINGFUL VALUE	CDCM	802
350	5120000524 +		SA2	PCSRR	CLEAR *OR.REG* VALUES FOR RESULT REGISTER	CDCM	803
	66600		SB6	B0		CDCM	804
351	6170000002		SB7	PCSNVAL		CDCM	805
352	5272011637 +	PCS30	SA7	X2+OR.REG	CLEAR *OR.REG* ENTRY	CDCM	806
	7222000030		SX2	X2+NREG		CDCM	807
353	66661		SB6	B6+B1		CDCM	808
	0767000352 +		LT	B6,B7,PCS30	LOOP	CDCM	809
354	0400000450 +		EQ	PCS80	GO COMPLETE STATEMENT PROCESSING	CDCM	810
						CDCM	811
355	5110000523 +	PCS31	SA1	PCSOC		CDCM	812
	5120012054 +		SA2	=0LSA7		CDCM	813
356	37321		IX3	X2-X1		CDCM	814
	0303000363 +		ZR	X3,PCS32	IF *SA7*	CDCM	815
	76410		SX4	B1		CDCM	816
357	20452		LX4	42	00000100000000000000B	CDCM	817
	37334		IX3	X3-X4		CDCM	818
	0303000363 +		ZR	X3,PCS32	IF *SA6*	CDCM	819
360	5120012055 +		SA2	=0LSA.7		CDCM	820
	37321		IX3	X2-X1		CDCM	821
361	0303000363 +		ZR	X3,PCS32	IF *SA.7*	CDCM	822
	20466		LX4	-6	00000001000000000000B	CDCM	823
	37334		IX3	X3-X4		CDCM	824
362	0313000364 +		NZ	X3,PCS33	IF NOT *SA.6*	CDCM	825
363	5160000526 +	PCS32	SA6	PCSSTF	SET STORE FLAG	CDCM	826
	0400000366 +		EQ	PCS50	GO PROCESS ADDRESS FIELD	CDCM	827
						CDCM	828
364	5120012056 +	PCS33	SA2	=0LR=		CDCM	829
	37321		IX3	X2-X1		CDCM	830
	77601		SX6	-B1		CDCM	831
365	0313000366 +		NZ	X3,PCS50	IF OPCODE NOT *R=*	CDCM	832
	5160000526 +		SA6	PCSSTF	SET STORE FLAG SO FIRST ADDRESS FIELD WILL	CDCM	833
					BE CHECKED FOR A RESULT REGISTER	CDCM	834
						CDCM	835
		*		PROCESS ADDRESS FIELD.		CDCM	836
						CDCM	837
366	0100000126 +	PCS50	RJ	FBF	FIND BEGINNING OF FIELD	CDCM	838
367	5120000254 +		SA2	COMCOL		CDCM	839
	37262		IX2	X6-X2		CDCM	840
370	0322000510 +		PL	X2,PCS90	IF NO ADDRESS FIELD	CDCM	841
						CDCM	842
		*		IF OPCODE WAS *R=*, ADDRESS FIELD SHOULD BEGIN WITH REGISTER.		CDCM	843
						CDCM	844
	5110000526 +		SA1	PCSSTF		CDCM	845
371	0321000377 +		PL	X1,PCS52	IF NOT *R=*	CDCM	846

372	0520000510 +	0100000134 +	RJ	GSE	GET STATEMENT ELEMENT	CDCM	847
			NZ	B2,PCS90	IF NOT REGISTER	CDCM	848
		10711	BX7	X1	REGISTER INDEX	CDCM	849
		76610	SX6	B1	SET FOR STORE	CDCM	850
373	7231777770		R=	X3,X1-7	(X1) = 6 OR 7 FOR A6, A7, RESPECTIVELY	CDCM	851
		0303000376 +	ZR	X3,PCS51	IF A6	CDCM	852
374	7233000001		R=	X3,X3+7-6		CDCM	853
		0303000376 +	ZR	X3,PCS51	IF A7	CDCM	854
375	76600		SX6	B0	SET FOR NOT A STORE	CDCM	855
376	5160000526 +	PCS51	SA6	PCSSTF		CDCM	856
	5170000524 +		SA7	PCSRR	SET RESULT REGISTER INDEX	CDCM	857
377	0100000134 +	PCS52	RJ	GSE	GET STATEMENT ELEMENT	CDCM	858
400	6132777773		SB3	B2-4		CDCM	859
		0530000410 +	NZ	B3,PCS55	IF CANNOT BE ** OR *-	CDCM	860
401	7231777730		R=	X3,X1-1R*		CDCM	861
		0313000410 +	NZ	X3,PCS55	IF 1ST CHAR NOT *	CDCM	862
402	7232777731		R=	X3,X2-1R-		CDCM	863
		0303000404 +	ZR	X3,PCS53	IF *-	CDCM	864
403	7232777732		R=	X3,X2-1R+		CDCM	865
		0313000410 +	NZ	X3,PCS55	IF NEITHER ** NOR *-	CDCM	866
404	5120000526 +	PCS53	SA2	PCSSTF		CDCM	867
		0302000450 +	ZR	X2,PCS80	IF NOT A STORE INSTRUCTION	CDCM	868
405	43601		MX6	1	FORCE INTERMEDIATE FILE ENTRY TO BE LISTED	CDCM	869
		5160000516 +	SA6	PCSE		CDCM	870
406	0400000450 +		EQ	PCS80	GO TO FINAL PROCESSING	CDCM	871
						CDCM	872
		*			PROCESS REMAINING ADDRESS FIELDS. FIRST CHECK FOR REGISTER.	CDCM	873
						CDCM	874
407	0100000134 +	PCS54	RJ	GSE	GET STATEMENT ELEMENT	CDCM	875
410	0520000417 +	PCS55	NZ	B2,PCS57	IF NOT A REGISTER	CDCM	876
		63310	SB3	X1	INDEX INTO *OR.REG* FOR PREVIOUS SYMBOLS	CDCM	877
411	5120000521 +		SA2	PCSVALC	(X2)= NUMBER OF SYMBOLS STORED IN *PCSVALS*	CDCM	878
412	5133011637 +	PCS56	SA3	B3+OR.REG	NEXT SYMBOL, IF ANY	CDCM	879
		0303000407 +	ZR	X3,PCS54	IF NO MORE SYMBOLS FOR THIS REGISTER	CDCM	880
413	6272777775		SB7	X2-PCSNVAL		CDCM	881
		0670000450 +	PL	B7,PCS80	IF MAXIMUM NUMBER OF SYMBOLS ALREADY STORED	CDCM	882
414	10633		BX6	X3	STORE CURRENT SYMBOL	CDCM	883
		5262000527 +	SA6	X2+PCSVALS		CDCM	884
		73221	SX2	X2+B1	ADVANCE COUNT OF SYMBOLS STORED	CDCM	885
415	10722		BX7	X2		CDCM	886
		54720	SA7	A2		CDCM	887
		6133000030	SB3	B3+NREG	ADVANCE FETCH INDEX	CDCM	888
416	0400000412 +		EQ	PCS56	LOOP FOR NEXT *OR.REG* SYMBOL	CDCM	889
						CDCM	890
		*			CHECK FOR AN UN-QUALIFIED SYMBOL.	CDCM	891
						CDCM	892
417	66300	PCS57	SB3	B0	(B3) = 0 FOR IMPLICIT QUALIFICATION	CDCM	893
		43500	MX5	0	(X5) = 0 FOR NO QUALIFIER INDEX	CDCM	894
		0421000443 +	EQ	B2,B1,PCS63	IF A SYMBOL WITHOUT QUALIFIER	CDCM	895
						CDCM	896
		*			CHECK FOR EXTERNAL (=X OR =Y).	CDCM	897
						CDCM	898
420	7172777774		SX7	B2-3		CDCM	899
		0317000423 +	NZ	X7,PCS58	IF NOT EXTERNAL	CDCM	900
421	5120000003 +		SA2	0.EXT		CDCM	901
		0100000112 +	RJ	ANT	ADD NAME TO TABLE	CDCM	902
422	0400000443 +		EQ	PCS63	GO PROCESS AS SYMBOL	CDCM	903

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446	5262000527 + 73721 54720	SA6 SX7 SA7	X2+PCSVALS X2+B1 A2	ADVANCE COUNT OF SYMBOLS STORED	CDCM CDCM CDCM	961 962 963
447	0400000407 +	EQ	PCS54	LOOP FOR NEXT ADDRESS FIELD	CDCM	964
	*			ADD LOCATION SYMBOL(S) TO *O.LOC* IF APPROPRIATE.	CDCM	965
					CDCM	966
450	5120000512 + 5130000513 +	PCS80 SA2 SA3	PCSCLC PCSPLC	NZ IF CURRENT INSTRUCTION IS EXECUTABLE NZ IF PREVIOUS INSTRUCTION WAS EXECUTABLE, AND NOT AN UNCONDITIONAL, UN-INDEXED JUMP	CDCM CDCM CDCM	967 968 969
451	43600 5110000514 + 12223	MX6 SA1	0 PCSPVL	SYMBOL FROM A PREVIOUS BSS 0, IF ANY	CDCM CDCM	970 971 972
452	54610 0302000461 +	BX2 SA6 ZR	X2+X3 A1 X2,PCS82	CLEAR PREVIOUS SYMBOL IF EXECUTABLE CRITERIA NOT MET	CDCM CDCM CDCM	973 974 975
453	5150000515 + 20560	SA5 LX5	PCSQI 48	CURRENT QUAL-INDEX	CDCM CDCM	976 977
454	0301000456 + 20160 12115	ZR LX1 BX1	X1,PCS81 -12 X1+X5	IF NO PREVIOUS LOCATION SYMBOL FORM *O.LOC* ENTRY 1/E,2/0,9/QUAL-INDEX,48/NAME	CDCM CDCM CDCM	978 979 980
455	5120000006 + 0100001206 +	SA2 RJ	O.LOC ADW	ADD WORD TO TABLE	CDCM	981 982
456	5110000522 + 0301000461 +	PCS81 SA1 ZR	PCSLC X1,PCS82	SYMBOL FROM CURRENT INSTRUCTION, IF ANY IF NONE	CDCM CDCM	983 984
457	20160 12115 5120000006 +	LX1 BX1 SA2	-12 X1+X5 O.LOC	FORM *O.LOC* ENTRY 1/E,2/0,9/QUAL-INDEX,48/NAME	CDCM CDCM CDCM	985 986 987
460	0100001206 +	RJ	ADW	ADD WORD TO TABLE	CDCM	988
	*			IF THE CURRENT STATEMENT HAS A RESULT REGISTER, MOVE ENTRIES	CDCM	989
	*			FROM TABLE *PCSVALS* TO THE *OR.REG* ENTRIES FOR THE RESULT	CDCM	990
	*			REGISTER. IF THE RESULT REGISTER IS A1-5, ALSO CLEAR THE	CDCM	991
	*			*OR.REG* ENTRIES FOR THE CORRESPONDING X-REGISTER.	CDCM	992
461	5110000525 + 0301000473 +	PCS82 SA1 ZR	PCSRCG X1,PCS85	IF NO RESULT REGISTER	CDCM CDCM	993 994 995
462	5120000524 + 7232777767	SA2 SX3	PCSRR X2-8	RESULT REGISTER INDEX	CDCM	996
463	0303000473 + 66500 66700	ZR SB5 SB7	X3,PCS85 B0 B0	IF RESULT REGISTER = B0 *PCSVALS* FETCH INDEX SET FOR NOT CLEARING X-REGISTER	CDCM CDCM CDCM	997 998 999
464	6160000002 0302000467 +	R= ZR	B6,PCSNVAL X2,PCS83	NUMBER OF ENTRIES TO MOVE IF RESULT REGISTER = A0	CDCM CDCM	1000 1001 1002
465	7242777771 43700	SX4 MX7	X2-6 0		CDCM CDCM	1003 1004 1005
466	0324000467 + 66710	PL SB7	X4,PCS83 B1	IF NOT A1 - A5 SET TO CLEAR X-REGISTER	CDCM CDCM	1006 1007
467	5135000527 + 10633 66551	PCS83 SA3 BX6	B5+PCSVALS X3	NEXT SYMBOL (OR ZERO)	CDCM	1008
470	5262011637 + 7222000030	SA6 SX2	B5+B1 X2+OR.REG	ADVANCE FETCH INDEX	CDCM	1009 1010 1011
471	0470000472 + 5076000020	ZR SA7	B7,PCS84 A6+16	ADVANCE STORE INDEX IF NOT TO CLEAR X-REGISTER CLEAR CORRESPONDING X-REGISTER	CDCM CDCM CDCM	1012 1013 1014
472	0756000467 +	PCS84 LT	B5,B6,PCS83	LOOP	CDCM	1015
	*			CHECK IF AN INTERMEDIATE ENTRY IS TO BE ADDED. IT IS IF:	CDCM	1016
					CDCM	1017

			*							CDCM	1018
			*	1)	IT IS ALREADY FLAGGED AS TO BE ADDED.					CDCM	1019
			*	2)	CURRENT INSTRUCTION IS A STORE, AND THERE IS AT LEAST					CDCM	1020
1			*		ONE NON-ZERO REFERENCE WORD FOR THE RESULT REGISTER IN					CDCM	1021
2			*		*OR.REG*.					CDCM	1022
3			*							CDCM	1023
4										CDCM	1024
5	473	5150000516 +	PCS85	SA5	PCSE	(X5) = FIRST WORD OF INT. FILE ENTRY				CDCM	1025
6		0335000503 +		MI	X5,PCS87	IF ALREADY DETERMINED TO BE LISTED				CDCM	1026
7	474	5140000526 +		SA4	PCSSTF					CDCM	1027
8		0304000510 +		ZR	X4,PCS90	IF NOT A STORE INSTRUCTION				CDCM	1028
9	475	5120000524 +		SA2	PCSRR	RESULT REGISTER INDEX				CDCM	1029
10		7222011637 +		SX2	X2+OR.REG					CDCM	1030
11	476	66500		SB5	B0	NUMBER OF ENTRIES FETCHED				CDCM	1031
12		6160000002		SB6	PCSNVAL	NUMBER OF ENTRIES TO FETCH				CDCM	1032
13		64751		SB7	A5+B1	STORE POINTER				CDCM	1033
14	477	43400		MX4	0	ACCUMULATOR OF NON-NULL VALUES				CDCM	1034
15	500	53320	PCS86	SA3	X2	GET NEXT ENTRY				CDCM	1035
16		12443		BX4	X4+X3					CDCM	1036
17		10633		BX6	X3					CDCM	1037
18		56670		SA6	B7	STORE WORD FOR INTERMEDIATE FILE				CDCM	1038
19	501	7222000030		SX2	X2+NREG	ADVANCE FETCH POINTER				CDCM	1039
20		66551		SB5	B5+B1					CDCM	1040
21		66771		SB7	B7+B1	ADVANCE STORE POINTER				CDCM	1041
22	502	0756000500 +		LT	B5,B6,PCS86	LOOP				CDCM	1042
23		0304000510 +		ZR	X4,PCS90	IF NO SYMBOLS INDICATED IN THIS ENTRY,				CDCM	1043
24						DO NOT PUT IT IN INTERMEDIATE FILE				CDCM	1044
25										CDCM	1045
26			*		ADD INTERMEDIATE ENTRY.					CDCM	1046
27										CDCM	1047
28	503	5120000515 +	PCS87	SA2	PCSQI	STORE CURRENT QUALIFIER INDEX IN INT ENTRY				CDCM	1048
29		12625		BX6	X2+X5					CDCM	1049
30		54650		SA6	A5					CDCM	1050
31	504	64250		SB2	A5	(B2) = FWA OF INTERMEDIATE ENTRY				CDCM	1051
32		6130000003		SB3	INTLTH	(B3) = LENGTH				CDCM	1052
33	505	0100001356 +		RJ	SIF	STORE INTERMEDIATE FILE				CDCM	1053
34	506	6120001332 +		SB2	ILINE	PLACE LINE IMAGE IN INTERMEDIATE FILE				CDCM	1054
35		6130000011		SB3	LINELTH					CDCM	1055
36	507	0100001356 +		RJ	SIF	STORE INTERMEDIATE FILE				CDCM	1056
37										CDCM	1057
38			*		ALL DONE - RETURN.					CDCM	1058
39										CDCM	1059
40	510	0400000257 +	PCS90	EQ	PCS	RETURN				CDCM	1060
41		257 +	PCSEXIT	EQU	PCS	RETURN LOCATION IF NO MORE TO DO FOR STMT				CDCM	1061
42		450 +	PCSPROC	EQU	PCS80	RETURN LOCATION TO PROCESS LOCATION FIELD				CDCM	1062
43										CDCM	1063
44	511	00000000000000000001	PCSID	CON	1	NZ IF BETWEEN *END* AND *IDENT*				CDCM	1064
45	512	00000000000000000000	PCSCLC	CON	0	NZ IF CURRENT STATEMENT IS EXECUTABLE CODE				CDCM	1065
46	513	00000000000000000000	PCSPLC	CON	0	NZ IF PREVIOUS STATEMENT IS EXECUTABLE CODE				CDCM	1066
47	514	00000000000000000000	PCSPVL	CON	0	ZERO OR LOCATION SYMBOL OF PREVIOUS STMT				CDCM	1067
48	515	00000000000000000000	PCSQI	CON	0	CURRENT QUALIFIER INDEX				CDCM	1068
49	516		PCSA	BSS	0	START OF *PCS* TEMPORARY AREA TO BE CLEARED				CDCM	1069
50	516	3	PCSE	BSSZ	INTLTH	INTERMEDIATE FILE ENTRY				CDCM	1070
51	521	00000000000000000000	PCSVALC	CON	0	NUMBER OF ADRS FOR CURRENT RESULT REGISTER				CDCM	1071
52	522	00000000000000000000	PCSLOC	CON	0	ZERO OR LOCATION SYMBOL OF CURRENT STMT				CDCM	1072
53	523	00000000000000000000	PCSOC	CON	0	CURRENT OPCODE WITH ACTUAL REGISTER NUMBER				CDCM	1073
54	524	00000000000000000000	PCSRR	CON	0	REGISTER INDEX OF CURRENT RESULT REGISTER				CDCM	1074
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531	PC	SITAB	BSS	0	BEGINNING OF INSTRUCTION TABLE	CDCM	1102
	*				STANDARD COMPASS OPCODES AND PSEUDO INSTRUCTIONS.	CDCM	1103
531	230133000000000000000000		OPC	SA0,1,1,1		CDCM	1105
533	230233000000000000000000		OPC	SB0,1,1,1		CDCM	1106
535	233033000000000000000000		OPC	SX0,1,1,1		CDCM	1107
537	023033000000000000000000		OPC	BX0,1,1,1		CDCM	1108
541	143033000000000000000000		OPC	LX0,1,1,1		CDCM	1109
543	013033000000000000000000		OPC	AX0,1,1,1		CDCM	1110
545	153033000000000000000000		OPC	MX0,1,1,1,1		CDCM	1111
547	052100000000000000000000		OPC	EQ,1,1,0,0,PC.JUMP		CDCM	1112
551	160500000000000000000000		OPC	NE,1,1		CDCM	1113
553	070500000000000000000000		OPC	GE,1,1		CDCM	1114
555	140500000000000000000000		OPC	LE,1,1		CDCM	1115
557	072400000000000000000000		OPC	GT,1,1		CDCM	1116
561	142400000000000000000000		OPC	LT,1,1		CDCM	1117
563	322200000000000000000000		OPC	ZR,1,1,0,0,PC.JUMP		CDCM	1118
565	163200000000000000000000		OPC	NZ,1,1		CDCM	1119
567	201400000000000000000000		OPC	PL,1,1		CDCM	1120
571	151100000000000000000000		OPC	MI,1,1		CDCM	1121
573	160700000000000000000000		OPC	NG,1,1		CDCM	1122
575	221200000000000000000000		OPC	RJ,1,1		CDCM	1123
577	122000000000000000000000		OPC	JP,1,1,0,0,PC.JUMP		CDCM	1124
601	202300000000000000000000		OPC	PS,1,1,0,0,UJUMP		CDCM	1125
603	112200000000000000000000		OPC	IR,1,1		CDCM	1126
605	172200000000000000000000		OPC	OR,1,1		CDCM	1127

607	04060000000000000000	OPC	DF,1,1	CDCM	1129
611	11040000000000000000	OPC	ID,1,1	CDCM	1130
613	16303300000000000000	OPC	NX0,1,1,1,1	CDCM	1131
615	32303300000000000000	OPC	ZX0,1,1,1,1	CDCM	1132
617	25303300000000000000	OPC	UX0,1,1,1	CDCM	1133
621	20303300000000000000	OPC	PX0,1,1,1	CDCM	1134
623	06303300000000000000	OPC	FX0,1,1,1,1	CDCM	1135
625	04303300000000000000	OPC	DX0,1,1,1,1	CDCM	1136
627	11303300000000000000	OPC	IX0,1,1,1	CDCM	1137
631	22303300000000000000	OPC	RX0,1,1,1,1	CDCM	1138
633	27303300000000000000	OPC	WX0,1,1	CDCM	1139
635	16170000000000000000	OPC	NO,1,1	CDCM	1140
637	03303300000000000000	OPC	CX0,1,1,1,1	CDCM	1141
641	22540000000000000000	OPC	R=,1,1,1	CDCM	1142
643	03220000000000000000	OPC	CR,1,1	CDCM	1143
645	03270000000000000000	OPC	CW,1,1	CDCM	1144
647	05230000000000000000	OPC	ES,1,1	CDCM	1145
651	22140000000000000000	OPC	RL,1,1	CDCM	1146
653	22050000000000000000	OPC	RE,1,1	CDCM	1147
655	27140000000000000000	OPC	WL,1,1	CDCM	1148
657	27050000000000000000	OPC	WE,1,1	CDCM	1149
661	15120000000000000000	OPC	MJ,1,1	CDCM	1150
663	30120000000000000000	OPC	XJ,1,1	CDCM	1151
665	22110000000000000000	OPC	RI,1,1	CDCM	1152
667	11023300000000000000	OPC	IB0,1,1,1,1	CDCM	1153
671	24023300000000000000	OPC	TB0,1,1,1,1	CDCM	1154
673	22170000000000000000	OPC	RO,1,1	CDCM	1155
675	17023300000000000000	OPC	OB0,1,1,1,1	CDCM	1156
677	02232300000000000000	OPC	BSS,1,0,0,0,PC.BSS	CDCM	1157
701	02232332000000000000	OPC	BSSZ,1,0,0,0,PC.BSS	CDCM	1158
703	03171400000000000000	OPC	COL	CDCM	1159
705	03171600000000000000	OPC	CON,1	CDCM	1160
707	04012401000000000000	OPC	DATA,1	CDCM	1161
711	05160400000000000000	OPC	END,0,0,0,0,PC.END	CDCM	1162
713	05162422310000000000	OPC	ENTRY,0,0,0,0,PC.ENT	CDCM	1163
715	05162422310300000000	OPC	ENTRYC,0,0,0,0,PC.ENT	CDCM	1164
717	05212500000000000000	OPC	EQU,0,0,0,0,PC.EQU	CDCM	1165
721	05302400000000000000	OPC	EXT,0,0,0,0,PC.EXT	CDCM	1166
723	11040516240000000000	OPC	IDENT	CDCM	1167
725	21250114000000000000	OPC	QUAL,0,0,0,0,PC.QUAL	CDCM	1168
727	26060400000000000000	OPC	VFD,1	CDCM	1169
731	PCSTA	BSS	0	LWA+1 OF *COMPASS* INSTRUCTIONS AND PSEUDOS	CDCM 1170
					CDCM 1171
	*		SYSTEM MACROS OF INTEREST TO *CDCM*. THESE ARE RECOGNIZED	CDCM	1172
	*		ONLY IF THE *SM* OPTION IS SELECTED (DEFAULT).	CDCM	1173
731	01021722240000000000	OPC	ABORT,1,1,0,0,UJUMP	CDCM	1174
733	05160422251600000000	OPC	ENDRUN,1,1,0,0,UJUMP	CDCM	1175
735	23250222000000000000	OPC	SUBR,1,1	CDCM	1176
737	PCSTB	BSS	0	LWA+1 OF SYSTEM MACRO DEFINITIONS	CDCM 1177
					CDCM 1178
					CDCM 1179
					CDCM 1180
	*		LOCAL MACROS OF INTEREST TO *CDCM*. THESE ARE RECOGNIZED	CDCM	1181
	*		ONLY IF THE *LM* OPTION IS SELECTED (DEFAULT=OFF).	CDCM	1182
737	22242216000000000000	OPC	RTRN,1,1,0,0,UJUMP	CDCM	1183
741	23250222241600000000	OPC	SUBRTN,1,1	CDCM	1184
					CDCM 1185

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743	24010214050000000000		OPC	TABLE,1		CDCM	1186
745	00000000000000000000	PCSTC	CON	0	LWA+1 OF LOCAL MACRO DEFINITIONS	CDCM	1187
						CDCM	1188
746	00000000000000000000	PCSTT	CON	0	LOCATION TO STORE TARGET DURING SEARCH	CDCM	1189

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** PC.BSS - PROCESS *BSS* AND *BSSZ* STATEMENTS.
*
* *BSS* AND *BSSZ* STATEMENTS ARE COUNTED AS GENERATING
* (NON-EXECUTABLE) CODE, UNLESS THE ADDRESS FIELD CONTAINS ZERO.

CDCM 1191
CDCM 1192
CDCM 1193
CDCM 1194
CDCM 1195
CDCM 1196
CDCM 1197
CDCM 1198
CDCM 1199
CDCM 1200
CDCM 1201
CDCM 1202
CDCM 1203
CDCM 1204
CDCM 1205
CDCM 1206
CDCM 1207
CDCM 1208
CDCM 1209
CDCM 1210
CDCM 1211
CDCM 1212
CDCM 1213
CDCM 1214
CDCM 1215
CDCM 1216
CDCM 1217
CDCM 1218
CDCM 1219
CDCM 1220

747		PC.BSS	BSS	0	
			QUAL	PC.BSS	
747	5150000254 +		SA5	COMCOL	
	0100000126 +		RJ	FBF	FIND BEGINNING OF ADDRESS FIELD
750	37565		IX5	X6-X5	
	0325000757 +		PL	X5,BSS2	IF NO ADDRESS FIELD (SAME AS BSS 0)
751	0100000134 +		RJ	GSE	GET STATEMENT ELEMENT
752	7211777744		SX1	X1-1R0	
	0311000754 +		NZ	X1,BSS1	IF ADDRESS FIELD .NE. 0
753	7222777722		SX2	X2-1R	
	0302000757 +		ZR	X2,BSS2	IF ADDRESS FIELD .EQ. 0
754	5130000512 +	BSS1	SA3	PCSCLC	SET PREVIOUS EXEC CODE FLAG = CURRENT / 2
	23613		AX6	X3,B1	(= 0 IF LAST INST. WAS UNCONDITIONAL JUMP)
	43700		MX7	0	CURRENT EXEC CODE FLAG = 0
755	5160000513 +		SA6	PCSPLC	
	54730		SA7	A3	
756	0400000450 +		EQ	PCSPROC	GO COMPLETE STATEMENT PROCESSING
757	5110000522 +	BSS2	SA1	PCSLOC	SAVE CURRENT LOCATION SYMBOL AS A PREVIOUS
	10611		BX6	X1	SYMBOL FROM BSS 0
760	5160000514 +		SA6	PCSPVL	
	0400000257 +		EQ	PCSEXIT	EXIT FROM *PCS*
			QUAL	*	

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**          PC.END - PROCESS *END* STATEMENT.          CDCM      1222
*          CDCM      1223
*          WHEN AN *END* STATEMENT IS ENCOUNTERED, THE FOLLOWING CDCM      1224
*          PROCESSING TAKES PLACE:          CDCM      1225
*          CDCM      1226
*          1) TABLE *O.LOC* IS CHECKED FOR MATCHING NAMES IN *O.ENT*, AND CDCM      1227
*          THE *E* (ENTRY POINT) BIT IS SET IN EACH CORRESPONDING CDCM      1228
*          *O.LOC* ENTRY.  NOTE THAT *O.ENT* HAS ENTRIES ONLY FOR CDCM      1229
*          THE CURRENT PROGRAM UNIT.          CDCM      1230
*          CDCM      1231
*          2) THE INTERMEDIATE FILE IS READ, AND EACH ENTRY IN TURN IS CDCM      1232
*          DISCARDED, UNLESS IT MEETS ONE OF THE FOLLOWING CONDITIONS: CDCM      1233
*          CDCM      1234
*          - THE ENTRY IS FLAGGED AS TO BE LISTED.          CDCM      1235
*          - AT LEAST ONE OF THE SYMBOLS IN THE ENTRY HAS A MATCHING CDCM      1236
*          NAME IN TABLE *O.EXT*, MEANING THIS ENTRY REPRESENTS AN CDCM      1237
*          EXTERNAL.  IN THIS CASE, THE *E* BIT GETS SET IN THE CDCM      1238
*          ENTRY, SO THE ENTRY WILL BE RETAINED.          CDCM      1239
*          - AT LEAST ONE OF THE SYMBOLS IN THE ENTRY IS AN EXTERNAL. CDCM      1240
*          - AT LEAST ONE OF THE SYMBOLS IN THE ENTRY HAS A MATCHING CDCM      1241
*          ENTRY IN TABLE *O.LOC*.  IN THIS CASE, THE ENTRY WILL CDCM      1242
*          BECOME FLAGGED TO BE LISTED.          CDCM      1243
*          CDCM      1244
*          THIS PROCESSING NORMALLY CAUSES THE INTERMEDIATE FILE TO CDCM      1245
*          SHRINK TO A RELATIVELY SMALL SIZE AT THE END OF EACH CDCM      1246
*          PROGRAM UNIT.  FOR THIS REASON, IT IS RE-WRITTEN BY STORING CDCM      1247
*          INTO CM OR LCM WHETHER OR NOT IT HAD PREVIOUSLY OVERFLOWED CDCM      1248
*          TO MASS-STORAGE.  SUBSEQUENTLY, IF IT OVERFLOWS AGAIN, IT CDCM      1249
*          WILL THEN GO TO MASS-STORAGE, AND THIS PROCESS IS CONTINUED CDCM      1250
*          USING TWO ALTERNATE SCRATCH FILES.          CDCM      1251
*          CDCM      1252
*          3) LOCATION SYMBOLS IN *O.LOC* WHICH ARE NOT THAT OF ENTRY CDCM      1253
*          POINTS ARE DISCARDED.          CDCM      1254
*          CDCM      1255
*          4) TABLES AND VARIABLES ARE RESET FOR THE NEXT PROGRAM UNIT. CDCM      1256
*          CDCM      1257
*          5) AFTER PROCESSING AN *END* PSEUDO, SUBSEQUENT STATEMENTS ARE CDCM      1258
*          IGNORED UNTIL AN *IDENT* OR END OF FILE IS ENCOUNTERED. CDCM      1259
*          CDCM      1260
*          CDCM      1261
*          761          PC.END      BSS      0          ENTRY FROM *PCS* CDCM      1262
*          CDCM      1263
*          CDCM      1264
*          *          SET THE ENTRY POINT BIT IN ALL *O.LOC* ENTRIES FOR WHICH A CDCM      1265
*          *          MATCHING NAME IS PRESENT IN TABLE *O.ENT*.          CDCM      1266
*          CDCM      1267
*          761  5110000006 +          SA1      O.LOC      (B2) = FWA *O.LOC* CDCM      1268
*          54211          SA2      A1+B1          CDCM      1269
*          63210          SB2      X1          CDCM      1270
*          762  0302000774 +          ZR      X2,END10      IF *O.LOC* EMPTY CDCM      1271
*          5130000000 +          SA3      O.ENT      (B5) = FWA *O.ENT* CDCM      1272
*          763  54431          SA4      A3+B1          CDCM      1273
*          63322          SB3      B2+X2      (B3) = LWA+1 *O.LOC* CDCM      1274
*          0304000774 +          ZR      X4,END10      IF *O.ENT* EMPTY CDCM      1275
*          764  63530          SB5      X3          CDCM      1276
*          53545          SA5      B5+X4      SAVE (LWA+1 *O.ENT*) CDCM      1277
*          43014          MX0      12          CDCM      1278
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765	56120	64750	END1	SB7 SA1 MI	A5 B2 X1,END3	(B7) = LWA+1 *0.ENT* NEXT *0.LOC* ENTRY IF ALREADY SET AS AN ENTRY POINT	CDCM CDCM CDCM	1279 1280 1281
766	20614	15610		BX6 LX6 SA6	-X0*X1 12 A5	STORE TARGET VALUE AT (LWA+1 OF *0.ENT*)	CDCM CDCM CDCM	1282 1283 1284
767	54331	5135777776	END2	SA3 SA3 BX3	B5-1 A3+B1 X3-X6	FIRST-1 ENTRY SEARCH LOOP	CDCM CDCM CDCM	1285 1286 1287
770	64630	0313000767 +		NZ SB6 EQ	X3,END2 A3 B6,B7,END3	LOOP UNTIL HIT IF NAME NOT IN *0.ENT*	CDCM CDCM CDCM	1288 1289 1290
771	15110	43701		MX7 BX1 BX6	1 -X0*X1 X1+X7	ADD ENTRY POINT BIT	CDCM CDCM CDCM	1291 1292 1293
772	66221	54610	END3	SA6 SB2 LT	A1 B2+B1 B2,B3,END1	ADVANCE *0.LOC* FETCH POINTER LOOP FOR *0.LOC* ENTRIES	CDCM CDCM CDCM	1294 1295 1296
773	54750	10755		BX7 SA7	X5 A5	RESTORE (LWA+1 OF *0.ENT*)	CDCM CDCM CDCM	1297 1298 1299
*				PROCESS INTERMEDIATE FILE.			CDCM	1300
774	5120000036 +		END10	SA2	SP+1		CDCM	1301
775	7170777753	0302000776 +		ZR	X2,END11	IF INTERMEDIATE FILE IN CM OR LCM	CDCM	1303
776	0100001343 +		END11	WRITER RJ	X2,RCL RWF	ISSUE EOR WRITE ON INTERMEDIATE FILE REWIND INTERMEDIATE FILE	CDCM CDCM	1304 1305
*				READ NEXT INTERMEDIATE ENTRY.			CDCM	1306
777	0100001312 +		END12	RJ	RIF	READ INTERMEDIATE FILE	CDCM	1309
1000	0311001043 +			NZ	X1,END50	IF FINISHED READING INTERMEDIATE FILE	CDCM	1310
	5130001327 +			SA3	INTENT	1ST WORD OF ENTRY	CDCM	1311
1001	0333001040 +			MI	X3,END24	IF THIS ENTRY ALREADY FLAGGED	CDCM	1312
1002	66610			SB6	B1	INDEX FOR WORD WITHIN ENTRY	CDCM	1313
1002	6170000003			SB7	INTLTH	MAXIMUM INDEX + 1	CDCM	1314
1003	5126001327 +	43000	END13	MX0	0	(X0) = KEEP / DO NOT KEEP FLAG	CDCM	1315
	0302001006 +			SA2	B6+INTENT	NEXT SYMBOL (IF ANY)	CDCM	1316
1004	0322001010 +			ZR	X2,END15	IF NO SYMBOL	CDCM	1317
1005	76010		END14	PL	X2,END16	IF NOT AN EXTERNAL	CDCM	1318
1006	66661		END15	SX0 SB6	B1 B6+B1	FLAG AS TO KEEP ADVANCE INDEX	CDCM CDCM	1319 1320
1007	0767001003 +			LT	B6,B7,END13	LOOP FOR NUMBER OF SYMBOLS POSSIBLE (2)	CDCM	1321
	0300000777 +			ZR	X0,END12	IF NOT TO KEEP THIS ENTRY	CDCM	1322
	0400001040 +			EQ	END24	GO KEEP THIS ENTRY	CDCM	1323
*				IF SYMBOL NAME APPEARS IN EITHER *0.EXT* OR *0.ENT*, THEN SET			CDCM	1324
*				THE ENTRY POINT FLAG AND CLEAR THE QUAL-INDEX FIELD FOR			CDCM	1325
*				THIS ENTRY.			CDCM	1326
1010	5110000003 +		END16	SA1	0.EXT	(B2) = FWA OF *0.EXT*	CDCM	1327
1011	54311	66300	END17	SB3	B0	INDICATE SEARCHING *0.EXT*	CDCM	1328
	63210			SA3 SB2	A1+B1 X1		CDCM CDCM	1329 1330
1012	63532	0303001020 +		ZR	X3,END19	IF TABLE EMPTY	CDCM	1331
	56550			SB5 SA5	B2+X3 B5	(B5) = LWA+1 TABLE SAVE (LWA+1)	CDCM CDCM	1332 1333

		43714		MX7	12	LEFT JUSTIFY SYMBOL NAME FOR SEARCH	CDCM	1336
		10655		BX6	X5		CDCM	1337
	1013	15727		BX7	-X7*X2		CDCM	1338
		20714		LX7	12		CDCM	1339
		56750		SA7	B5	STORE TARGET AT (LWA+1)	CDCM	1340
		57421		SA4	B2-B1	FIRST-1 ENTRY	CDCM	1341
	1014	54441	END18	SA4	A4+B1	NEXT ENTRY	CDCM	1342
		13447		BX4	X4-X7		CDCM	1343
		0314001014 +		NZ	X4,END18	LOOP UNTIL HIT	CDCM	1344
	1015	64440		SB4	A4		CDCM	1345
		56650		SA6	B5	RESTORE (LWA+1)	CDCM	1346
		0445001020 +		EQ	B4,B5,END19	IF NAME NOT IN TABLE	CDCM	1347
	1016	20760		LX7	-12		CDCM	1348
		43301		MX3	1	SET ENTRY POINT BIT IN INTERMEDIATE FILE	CDCM	1349
		12773		BX7	X7+X3	ENTRY	CDCM	1350
		54720		SA7	A2		CDCM	1351
	1017	0400001005 +		EQ	END14	GO FLAG TO KEEP	CDCM	1352
							CDCM	1353
	1020	0530001022 +	END19	NZ	B3,END20	IF BOTH *O.EXT* AND *O.ENT* SEARCHED	CDCM	1354
		66310		SB3	B1		CDCM	1355
	1021	5110000000 +		SA1	O.ENT	NOW SEARCH *O.ENT*	CDCM	1356
		0400001011 +		EQ	END17		CDCM	1357
							CDCM	1358
			*		SEARCH *O.LOC* FOR CURRENT SYMBOL NAME. QUALIFIERS ARE		CDCM	1359
			*		HANDLED AS FOLLOWS:		CDCM	1360
			*				CDCM	1361
			*		- IF THE REFERENCE (SYMBOL ENTRY IN THE INTERMEDIATE) IS		CDCM	1362
			*		EXPLICITLY QUALIFIED (G=1), OR IF THE REFERENCE IS IN THE		CDCM	1363
			*		GLOBAL QUAL BLOCK, THEN THE NAME IN *O.LOC* MUST MATCH THE		CDCM	1364
			*		QUALIFIER INDEX (THIS INCLUDES A QUALIFIER INDEX OF ZERO		CDCM	1365
			*		FOR THE CASE OF AN EXPLICIT GLOBAL QUALIFICATION).		CDCM	1366
			*				CDCM	1367
			*		- IF THE REFERENCE IS NOT EXPLICITLY QUALIFIED, AND IF		CDCM	1368
			*		THE STORE INSTRUCTION IS NOT IN THE GLOBAL BLOCK, THEN UP TO		CDCM	1369
			*		TWO (2) SEARCHES OF *O.LOC* WILL BE MADE. THE FIRST WILL		CDCM	1370
			*		BE FOR A NAME HAVING THE SAME QUALIFIER INDEX AS THE ONE IN		CDCM	1371
			*		WHICH THE INSTRUCTION RESIDES, AND, IF NOT FOUND, THE SECOND		CDCM	1372
			*		WILL BE FOR A NAME WITH A QUALIFIER INDEX OF ZERO.		CDCM	1373
							CDCM	1374
	1022	43763	END20	MX7	-9	(X1) = QUAL-INDEX OF THIS INSTRUCTION	CDCM	1375
		5110001327 +		SA1	INTENT		CDCM	1376
		15117		BX1	-X7*X1		CDCM	1377
	1023	66210		SB2	B1	FLAG ONLY ONE SEARCH	CDCM	1378
		10322		BX3	X2	(X4) = QUAL-INDEX OF REFERENCE	CDCM	1379
		20314		LX3	12	= QUAL-INDEX TO USE IN SEARCH	CDCM	1380
		15437		BX4	-X7*X3		CDCM	1381
	1024	43760		MX7	48		CDCM	1382
		0301001026 +		ZR	X1,END21	IF INSTRUCTION IN GLOBAL QUAL BLOCK	CDCM	1383
		20362		LX3	-12+59-57	CHECK G FLAG	CDCM	1384
	1025	0333001026 +		MI	X3,END21	IF EXPLICITLY QUALIFIED	CDCM	1385
		66200		SB2	B0	FLAG TWO SEARCHES, IF NECESSARY	CDCM	1386
		10411		BX4	X1	SET TO USE QUAL-INDEX OF INSTRUCTION	CDCM	1387
	1026	10322	END21	BX3	X2	INTERMEDIATE FILE SYMBOL ENTRY	CDCM	1388
		5110000006 +		SA1	O.LOC	FWA OF *O.LOC*	CDCM	1389
		20314		LX3	12	PUT IN QUAL-INDEX FOR SEARCH	CDCM	1390
	1027	11373		BX3	X7*X3		CDCM	1391
		12634		BX6	X3+X4		CDCM	1392

		20660		LX6	-12		CDCM	1393
		54311		SA3	A1+B1	LENGTH OF *O.LOC*	CDCM	1394
	1030	36413		IX4	X1+X3	(B5) = LWA+1 *O.LOC*	CDCM	1395
1		0303001006 +		ZR	X3,END15	IF *O.LOC* EMPTY	CDCM	1396
2		63540		SB5	X4		CDCM	1397
3	1031	56550		SA5	B5	SAVE (LWA+1)	CDCM	1398
4		54650		SA6	A5	STORE TARGET AT (LWA+1)	CDCM	1399
5		5241777776		SA4	X1-1	FIRST - 1 ENTRY	CDCM	1400
6	1032	54441	END22	SA4	A4+B1	NEXT ENTRY	CDCM	1401
7		13346		BX3	X4-X6		CDCM	1402
8		0313001032 +		NZ	X3,END22	LOOP UNTIL MATCH	CDCM	1403
9	1033	10655		BX6	X5	RESTORE (LWA+1)	CDCM	1404
10		64440		SB4	A4		CDCM	1405
11		43760		MX7	48		CDCM	1406
12		56650		SA6	B5		CDCM	1407
13	1034	0545001036 +		NE	B4,B5,END23	IF SYMBOL FOUND	CDCM	1408
14		0520001006 +		NZ	B2,END15	IF NOT TO SEARCH USING GLOBAL QUALIFIER	CDCM	1409
15	1035	43400		MX4	0	SET TO SEARCH FOR UNQUALIFIED SYMBOL	CDCM	1410
16		66210		SB2	B1	SET TO INDICATE 2ND SEARCH	CDCM	1411
17		0400001026 +		EQ	END21	REPEAT SEARCH	CDCM	1412
18							CDCM	1413
19			*			SYMBOL MATCHES WITH AN *O.LOC* ENTRY. FLAG THIS INTERMEDIATE	CDCM	1414
20			*			ENTRY TO BE LISTED.	CDCM	1415
21							CDCM	1416
22	1036	5110001327 +	END23	SA1	INTENT	SET *TO BE LISTED* BIT IN WD 0 OF ENTRY	CDCM	1417
23		43701		MX7	1		CDCM	1418
24		12717		BX7	X1+X7		CDCM	1419
25	1037	54710		SA7	A1		CDCM	1420
26							CDCM	1421
27			*			KEEP CURRENT INTERMEDIATE ENTRY.	CDCM	1422
28							CDCM	1423
29	1040	6120001327 +	END24	SB2	INTENT		CDCM	1424
30		6130000014		SB3	INTLTH+LINELTH		CDCM	1425
31	1041	0100001356 +		RJ	SIF	STORE INTERMEDIATE FILE	CDCM	1426
32	1042	0400000777 +		EQ	END12	LOOP FOR NEXT INTERMEDIATE ENTRY	CDCM	1427
33							CDCM	1428
34			*			FINISHED PROCESSING INTERMEDIATE FILE. RESET VARIOUS	CDCM	1429
35			*			INFORMATION FOR NEXT *IDENT*.	CDCM	1430
36							CDCM	1431
37	1043	76710	END50	SX7	B1		CDCM	1432
38		5170000511 +		SA7	PCSID	SET *SKIPPING TO IDENT* FLAG	CDCM	1433
39		43600		MX6	0		CDCM	1434
40	1044	5160000512 +		SA6	PCSCLC	RESET CURRENT EXECUTABLE CODE FLAG	CDCM	1435
41		5160000001 +		SA6	O.ENT+1	RESET ENTRY POINT NAME TABLE	CDCM	1436
42	1045	5160000004 +		SA6	O.EXT+1	RESET EXTERNAL NAME TABLE	CDCM	1437
43		5160000012 +		SA6	O.QUL+1	RESET QUALIFIER NAME TABLE	CDCM	1438
44	1046	5160000015 +		SA6	O.QUS+1	RESET QUALIFIER STACK TABLE	CDCM	1439
45		5160000515 +		SA6	PCSQI	RESET CURRENT QUALIFIER INDEX	CDCM	1440
46	1047	0100000122 +		RJ	CRT	CLEAR REGISTER TABLE	CDCM	1441
47	1050	5110000006 +		SA1	O.LOC	SHRINK *O.LOC* TO ONLY LEAVE THOSE LOCATION	CDCM	1442
48		54211		SA2	A1+B1	SYMBOLS WHICH ARE ENTRY POINTS	CDCM	1443
49		10622		BX6	X2	(X6) = NEW LENGTH	CDCM	1444
50	1051	66500		SB5	B0	(B5) = FETCH POINTER	CDCM	1445
51		66600		SB6	B0	(B6) = STORE POINTER	CDCM	1446
52		63720		SB7	X2		CDCM	1447
53	1052	0470001056 +	END51	ZR	B7,END53	IF NO MORE	CDCM	1448
54		53315		SA3	X1+B5	NEXT ENTRY	CDCM	1449
55								
56								
57								
58								
59								
60								

		67771	SB7	B7-B1		CDCM	1450
1053	66551		SB5	B5+B1	ADVANCE FETCH POINTER	CDCM	1451
	0323001055 +		PL	X3,END52	IF NOT AN ENTRY POINT	CDCM	1452
		10733	BX7	X3	STORE ENTRY	CDCM	1453
1054	53716		SA7	X1+B6		CDCM	1454
	66661		SB6	B6+B1	ADVANCE STORE POINTER	CDCM	1455
	0400001052 +		EQ	END51	LOOP	CDCM	1456
						CDCM	1457
1055	7266777776	END52	SX6	X6-1	DECREMENT NEW LENGTH	CDCM	1458
	0400001052 +		EQ	END51	LOOP	CDCM	1459
						CDCM	1460
1056	54620	END53	SA6	A2	STORE UPDATED LENGTH	CDCM	1461
	0400000257 +		EQ	PCSEXIT	EXIT FROM *PCS*	CDCM	1462
						CDCM	1463
			QUAL	*		CDCM	1464

1412THE

** PC.ENT - PROCESS *ENTRY* AND *ENTRYC* STATEMENTS.

CDCM 1466

*

CDCM 1467

*

CDCM 1468

* WHEN *ENTRY* OR *ENTRYC* IS ENCOUNTERED, THE SYMBOLS IN THE
* ADDRESS FIELD ARE ADDED TO THE TABLE *O.ENT* IF NOT ALREADY
* PRESENT. AT *END* PROCESSING (IN *PC.END*), ALL NEW *O.LOC*
* ENTRIES FOR THE CURRENT PROGRAM UNIT ARE CHECKED FOR A
* MATCHING NAME IN *O.ENT*.

CDCM 1469

CDCM 1470

CDCM 1471

CDCM 1472

CDCM 1473

CDCM 1474

1057 PC.ENT BSS 0 ENTRY FROM *PCS*

CDCM 1475

1057 5150000254 + QUAL PC.ENT
SA5 COMCOL BEGINNING DEFAULT COMMENT COLUMN

CDCM 1476

CDCM 1477

0100000126 + RJ FBF FIND BEGINNING OF FIELD

CDCM 1478

1060 37565 IX5 X6-X5

CDCM 1479

0325000257 + PL X5,PCSEXIT IF NO ADDRESS FIELD, EXIT

CDCM 1480

1061 0100000134 + ENT1 RJ GSE GET STATEMENT ELEMENT

CDCM 1481

1062 0521000257 + NE B2,B1,PCSEXIT IF NOT SYMBOL, ERROR

CDCM 1482

7252777721 SX5 X2-1R, (X5) = 0 IF NOT END OF ADDRESS FIELD

CDCM 1483

1063 5120000000 + SA2 O.ENT

CDCM 1484

0100000112 + RJ ANT ADD NAME TO TABLE

CDCM 1485

1064 0305001061 + ZR X5,ENT1 LOOP IF MORE SYMBOLS

CDCM 1486

0400000257 + EQ PCSEXIT EXIT FROM *PCS*

CDCM 1487

QUAL *

CDCM 1488

1412THE

**	PC.EQU - PROCESS *EQU* STATEMENT.	CDCM	1490
*		CDCM	1491
*	AN *EQU* STATEMENT CAUSES AN ENTRY TO BE ADDED TO TABLE	CDCM	1492
*	*O.LOC* IF THE ADDRESS FIELD VALUE IS CURRENTLY IN *O.LOC*.	CDCM	1493
*	IF NOT FOUND, THE *EQU* STATEMENT IS IGNORED, BECAUSE	CDCM	1494
*	*COMPASS* WOULD NOT HAVE DEFINED THE SYMBOL, AND ANY SUB-	CDCM	1495
*	SEQUENT REFERENCES TO IT WOULD CAUSE AN ASSEMBLY ERROR.	CDCM	1496
		CDCM	1497
		CDCM	1498
1065	PC.EQU BSS 0 ENTRY FROM *PCS*	CDCM	1499
	QUAL PC.EQU	CDCM	1500
1065 0100000126 +	RJ FBF FIND BEGINNING OF FIELD	CDCM	1501
1066 5120000254 +	SA2 COMCOL	CDCM	1502
43001	MX0 1 SET TO TRY CURRENT QUAL-IND, THEN GLOBAL	CDCM	1503
	IF NECESSARY	CDCM	1504
37262	IX2 X6-X2	CDCM	1505
1067 0322000257 +	PL X2,PCSEXIT IF NO ADDRESS FIELD, EXIT FROM *PCS*	CDCM	1506
0100000134 +	RJ GSE GET STATEMENT ELEMENT	CDCM	1507
1070 0421001111 +	EQ B2,B1,EQU5 IF SYMBOL	CDCM	1508
		CDCM	1509
*	CHECK FOR QUALIFIER.	CDCM	1510
		CDCM	1511
6132777775	SB3 B2-2	CDCM	1512
1071 0530001101 +	NZ B3,EQU2 IF NOT A QUALIFIED SYMBOL	CDCM	1513
7222777727	SX2 X2-1R/	CDCM	1514
1072 0312000257 +	NZ X2,PCSEXIT IF NAME NOT FOLLOWED BY /	CDCM	1515
5120000011 +	SA2 O.QUL	CDCM	1516
1073 54321	SA3 A2+B1 *O.QUL* LENGTH	CDCM	1517
0303000257 +	ZR X3,PCSEXIT IF NO QUALIFIERS DEFINED, MUST BE ERROR	CDCM	1518
63220	SB2 X2 (B2) = FWA *O.QUL*	CDCM	1519
1074 53532	SA5 B2+X3 SAVE (LWA+1)	CDCM	1520
10755	BX7 X5	CDCM	1521
64750	SB7 A5 (B7) = LWA+1	CDCM	1522
10611	BX6 X1	CDCM	1523
1075 54650	SA6 A5 SET TARGET VALUE AT LWA+1	CDCM	1524
57421	SA4 B2-B1 FIRST-1 ENTRY	CDCM	1525
1076 54441	SA4 A4+B1 SEARCH LOOP	CDCM	1526
13464	BX4 X6-X4	CDCM	1527
0314001076 +	NZ X4,EQU1 LOOP UNTIL HIT	CDCM	1528
1077 64640	SB6 A4	CDCM	1529
54750	SA7 A5 RESTORE (LWA+1)	CDCM	1530
0467000257 +	EQ B6,B7,PCSEXIT IF QUALIFIER NAME NOT IN TABLE, ERROR	CDCM	1531
1100 77062	SX0 B6-B2 (X0) = INDEX OF QUALFIER NAME	CDCM	1532
73001	SX0 X0+B1	CDCM	1533
0400001107 +	EQ EQU4 GO GET SYMBOL	CDCM	1534
		CDCM	1535
1101 6132777773	SB3 B2-4	CDCM	1536
0530000257 +	NZ B3,PCSEXIT IF CANNOT BE //	CDCM	1537
1102 7231777727	SX3 X1-1R/	CDCM	1538
7242777727	SX4 X2-1R/	CDCM	1539
1103 0303001106 +	ZR X3,EQU3 IF 1ST CHAR IS /	CDCM	1540
7231777730	SX3 X1-1R* CHECK FOR EQU *	CDCM	1541
1104 0313000257 +	NZ X3,PCSEXIT IF 1ST CHAR NOT *	CDCM	1542
7242777722	SX4 X2-1R	CDCM	1543
1105 0314000257 +	NZ X4,PCSEXIT IF 2ND CHAR NOT BLANK	CDCM	1544
0400000757 +	EQ /PC.BSS/BSS2 GO PROCESS LOCATION SYMBOL SAME AS BSS 0	CDCM	1545
		CDCM	1546

1106	0314000257 +	EQU3	NZ	X4,PCSEXIT	IF 2ND CHAR NOT /	CDCM	1547
	43000		MX0	0	SET TO USE GLOBAL QUALIFIER	CDCM	1548
1107	0100000134 +	EQU4	RJ	GSE	GET STATEMENT ELEMENT	CDCM	1549
1110	0521000257 +		NE	B2,B1,PCSEXIT	IF NOT SYMBOL, ERROR	CDCM	1550
						CDCM	1551
		*		SYMBOL FOUND.	DETERMINE IF IN TABLE *0.LOC*.	CDCM	1552
						CDCM	1553
1111	0320001115 +	EQU5	PL	X0,EQU7	IF A QUALIFIER WAS SPECIFIED	CDCM	1554
	5150000515 +		SA5	PCSQI	IF QUALIFIER IN EFFECT, SEARCH *0.LOC*	CDCM	1555
1112	0315001114 +		NZ	X5,EQU6	WITH CURRENT QUAL-INDEX	CDCM	1556
	43000		MX0	0	NO QUALIFIER IN EFFECT SO ONLY SEARCH ONCE	CDCM	1557
1113	0400001116 +		EQ	EQU8	USING GLOBAL QUAL-INDEX = 0	CDCM	1558
						CDCM	1559
1114	20560	EQU6	LX5	48	INDEX OF CURRENT QUALIFIER	CDCM	1560
	0400001116 +		EQ	EQU8		CDCM	1561
						CDCM	1562
1115	10500	EQU7	BX5	X0	SET QUALIFIER INDEX	CDCM	1563
	20560		LX5	48		CDCM	1564
1116	10611	EQU8	BX6	X1		CDCM	1565
	20660		LX6	-12		CDCM	1566
	5120000006 +		SA2	0.LOC		CDCM	1567
1117	12656		BX6	X5+X6	(X6) = VFD 3/0,9/(QUAL-IND),48/NAME	CDCM	1568
	54321		SA3	A2+B1	*0.LOC* LENGTH	CDCM	1569
	63220		SB2	X2	(B2) = FWA *0.LOC*	CDCM	1570
1120	0303000257 +		ZR	X3,PCSEXIT	IF *0.LOC* EMPTY, ADDRESS UNDEFINED	CDCM	1571
	53532		SA5	B2+X3	SAVE (LWA+1)	CDCM	1572
	10755		BX7	X5		CDCM	1573
1121	64750		SB7	A5	(B7) = LWA+1	CDCM	1574
	54650		SA6	A5	SET TARGET VALUE AT LWA+1	CDCM	1575
	57421		SA4	B2-B1	FIRST-1 ENTRY	CDCM	1576
1122	54441	EQU9	SA4	A4+B1	SEARCH LOOP	CDCM	1577
	13464		BX4	X6-X4		CDCM	1578
	0314001122 +		NZ	X4,EQU9	LOOP UNTIL HIT	CDCM	1579
1123	64640		SB6	A4		CDCM	1580
	54750		SA7	A5	RESTORE (LWA+1)	CDCM	1581
	0567001126 +		NE	B6,B7,EQU10	IF LOCATION SYMBOL FOUND	CDCM	1582
1124	0320000257 +		PL	X0,PCSEXIT	IF LAST SEARCH WAS WAS GLOBAL	CDCM	1583
	43000		MX0	0	NOW SEARCH WITH GLOBAL QUALIFICATION	CDCM	1584
	76500		SX5	B0		CDCM	1585
1125	0400001115 +		EQ	EQU7		CDCM	1586
						CDCM	1587
1126	5140000522 +	EQU10	SA4	PCSLOC	CURRENT LOCATION SYMBOL	CDCM	1588
	5110000515 +		SA1	PCSQI	CURRENT QUALIFIER INDEX	CDCM	1589
1127	0304000257 +		ZR	X4,PCSEXIT	IF THERE WAS NO LOCATION SYMBOL	CDCM	1590
	12141		BX1	X4+X1		CDCM	1591
	20160		LX1	48	3/0,9/(QUAL-IND),48/0	CDCM	1592
1130	5120000006 +		SA2	0.LOC		CDCM	1593
	0100001206 +		RJ	ADW	ADD NEW ENTRY TO *0.LOC*	CDCM	1594
1131	0400000257 +		EQ	PCSEXIT	EXIT FROM *PCS*	CDCM	1595
						CDCM	1596
			QUAL	*		CDCM	1597

** PC.EXT - PROCESS *EXT* STATEMENT.

CDCM 1599

*

CDCM 1600

*

CDCM 1601

* WHEN AN *EXT* STATEMENT IS ENCOUNTERED, THE SYMBOLS IN THE
* ADDRESS FIELD ARE ADDED TO THE TABLE *O.EXT* IF NOT ALREADY
* PRESENT. AT *END* PROCESSING IN *PC.END*, DURING THE
* PROCESSING OF ADDRESS FIELD SYMBOLS, ANY SYMBOL WHICH HAS A
* MATCHING ENTRY IN TABLE *O.EXT* WILL CAUSE THE EP BIT TO BE
* SET IN THE RESULTING INTERMEDIATE FILE ENTRY.

CDCM 1602

CDCM 1603

CDCM 1604

CDCM 1605

CDCM 1606

CDCM 1607

1132

PC.EXT

BSS

0

ENTRY FROM *PCS*

CDCM 1608

CDCM 1609

CDCM 1610

1132 5150000254 +

0100000126 +

SA5

COMCOL

BEGINNING DEFAULT COMMENT COLUMN

CDCM 1611

RJ

FBF

FIND BEGINNING OF FIELD

CDCM 1612

1133 37565

IX5

X6-X5

CDCM 1613

0325000257 +

PL

X5,PCSEXIT

IF NO ADDRESS FIELD, EXIT

CDCM 1614

1134 0100000134 +

EXT1

RJ

GSE

GET STATEMENT ELEMENT

CDCM 1615

1135 0521000257 +

NE

B2,B1,PCSEXIT

IF NOT SYMBOL, ERROR

CDCM 1616

7252777721

SX5

X2-1R,

(X5) = 0 IF NOT END OF ADDRESS FIELD

CDCM 1617

1136 5120000003 +

SA2

O.EXT

CDCM 1618

0100000112 +

RJ

ANT

ADD NAME TO TABLE

CDCM 1619

1137 0305001134 +

ZR

X5,EXT1

LOOP IF MORE SYMBOLS

CDCM 1620

0400000257 +

EQ

PCSEXIT

EXIT FROM *PCS*

CDCM 1621

QUAL

*

CDCM 1622

1412THE

** PC.JUMP - PROCESS JUMP INSTRUCTIONS.

*

*

THIS ROUTINE IS USED FOR AN INSTRUCTION WHICH CAN BE AN

UNCONDITIONAL JUMP, DEPENDING ON THE CONTENTS OF THE ADDRESS

FIELD. FOR THE PURPOSES OF CDCM OUTPUT, UNCONDITIONAL

ACTUALLY MEANS NOT ONLY UNCONDITIONAL, BUT ALSO NOT LIKELY

TO JUMP INTO MODIFIED CODE. THIS CONDITION IS CONSIDERED TO

BE MET IF ONLY IF ALL OF THE FOLLOWING CONDITIONS ARE MET:

*

*

*

A) THERE ARE NO REGISTERS IN THE ADDRESS FIELD.

B) THERE ARE NO *+ OR *- DESIGNATORS IN THE ADDRESS

FIELD. * BY ITSELF IS OK.

CDCM 1624

CDCM 1625

CDCM 1626

CDCM 1627

CDCM 1628

CDCM 1629

CDCM 1630

CDCM 1631

CDCM 1632

CDCM 1633

CDCM 1634

CDCM 1635

CDCM 1636

CDCM 1637

CDCM 1638

CDCM 1639

CDCM 1640

CDCM 1641

CDCM 1642

CDCM 1643

CDCM 1644

CDCM 1645

CDCM 1646

CDCM 1647

CDCM 1648

CDCM 1649

CDCM 1650

CDCM 1651

CDCM 1652

CDCM 1653

CDCM 1654

CDCM 1655

CDCM 1656

CDCM 1657

CDCM 1658

CDCM 1659

CDCM 1660

CDCM 1661

CDCM 1662

CDCM 1663

CDCM 1664

CDCM 1665

CDCM 1666

CDCM 1667

CDCM 1668

CDCM 1669

CDCM 1670

1140

PC.JUMP

BSS

0

ENTRY FROM *PCS*

1140 5110000512 +
63310

QUAL

PC.JUMP

SA1

PCSCLC

SET PREVIOUS EXEC CODE FLAG = CURRENT / 2

SB3

X1

(B3) = CURRENT *PCSCLC* SETTING

23611

AX6

X1,B1

(= 0 IF LAST INST. WAS UNCONDITIONAL JUMP)

1141 76711

R=

X7,2

CURRENT EXEC CODE FLAG = 2 FOR INSTRUCTIONS

5160000513 +

SA6

PCSPLC

OTHER THAN UNCONDITIONAL JUMPS

54710

SA7

A1

1142 5150000254 +

SA5

COMCOL

BEGINNING DEFAULT COMMENT COLUMN

0100000126 +

RJ

FBF

FIND BEGINNING OF ADDRESS FIELD

1143 37565

IX5

X6-X5

0325001150 +

PL

X5,JMP3

IF NO ADDRESS, EITHER UNCOND. OR ERROR

1144 0100000134 +

JMP1

RJ

GSE

GET NEXT ADDRESS FIELD ELEMENT

1145 0520001154 +

NZ

B2,JMP4

IF NOT A REGISTER

7211777767

SX1

X1-8

B0 REGISTER OK

1146 0311000450 +

NZ

X1,PCSPROC

NOT UNCONDITIONAL, GO COMPLETE PROCESSING

1147 0314001144 +

JMP2

NZ

X4,JMP1

IF MORE ADDRESS FIELDS

1150 76710

JMP3

SX7

B1

SET FOR UNCONDITIONAL JUMP

5170000512 +

SA7

PCSCLC

1151 5110000024 +

SA1

S0.JP

0301000450 +

ZR

X1,PCSPROC

IF *JP* NOT SELECTED

1152 0100000122 +

RJ

CRT

CLEAR REGISTER TABLE

1153 0400000450 +

EQ

PCSPROC

GO COMPLETE PROCESSING

1154 7231777730

JMP4

SX3

X1-1R*

CHECK FOR * IN ADDRESS FIELD

7242777722

SX4

X2-1R

(X4) = 0 IF AT END OF ADDRESS FIELD

1155 0313001147 +

NZ

X3,JMP2

IF ADDRESS DOES NOT BEGIN WITH *

0304001150 +

ZR

X4,JMP3

IF ADDRESS FIELD CONTAINS * (ALONE)

1156 0400000450 +

EQ

PCSPROC

NOT UNCONDITIONAL, GO COMPLETE PROCESSING

1150 +

UJUMP

QUAL

*

/PC.JUMP/JMP3

	**	PC.QUAL - PROCESS *QUAL* STATEMENT.				CDCM	1672	
	*					CDCM	1673	
	*	A *QUAL* STATEMENT CAUSES THE TABLES *O.QUL* AND *O.QUS* TO				CDCM	1674	
1	*	BE UPDATED AND THE CURRENT QUALIFIER INDEX *PCSQI* TO BE				CDCM	1675	1
2	*	UPDATED. THERE ARE THREE (3) CASES.				CDCM	1676	2
3	*					CDCM	1677	3
4	*	1) ADDRESS FIELD CONTAINS A NAME: NAME IS ADDED TO *O.QUL*				CDCM	1678	4
5	*	IF NOT ALREADY THERE. AN ENTRY IS ADDED TO *O.QUS*				CDCM	1679	5
6	*	CONTAINING THE CURRENT QUALIFIER INDEX. *PCSQI* IS SET				CDCM	1680	6
7	*	TO THE CURRENT QUALIFIER INDEX.				CDCM	1681	7
8	*					CDCM	1682	8
9	*	2) ADDRESS FIELD IS BLANK: AN ENTRY IS ADDED TO *O.QUS* FOR				CDCM	1683	9
10	*	GLOBAL QUALIFICATION (ZERO VALUE). *PCSQI* IS SET TO ZERO.				CDCM	1684	10
11	*					CDCM	1685	11
12	*	3) ADDRESS FIELD CONTAINS *: IF THERE ARE ANY ENTRIES IN				CDCM	1686	12
13	*	*O.QUS*, THE LAST ONE IS REMOVED, THUS POPPING THE STACK.				CDCM	1687	13
14	*	*PCSQI* IS SET TO THE QUALIFIER INDEX FROM THE PREVIOUS				CDCM	1688	14
15	*	*O.QUS* ENTRY (OR ZERO IF *O.QUS* IS EMPTY).				CDCM	1689	15
16						CDCM	1690	16
17						CDCM	1691	17
18	1157	PC.QUAL	BSS	0	ENTRY FROM *PCS*	CDCM	1692	18
19			QUAL	PC.QUAL		CDCM	1693	19
20	1157	0100000126 +	RJ	FBF	FIND BEGINNING OF FIELD	CDCM	1694	20
21	1160	5120000254 +	SA2	COMCOL		CDCM	1695	21
22		37262	IX2	X6-X2		CDCM	1696	22
23	1161	0322001173 +	PL	X2,QUL3	IF NO ADDRESS FIELD	CDCM	1697	23
24		0100000134 +	RJ	GSE	GET STATEMENT ELEMENT	CDCM	1698	24
25	1162	0521001176 +	NE	B2,B1,QUL5	IF NOT A SYMBOL	CDCM	1699	25
26		5120000011 +	SA2	O.QUL		CDCM	1700	26
27	1163	54321	SA3	A2+B1	*O.QUL* LENGTH	CDCM	1701	27
28		0303001171 +	ZR	X3,QUL2	IF *O.QUL* EMPTY	CDCM	1702	28
29		63220	SB2	X2	(B2) = FWA *O.QUL*	CDCM	1703	29
30	1164	53532	SA5	B2+X3	SAVE (LWA+1)	CDCM	1704	30
31		10755	BX7	X5		CDCM	1705	31
32		64750	SB7	A5	(B7) = LWA+1	CDCM	1706	32
33		10611	BX6	X1		CDCM	1707	33
34	1165	54650	SA6	A5	SET TARGET VALUE AT LWA+1	CDCM	1708	34
35		5142777776	SA4	B2-1	FIRST-1 ENTRY	CDCM	1709	35
36	1166	54441	QUL1	SA4	A4+B1	CDCM	1710	36
37		13464	BX4	X6-X4		CDCM	1711	37
38		0314001166 +	NZ	X4,QUL1	LOOP UNTIL HIT	CDCM	1712	38
39	1167	64640	SB6	A4		CDCM	1713	39
40		54750	SA7	A5	RESTORE (LWA+1)	CDCM	1714	40
41		0467001171 +	EQ	B6,B7,QUL2	IF QUALIFIER NAME NOT IN TABLE	CDCM	1715	41
42	1170	77162	SX1	B6-B2	(X1) = INDEX OF QUALIFIER NAME	CDCM	1716	42
43		73111	SX1	X1+B1		CDCM	1717	43
44		0400001174 +	EQ	QUL4	GO ADD TO *O.QUS*	CDCM	1718	44
45						CDCM	1719	45
46	1171	0100001206 +	QUL2	RJ	ADW	CDCM	1720	46
47					ADD WORD TO TABLE *O.QUL*	CDCM	1721	47
48	1172	10133		BX1	X3	CDCM	1722	48
49		0400001174 +	EQ	QUL4	(X1) = NEW LENGTH OF *O.QUL*	CDCM	1723	49
50					= CURRENT QUAL-INDEX	CDCM	1724	50
51	1173	43100	QUL3	MX1	0	CDCM	1725	51
52	1174	5120000014 +	QUL4	SA2	O.QUS	CDCM	1726	52
53		0100001206 +	RJ	ADW	ADD WORD TO TABLE *O.QUS*	CDCM	1727	53
54	1175	5160000515 +	SA6	PCSQI	SET CURRENT QUAL-INDEX	CDCM	1728	54
55								55
56								56
57								57
58								58
59								59
60								60

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		0400000510 +	EQ	PCS90	RETURN TO MAIN STATEMENT PROCESSOR	CDCM	1729
						CDCM	1730
	1176	6122777773	QUL5	SB2	B2-4	CDCM	1731
		0520000510 +	NZ	B2,PCS90	IF NOT QUAL *	CDCM	1732
	1177	7211777730	SX1	X1-1R*		CDCM	1733
		0311000510 +	NZ	X1,PCS90	IF NOT QUAL *	CDCM	1734
	1200	7222777722	SX2	X2-1R		CDCM	1735
		0312000510 +	NZ	X2,PCS90	IF NOT QUAL *	CDCM	1736
						CDCM	1737
		*	QUAL * FOUND. REMOVE THE TOP ENTRY FROM THE QUALIFIER STACK			CDCM	1738
		*	AND SET THE CURRENT QUALIFIER INDEX TO THAT OF THE PREVIOUS			CDCM	1739
		*	ENTRY.			CDCM	1740
						CDCM	1741
	1201	5120000015 +	SA2	0.QUS+1	*0.QUS* LENGTH	CDCM	1742
		43600	MX6	0	SET FOR ZERO QUAL-INDEX	CDCM	1743
		55121	SA1	A2-B1	*0.QUS* FWA	CDCM	1744
	1202	0302001205 +	ZR	X2,QUL6	IF *0.QUS* ALREADY EMPTY	CDCM	1745
		7262777776	SX6	X2-1	SHORTEN BY ONE ENTRY	CDCM	1746
	1203	54620	SA6	A2		CDCM	1747
		0306001205 +	ZR	X6,QUL6	IF NOW EMPTY	CDCM	1748
		36316	IX3	X1+X6	NEW LWA+1	CDCM	1749
	1204	5243777776	SA4	X3-1	GET THE NEW TOP ENTRY	CDCM	1750
		10644	BX6	X4		CDCM	1751
	1205	5160000515 +	SA6	PCSQI	SET CURRENT QUAL-INDEX	CDCM	1752
		0400000257 +	EQ	PCSEXIT	EXIT FROM *PCS*	CDCM	1753
						CDCM	1754
			QUAL	*		CDCM	1755

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**	ADW - ADD WORD TO TABLE IN CMM VARIABLE BLOCK.	CDCM	1757
*		CDCM	1758
*	ADDS A WORD TO A MANAGED TABLE. CMM VARIABLE-POSITION BLOCKS	CDCM	1759
*	ARE USED FOR THE TABLES TO ALLOW FOR THE FLEXIBILITY TO	CDCM	1760
*	INTERFACE WITH OTHER LANGUAGES IN THE FUTURE.	CDCM	1761
*		CDCM	1762
*	TABLE POINTERS ARE OF THE FOLLOWING FORMAT:	CDCM	1763
*		CDCM	1764
*	WD 0 VFD 30/(BLOCK-SIZE),30/(BLOCK-FWA)	CDCM	1765
*	WD 1 VFD 42/0,18/LENGTH	CDCM	1766
*	WD 2 VFD 42/0,18/INCR	CDCM	1767
*		CDCM	1768
*	WORD 0 IS THE POINTER WORD WHICH IS MAINTAINED BY CMM. IT IS	CDCM	1769
*	SET TO ZERO UNTIL THE BLOCK IS FIRST ALLOCATED.	CDCM	1770
*		CDCM	1771
*	LENGTH = LENGTH OF ACTUAL DATA IN BLOCK. THIS IS	CDCM	1772
*	UPDATED BY *ADW* OR BY ANY USERS OF THE BLOCK.	CDCM	1773
*	INCR = AMOUNT BY WHICH THE BLOCK-SIZE IS INCREASED	CDCM	1774
*	WHENEVER AN INCREASE IS NECESSARY. MAY BE	CDCM	1775
*	MODIFIED AT RUN-TIME IF DESIRED.	CDCM	1776
*		CDCM	1777
*		CDCM	1778
*	ENTRY (X1) = WORD.	CDCM	1779
*	(X2) = CMM POINTER WORD.	CDCM	1780
*	(B1) = 1.	CDCM	1781
*	(A2) = TABLE POINTER.	CDCM	1782
*		CDCM	1783
*	EXIT (X1) = (X6) = WORD.	CDCM	1784
*	(X2) = FWA OF TABLE.	CDCM	1785
*	(X3) = LENGTH OF TABLE.	CDCM	1786
*	(B1) = 1.	CDCM	1787
*	(A6) = ADDRESS OF WORD.	CDCM	1788
*		CDCM	1789
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	1790
*	B - 4, 5, 6, 7.	CDCM	1791
*	A - 1, 2, 3, 4, 5, 6, 7.	CDCM	1792
*		CDCM	1793
*	CALLS CMM.ALV, CMM.GLV.	CDCM	1794
		CDCM	1795
1206 0400401206 +	ADW EQ **1S17 ENTRY / EXIT	CDCM	1796
1207 54321	ADW1 SA3 A2+B1 USED LENGTH	CDCM	1797
10622	BX6 X2 (B7) = CMM LENGTH	CDCM	1798
63630	SB6 X3 (B6) = USED LENGTH	CDCM	1799
21636	AX6 30	CDCM	1800
1210 63760	SB7 X6	CDCM	1801
0767001221 +	LT B6,B7,ADW4 IF ROOM FOR ANOTHER WORD	CDCM	1802
10611	BX6 X1 SAVE X1 AND A2	CDCM	1803
1211 74720	SX7 A2	CDCM	1804
5160001223 +	SA6 ADWSV	CDCM	1805
54761	SA7 A6+B1	CDCM	1806
1212 0312001216 +	NZ X2,ADW2 IF TABLE ALREADY ALLOCATED	CDCM	1807
74420	SX4 A2 (X4) = ADDRESS OF POINTER WORD	CDCM	1808
1213 7130000301	SX3 3*1S6+1 SIZE-CODE = 3 (LWA CAN GROW OR SHRINK)	CDCM	1809
		CDCM	1810
		CDCM	1811
54231	SA2 A3+B1 (X2) = BLOCK-SIZE	CDCM	1812
1214 0100000000 X	RJ =XCMM.ALV ALLOCATE VARIABLE BLOCK	CDCM	1813

1215	0400001217 +	EQ	ADW3	GO RESTORE ENTRY REGISTERS	CDCM	1814
					CDCM	1815
1216	10122	ADW2	BX1	X2	(X1) = BLOCK-FWA	CDCM 1816
	54231	SA2	A3+B1	(X2) = AMOUNT OF INCREASE	CDCM	1817
	0100000000 X	RJ	=XCMM.GLV	GROW BLOCK AT LWA	CDCM	1818
					CDCM	1819
1217	5110001223 +	ADW3	SA1	ADWSV	RESTORE X1 AND A2	CDCM 1820
	54211	SA2	A1+B1			CDCM 1821
	53220	SA2	X2			CDCM 1822
1220	0400001207 +	EQ	ADW1	REPEAT		CDCM 1823
						CDCM 1824
1221	10611	ADW4	BX6	X1	(X6) = WORD	CDCM 1825
	53626	SA6	X2+B6	STORE WORD IN TABLE	CDCM	1826
	73731	SX7	X3+B1	ADVANCE TABLE USED LENGTH	CDCM	1827
	10377	BX3	X7	(X3) = NEW USED LENGTH	CDCM	1828
1222	54730	SA7	A3		CDCM	1829
	0400001206 +	EQ	ADW	RETURN	CDCM	1830
					CDCM	1831
1223		2	ADWSV	BSSZ 2	REGISTER SAVE AREA	CDCM 1832

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**	AWS - ALLOCATE WORK SPACE FOR INTERMEDIATE FILE.	CDCM	1834
*		CDCM	1835
*	ALLOCATES ADDITIONAL WORK SPACE FOR THE INTERMEDIATE FILE.	CDCM	1836
*	THE FILE IS INITIALLY TARGETTED FOR EITHER CM OR LCM BY *CWS*,	CDCM	1837
*	WHICHEVER HAS THE LARGER AVAILABLE AREA.	CDCM	1838
*		CDCM	1839
*	IF IN CM, A VARIABLE-POSITION *CMM* BLOCK IS USED, AND IS	CDCM	1840
*	INCREASED, WHEN NECESSARY, BY *FLINC* WORDS, UP TO THE	CDCM	1841
*	ALLOWED MAXIMUM. IF IN LCM, THE SPACE IS OBTAINED DIRECTLY	CDCM	1842
*	BY ISSUING *MEMORY* REQUESTS FOR *FLINL* WORDS, UP TO THE	CDCM	1843
*	ALLOWED MAXIMUM.	CDCM	1844
*		CDCM	1845
*	IF EITHER THE CM OR LCM AREA EXCEEDS THE ALLOWED MAXIMUM, THEN	CDCM	1846
*	AN ERROR STATUS IS RETURNED, AND NO FURTHER ALLOCATION TAKES	CDCM	1847
*	PLACE.	CDCM	1848
*		CDCM	1849
*		CDCM	1850
*	ENTRY (B1) = 1.	CDCM	1851
*		CDCM	1852
*	EXIT (X6) = 0 IF SPACE WAS OBTAINED.	CDCM	1853
*	-1 IF WORK SPACE OVERFLOW.	CDCM	1854
*	(B1) = 1.	CDCM	1855
*	IFWA = 0 IF WORK SPACE IS IN LCM.	CDCM	1856
*	NZ FWA IF IN CM.	CDCM	1857
*		CDCM	1858
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	1859
*	B - 4, 5, 6, 7.	CDCM	1860
*	A - 1, 2, 3, 4, 5, 6, 7.	CDCM	1861
*		CDCM	1862
*	CALLS CMM.ALV, CMM.GLV, SYS=.	CDCM	1863
		CDCM	1864
		CDCM	1865
1225	0400401225 + AWS EQ **1S17 ENTRY / EXIT	CDCM	1866
1226	5110000031 + SA1 IMAX MAXIMUM WORKSPACE SIZE	CDCM	1867
	5130000030 + SA3 IFWA WORKSPACE FWA	CDCM	1868
1227	5140001252 + SA4 AWSM CURRENT WORKSPACE SIZE	CDCM	1869
	37614 IX6 X1-X4 (MAX) - (CURRENT)	CDCM	1870
	63730 SB7 X3	CDCM	1871
1230	0303001241 + ZR X3,AWS3 IF FWA = 0, THEN WORKSPACE IS IN LCM	CDCM	1872
		CDCM	1873
*	CHECK IF ROOM FOR MORE CM WORKSPACE.	CDCM	1874
		CDCM	1875
	7170020000 SX7 FLINC AMOUNT OF INCREASE FOR CM	CDCM	1876
1231	0306001251 + ZR X6,AWS5 IF CM WORKSPACE FULL	CDCM	1877
		CDCM	1878
*	ALLOCATE ADDITIONAL CM WORKSPACE.	CDCM	1879
		CDCM	1880
	37267 IX2 X6-X7 (X7) = MIN (FLINC, (MAX-CURRENT))	CDCM	1881
1232	0322001233 + PL X2,AWS1	CDCM	1882
	10766 BX7 X6	CDCM	1883
1233	36647 AWS1 IX6 X4+X7 UPDATE CURRENT SIZE	CDCM	1884
	54640 SA6 A4	CDCM	1885
	10277 BX2 X7 (X2) = BLOCK-SIZE OR AMOUNT OF INCREASE	CDCM	1886
1234	0571001237 + NE B7,B1,AWS2 IF NOT FIRST REQUEST FOR CM WORKSPACE	CDCM	1887
	7130000301 SX3 3*1S6+1 SIZE-CODE = 3 (LWA CAN GROW OR SHRINK)	CDCM	1888
		CDCM	1889
1235	7140000030 + SX4 IFWA ADDRESS OF POINTER WORD	CDCM	1890

	1236	76600	0100000000 X	RJ	=XCMM.ALV	ALLOCATE VARIABLE BLOCK	CDCM	1891
				SX6	B0		CDCM	1892
			0400001225 +	EQ	AWS	RETURN	CDCM	1893
	1237	5110000030 +	AWS2	SA1	IFWA	(X1) = BLOCK-FWA	CDCM	1894
			0100000000 X	RJ	=XCMM.GLV	GROW BLOCK AT LWA	CDCM	1895
	1240	76600		SX6	B0		CDCM	1897
			0400001225 +	EQ	AWS	RETURN	CDCM	1898
							CDCM	1899
			*			CHECK IF ROOM FOR MORE LCM WORKSPACE.	CDCM	1900
							CDCM	1901
	1241	7170040000	AWS3	SX7	FLINL	AMOUNT OF INCREASE FOR LCM	CDCM	1902
			0306001251 +	ZR	X6,AWS5	IF ALREADY AT MAXIMUM	CDCM	1903
							CDCM	1904
			*			ALLOCATE ADDITIONAL SPACE FOR WORKSPACE IN LCM.	CDCM	1905
							CDCM	1906
	1242	37267		IX2	X6-X7	(X7) = MIN (FLINL, (MAX-CURRENT))	CDCM	1907
			0322001243 +	PL	X2,AWS4		CDCM	1908
			10766	BX7	X6		CDCM	1909
	1243	36747	AWS4	IX7	X4+X7	UPDATE CURRENT SIZE	CDCM	1910
			54740	SA7	A4		CDCM	1911
			20736	LX7	30	FORM *MEMORY* REQUEST FOR NEW LCM FL	CDCM	1912
	1244	5170001305 +		SA7	MEMARG		CDCM	1913
			7160150515	MEMORY	ECS, MEMARG, RCL	REQUEST LCM FL	CDCM	1914
	1250	76600		SX6	B0		CDCM	1915
			0400001225 +	EQ	AWS	RETURN	CDCM	1916
							CDCM	1917
			*			WORKSPACE OVERFLOW.	CDCM	1918
							CDCM	1919
	1251	77601	AWS5	SX6	-B1		CDCM	1920
			0400001225 +	EQ	AWS	RETURN	CDCM	1921
							CDCM	1922
	1252	00000000000000000000	AWSM	CON	0	CURRENT SIZE OF CM OR LCM WORKSPACE	CDCM	1923

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**          CALLS THE PP PROGRAM *CVL*.          CDCM      1925
*          CDCM      1926
*          ENTRY  (X1) = ADDRESS OF PARAMETER BLOCK. CDCM      1927
*          (X2) = REQUEST. CDCM      1928
*          (B1) = 1. CDCM      1929
*          CDCM      1930
*          EXIT  (B1) = 1. CDCM      1931
*          CDCM      1932
*          USES  X - 1, 2, 6. CDCM      1933
*          B - NONE. CDCM      1934
*          A - NONE. CDCM      1935
*          CDCM      1936
*          CALLS  SYS=. CDCM      1937
CDCM      1938
CDCM      1939
1253  0100000000 X          CVL1  RJ      SYS=      MAKE RA+1 CALL CDCM      1940
1254  0000000000          CVL=  PS          ENTRY/EXIT CDCM      1941
1255  43652          MX6    -18          POSITION PARAMETER BLOCK ADDRESS CDCM      1942
          15116          BX1    -X6*X1 CDCM      1943
          20222          LX2    18 CDCM      1944
1256  7160153061          SX6    4RCVLP/16 SET *CVL* CALL CDCM      1945
          12121          BX1    X2+X1 MERGE REQUEST CDCM      1946
          20650          LX6    40 CDCM      1947
1257  12661          BX6    X6+X1 CDCM      1948
          0400001253 +          EQ    CVL1      MAKE CALL CDCM      1949
          CDCM      1950

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**	CWS - COMPUTE MAXIMUM SIZE FOR WORK SPACE.	CDCM	1952
*		CDCM	1953
*	DETERMINES THE AMOUNT OF AVAILABLE WORK SPACE FOR THE	CDCM	1954
*	INTERMEDIATE FILE. IT IS ALLOCATED TO EITHER CM OR LCM, BUT	CDCM	1955
*	NOT BOTH. IF NOT ON A 180-CLASS MODEL OR A 176 (I.E., A MODEL	CDCM	1956
*	WITH DIRECT-ACCESS LCM ACCESSIBLE VIA *RXI* OR *WXI* INSTRUCTIONS),	CDCM	1957
*	WORKSPACE MUST GO TO CM. THE AMOUNT IS DETERMINED BY	CDCM	1958
*	THE FOLLOWING:	CDCM	1959
*		CDCM	1960
*	SPACE = MAX [MIN(AVAILCM,MAXC), MIN((MAXFLLCM-FUDL),MAXL)]	CDCM	1961
*		CDCM	1962
*	WHERE AVAILCM = AVAILABLE AMOUNT OF CM (ACCORDING TO CMM).	CDCM	1963
*	MAXC = MAXIMUM AMOUNT OF CM THAT WILL BE USED	CDCM	1964
*	(INSTALLATION OPTION).	CDCM	1965
*	MAXFLLCM = LCM MAXFL.	CDCM	1966
*	FUDL = AMOUNT TO REDUCE LCM MAXFL TO ENSURE WE CAN	CDCM	1967
*	GET IT (INSTALLATION OPTION).	CDCM	1968
*	MAXL = MAXIMUM AMOUNT OF LCM THAT WILL BE USED	CDCM	1969
*	(INSTALLATION OPTION).	CDCM	1970
*		CDCM	1971
*		CDCM	1972
*	ENTRY (B1) = 1.	CDCM	1973
*		CDCM	1974
*	EXIT (B1) = 1.	CDCM	1975
*	IFWA = 0 IF WORKSPACE TO GO IN LCM.	CDCM	1976
*	1 IF WORKSPACE TO GO IN CM.	CDCM	1977
*	IMAX = MAXIMUM ALLOWABLE SIZE OF WORKSPACE.	CDCM	1978
*		CDCM	1979
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	1980
*	B - 7.	CDCM	1981
*	A - 1, 2, 3, 4, 6, 7.	CDCM	1982
*		CDCM	1983
*	CALLS CMM.GFS, CVL=, SYS=.	CDCM	1984
		CDCM	1985
		CDCM	1986
1260	0400401260 + CWS EQ **1S17 ENTRY / EXIT	CDCM	1987
1261	76110 SX1 B1 GET SIZE OF LARGEST BLOCK THAT CMM WILL	CDCM	1988
	76200 SX2 B0 ALLOCATE UP TO MAXFL	CDCM	1989
	0100000000 X RJ =XCMM.GFS	CDCM	1990
1262	21606 AX6 6	CDCM	1991
	7266777776 SX6 X6-1 ROUND DOWN 100-177B CM WORDS	CDCM	1992
	20606 LX6 6	CDCM	1993
1263	7140140000 SX4 MAXC INSTALLATION-DEFINED MAXIMUM SIZE FOR CM	CDCM	1994
	37364 IX3 X6-X4 (X6) = MIN (AVAILCM,MAXC)	CDCM	1995
1264	0333001265 + MI X3,CWS1	CDCM	1996
	10644 BX6 X4	CDCM	1997
1265	63760 CWS1 SB7 X6 SAVE CM VALUE	CDCM	1998
	7110001304 + GETMC GETMCW GET MACHINE CHARACTERISTICS	CDCM	1999
1267	5120001304 + SA2 GETMCW	CDCM	2000
	43303 MX3 3 EXAMINE BITS 18-20 (180-CLASS OR 176)	CDCM	2001
	20247 LX2 59-20	CDCM	2002
1270	11232 BX2 X3*X2	CDCM	2003
	43700 MX7 0 SET FOR ZERO AVAILABLE LCM	CDCM	2004
	0302001300 + ZR X2,CWS2 IF NOT RUNNING ON 180-CLASS OR 176 MODEL	CDCM	2005
1271	7160150515 MEMORY ECS,MEMARG,RCL GET MAXFL FOR LCM	CDCM	2006
1275	5110001305 + SA1 MEMARG	CDCM	2007
	21136 AX1 30	CDCM	2008

1276	7271737777		SX7	X1-FUDL		CDCM	2009
	7140200000		SX4	MAXL	INSTALLATION-DEFINED MAXIMUM LCM SIZE	CDCM	2010
1277	37374		IX3	X7-X4	(X7) = MIN ((MAXFLLCM-FUDL), MAXL)	CDCM	2011
	0333001300 +		MI	X3,CWS2		CDCM	2012
	10744		BX7	X4		CDCM	2013
1300	76600	CWS2	SX6	B0	SET FOR *IFWA* = 0 IF USING LCM	CDCM	2014
	76470		SX4	B7		CDCM	2015
	37374		IX3	X7-X4	LCM - CM	CDCM	2016
1301	0323001302 +		PL	X3,CWS3	IF (LCM) .GE. (CM)	CDCM	2017
	76610		SX6	B1	SET FOR *IFWA* = 1 IF USING CM	CDCM	2018
	10744		BX7	X4		CDCM	2019
1302	5170000031 +	CWS3	SA7	IMAX	SAVE WORKSPACE SIZE	CDCM	2020
	5160000030 +		SA6	IFWA	SAVE CM / LCM INDICATOR	CDCM	2021
1303	0400001260 +		EQ	CWS	RETURN	CDCM	2022
						CDCM	2023
1304	00000000000000000000	GETMCW	CON	0	*GETMC* ARGUMENT WORD	CDCM	2024
1305	77777777760000000000	MEMARG	VFD	30/-1,30/0	*MEMORY* ARGUMENT WORD	CDCM	2025

	**	RIF - READ INTERMEDIATE FILE.				CDCM	2027	
	*					CDCM	2028	
	*	READS ONE ENTRY FROM THE INTERMEDIATE FILE. IF IN CM OR LCM,				CDCM	2029	
1	*	THE POSITION IS DETERMINED BY THE POINTERS AS INDICATED BELOW.				CDCM	2030	
2	*	IF ON A FILE, *RDW=* IS CALLED.				CDCM	2031	
3	*					CDCM	2032	
4	*	ENTRY (B1) = 1.				CDCM	2033	
5	*	*IFWA* = FWA OF THE WORKSPACE IF IN CM OR LCM.				CDCM	2034	
6	*	*IFETCH* = CURRENT POSITION IF IN CM OR LCM.				CDCM	2035	
7	*	*ISIZE* = LWA+1 OF DATA IF IN CM OR LCM.				CDCM	2036	
8	*					CDCM	2037	
9	*	EXIT (X1) = 0 IF ENTRY READ.				CDCM	2038	
10	*	NZ IF AT END OF INTERMEDIATE FILE.				CDCM	2039	
11	*	(B1) = 1.				CDCM	2040	
12	*	ENTRY IS STORED AT *INTENT*.				CDCM	2041	
13	*					CDCM	2042	
14	*	USES X - 1, 2, 3, 4, 6, 7.				CDCM	2043	
15	*	B - 2, 3, 4, 5, 6, 7.				CDCM	2044	
16	*	A - 1, 2, 3, 4, 6, 7.				CDCM	2045	
17	*					CDCM	2046	
18	*	CALLS RDW=.				CDCM	2047	
19						CDCM	2048	
20						CDCM	2049	
21	*	READ INTERMEDIATE ENTRY FROM LCM.				CDCM	2050	
22						CDCM	2051	
23	1306	76710	RIF1	SX7	B1	(X7) = 1	CDCM	2052
24		01464		RX6	X4	READ 1ST WORD	CDCM	2053
25		66410		SB4	B1	(B4) = NUMBER OF WORDS READ	CDCM	2054
26	1307	5160001327 +		SA6	INTENT	STORE 1ST WORD	CDCM	2055
27	1310	36447	RIF2	IX4	X4+X7	ADVANCE LCM FETCH ADDRESS	CDCM	2056
28		01464		RX6	X4	READ WORD	CDCM	2057
29		66441		SB4	B4+B1	ADVANCE WORD COUNT	CDCM	2058
30		54661		SA6	A6+B1	STORE WORD	CDCM	2059
31	1311	0747001310 +		LT	B4,B7,RIF2	LOOP	CDCM	2060
32		43100		MX1	0	(X1) = 0 FOR TRANSFER COMPLETE	CDCM	2061
33							CDCM	2062
34	*	ENTRY / EXIT.				CDCM	2063	
35						CDCM	2064	
36	1312	0400401312 +	RIF	EQ	**+1S17	ENTRY / EXIT	CDCM	2065
37	1313	5120000035 +		SA2	SP		CDCM	2066
38		0312001324 +		NZ	X2,RIF4	IF INTERMEDIATE ON FILE	CDCM	2067
39	1314	5120000030 +		SA2	IFWA	NZ IF CM, ZR IF LCM	CDCM	2068
40		5130000033 +		SA3	ISIZE	LENGTH OF STORED DATA	CDCM	2069
41	1315	5140000027 +		SA4	IFETCH	(X4) = FETCH POINTER	CDCM	2070
42		37643		IX6	X4-X3		CDCM	2071
43		77101		SX1	-B1	SET FOR EOI STATUS	CDCM	2072
44	1316	0326001312 +		PL	X6,RIF	IF AT END OF INTERMEDIATE FILE	CDCM	2073
45		6170000014		SB7	INTLTH+LINELTH	(B7) = ENTRY LENGTH	CDCM	2074
46	1317	73747		SX7	X4+B7	ADVANCE FETCH POINTER	CDCM	2075
47		54740		SA7	A4		CDCM	2076
48		0302001306 +		ZR	X2,RIF1	IF INTERMEDIATE IN LCM	CDCM	2077
49	1320	36242		IX2	X4+X2	(X2) = SOURCE	CDCM	2078
50		7130001327 +		SX3	INTENT	(X3) = DESTINATION	CDCM	2079
51		43773		MX7	-1		CDCM	2080
52	1321	53120	RIF3	SA1	X2	MOVE LOOP	CDCM	2081
53		10611		BX6	X1		CDCM	2082
54		53630		SA6	X3		CDCM	2083

1322	37337	37227	IX2	X2-X7	ADVANCE SOURCE	CDCM	2084
			IX3	X3-X7	ADVANCE DESTINATION	CDCM	2085
	67771		SB7	B7-B1		CDCM	2086
		0570001321 +	NZ	B7,RIF3	LOOP	CDCM	2087
1323	43100		MX1	0	(X1) = 0 FOR TRANSFER COMPLETE	CDCM	2088
		0400001312 +	EQ	RIF	RETURN	CDCM	2089
						CDCM	2090
		*			READ INTERMEDIATE FROM FILE.	CDCM	2091
						CDCM	2092
1324	6160001327 +		RIF4	READW	X2,INTENT,INTLTH+LINELTH	CDCM	2093
1326	0400001312 +		EQ	RIF	RETURN, (X1) = STATUS	CDCM	2094
						CDCM	2095
1327		3	INTENT	BSS	INTLTH	CDCM	2096
1332		11	ILINE	BSS	LINELTH	CDCM	2097
					LINE IMAGE PART OF INTERMEDIATE FILE ENTRY		

** RWF - REWIND INTERMEDIATE FILE.

CDCM 2099

*

CDCM 2100

*

CDCM 2101

IF THE INTERMEDIATE FILE IS IN CM OR LCM, THE POINTERS ARE
RESET. IF ON MASS-STORAGE, A *REWIND* IS ISSUED, FOLLOWED BY
A *READ* TO BEGIN THE READING OF DATA WHICH ALWAYS FOLLOWS.

CDCM 2102

CDCM 2103

CDCM 2104

* ENTRY (B1) = 1.

CDCM 2105

*

CDCM 2106

* EXIT (B1) = 1.

CDCM 2107

*

CDCM 2108

* USES X - 1, 2, 6, 7.

CDCM 2109

* B - NONE.

CDCM 2110

* A - 1, 2, 6, 7.

CDCM 2111

*

CDCM 2112

* CALLS CIO=.

CDCM 2113

CDCM 2114

CDCM 2115

1343 0400401343 + RWF EQ **1S17 ENTRY / EXIT

CDCM 2116

1344 5110000032 + SA1 INEXT SET WORKSPACE SIZE FOR READ

CDCM 2117

43700 MX7 0 RESET FETCH AND STORE POINTERS

CDCM 2118

10611

CDCM 2119

1345 5160000033 + SA6 ISIZE

CDCM 2120

54710 SA7 A1

CDCM 2121

1346 5170000027 + SA7 IFETCH

CDCM 2122

5120000035 + SA2 SP CHECK PREVIOUS INTERMEDIATE (SCRATCH-1)

CDCM 2123

1347 0302001351 + ZR X2,RWF1 IF SCRATCH-1 NOT USED

CDCM 2124

7170000070 RETURN X2 RETURN SCRATCH-1

CDCM 2125

1351 5120000036 + RWF1 SA2 SP+1 SET INTERMEDIATE JUST WRITTEN TO NOW BE

CDCM 2126

10722 BX7 X2 READ (SCRATCH-2 -> SCRATCH-1)

CDCM 2127

55721

CDCM 2128

1352 43600 SA7 A2-B1 CLEAR SCRATCH-2 TO START OVER IN CM/LCM

CDCM 2129

54620

CDCM 2130

0302001343 + ZR X2,RWF IF SCRATCH-2 NOT ON FILE

CDCM 2131

1353 7170000050 REWIND X2 REWIND SCRATCH-2

CDCM 2132

1354 7170000010 READ X2 BEGIN READ OF INTERMEDIATE

CDCM 2133

1355 0400001343 + EQ RWF RETURN

CDCM 2134

CDCM 2135

1412THE

**	SIF - STORE INTERMEDIATE FILE.	CDCM	2137
*		CDCM	2138
*	STORES INFORMATION INTO THE INTERMEDIATE FILE, EITHER CM, LCM,	CDCM	2139
*	OR MASS-STORAGE. INCREASES THE WORK SPACE IF NECESSARY.	CDCM	2140
*	IF THE WORKSPACE CANNOT BE INCREASED, THEN THE WORKSPACE IS	CDCM	2141
*	WRITTEN TO A FILE, AND THAT FILE IS USED FOR THE REMAINDER OF	CDCM	2142
*	THE CURRENT PROGRAM UNIT.	CDCM	2143
*		CDCM	2144
*	ENTRY (B1) = 1.	CDCM	2145
*	(B2) = FWA OF DATA	CDCM	2146
*	(B3) = LENGTH OF DATA.	CDCM	2147
*	*IFWA* = FWA OF THE WORKSPACE IF IN CM OR LCM.	CDCM	2148
*	*INEXT* = CURRENT STORE POINTER IF IN CM OR LCM.	CDCM	2149
*		CDCM	2150
*	EXIT (B1) = 1.	CDCM	2151
*		CDCM	2152
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	2153
*	B - 4, 5, 6, 7.	CDCM	2154
*	A - 1, 2, 3, 4, 5, 6, 7.	CDCM	2155
*		CDCM	2156
*	CALLS AWS, WTO=, WTW=.	CDCM	2157
		CDCM	2158
		CDCM	2159
1356	0400401356 + SIF EQ **1S17 ENTRY / EXIT	CDCM	2160
1357	5120000036 + SA2 SP+1	CDCM	2161
	0312001415 + NZ X2,SIF11 IF WORKSPACE ON FILE	CDCM	2162
		CDCM	2163
*	CHECK IF ROOM TO STORE ENTRY IN CURRENT WORKSPACE.	CDCM	2164
		CDCM	2165
1360	5110000032 + SIF1 SA1 INEXT NEXT AVAILABLE WORD IN WORK SPACE	CDCM	2166
	5120001252 + SA2 AWSM CURRENT SIZE	CDCM	2167
1361	73113 SX1 X1+B3	CDCM	2168
	37721 IX7 X2-X1	CDCM	2169
	0327001404 + PL X7,SIF7 IF ROOM FOR THIS INSERTION	CDCM	2170
		CDCM	2171
*	INCREASE WORKSPACE SIZE, IF POSSIBLE.	CDCM	2172
		CDCM	2173
1362	0100001225 + RJ AWS ALLOCATE WORK SPACE	CDCM	2174
1363	0336001364 + MI X6,SIF2 IF WORKSPACE OVERFLOW, COPY TO FILE	CDCM	2175
	0400001360 + EQ SIF1 TRY AGAIN	CDCM	2176
		CDCM	2177
*	COPY WORKSPACE TO A FILE.	CDCM	2178
		CDCM	2179
1364	76620 SIF2 SX6 B2 SAVE B2 AND B3	CDCM	2180
	76730 SX7 B3	CDCM	2181
	5160001417 + SA6 SIFA	CDCM	2182
1365	54761 SA7 A6+B1	CDCM	2183
	7170001621 + SX7 X SET FOR SCRATCH-1	CDCM	2184
1366	5110000034 + SA1 SF	CDCM	2185
	0301001370 + ZR X1,SIF3 IF TO USE SCRATCH-1	CDCM	2186
1367	7170001626 + SX7 Y SET FOR SCRATCH-2	CDCM	2187
1370	5170000036 + SIF3 SA7 SP+1 SET FILE NAME FOR INTERMEDIATE WRITE	CDCM	2188
	76310 SX3 B1	CDCM	2189
	13613 BX6 X1-X3 REVERSE FILE FLAG	CDCM	2190
1371	54610 SA6 A1	CDCM	2191
	73270 SX2 X7 (X2) = FET ADDRESS	CDCM	2192
	5110000030 + SA1 IFWA	CDCM	2193

1372	5130000032 +		SA3	INEXT	(X3) = STORE POINTER = AMOUNT TO TRANSFER	CDCM	2194
	0301001377 +		ZR	X1,SIF5	IF WORKSPACE IN LCM	CDCM	2195
1373	63610		WRITEW	X2,X1,X3		CDCM	2196
1374	5120000036 +	SIF4	SA2	SP+1	(X2) = FET ADDRESS	CDCM	2197
	5130001417 +		SA3	SIFA	RESTORE B2 AND B3	CDCM	2198
1375	54431		SA4	A3+B1		CDCM	2199
	63230		SB2	X3		CDCM	2200
	63340		SB3	X4		CDCM	2201
1376	0400001415 +		EQ	SIF11	GO WRITE CURRENT ENTRY TO FILE	CDCM	2202
						CDCM	2203
1377	76000	SIF5	SX0	B0	(X0) = TRANSFER ADDRESS	CDCM	2204
	10533		BX5	X3	(X5) = AMOUNT TO TRANSFER	CDCM	2205
	63270		SB2	X7	(B2) = FET ADDRESS	CDCM	2206
1400	01460	SIF6	RX6	X0	READ WORD FROM LCM	CDCM	2207
	5112000002		WRITE0	B2	WRITE WORD FROM (X6)	CDCM	2208
1402	76110		SX1	B1		CDCM	2209
	36001		IX0	X0+X1	ADVANCE TRANSFER ADDRESS	CDCM	2210
	37551		IX5	X5-X1	REDUCE TRANSFER COUNT	CDCM	2211
1403	0315001400 +		NZ	X5,SIF6	LOOP	CDCM	2212
	0400001374 +		EQ	SIF4	TRANSFER COMPLETE	CDCM	2213
						CDCM	2214
		*			ADD ENTRY TO WORKSPACE.	CDCM	2215
						CDCM	2216
1404	5110000030 +	SIF7	SA1	IFWA		CDCM	2217
	5120000032 +		SA2	INEXT	STORE POINTER	CDCM	2218
1405	36612		IX6	X1+X2		CDCM	2219
	63760		SB7	X6	INITIALIZE STORE ADDRESS	CDCM	2220
	57321		SA3	B2-B1	INITIALIZE FETCH ADDRESS	CDCM	2221
	66400		SB4	B0	INITIALIZE COUNT	CDCM	2222
1406	73723		SX7	X2+B3	ADVANCE *INEXT*	CDCM	2223
	54720		SA7	A2		CDCM	2224
	0301001412 +		ZR	X1,SIF9	IF IN LCM	CDCM	2225
1407	54331	SIF8	SA3	A3+B1	FETCH WORD	CDCM	2226
	10633		BX6	X3		CDCM	2227
	56670		SA6	B7	STORE WORD	CDCM	2228
	66441		SB4	B4+B1	ADVANCE COUNT	CDCM	2229
1410	66771		SB7	B7+B1	ADVANCE STORE ADDRESS	CDCM	2230
	0743001407 +		LT	B4,B3,SIF8	LOOP	CDCM	2231
1411	0400001356 +		EQ	SIF	RETURN	CDCM	2232
						CDCM	2233
1412	54331	SIF9	SA3	A3+B1	FETCH FIRST WORD	CDCM	2234
	73720		SX7	X2	INITIALIZE STORE ADDRESS	CDCM	2235
1413	01537	SIF10	WX3	X7	STORE WORD	CDCM	2236
	66441		SB4	B4+B1	ADVANCE COUNT	CDCM	2237
	54331		SA3	A3+B1	FETCH NEXT WORD	CDCM	2238
	73771		SX7	X7+B1	ADVANCE STORE ADDRESS	CDCM	2239
1414	0743001413 +		LT	B4,B3,SIF10	LOOP	CDCM	2240
	0400001356 +		EQ	SIF	RETURN	CDCM	2241
						CDCM	2242
		*			WRITE INTERMEDIATE ENTRY TO FILE.	CDCM	2243
						CDCM	2244
1415	66620	SIF11	WRITEW	X2,B2,B3	WRITE INTERMEDIATE	CDCM	2245
1416	0400001356 +		EQ	SIF	RETURN	CDCM	2246
						CDCM	2247
1417	00000000000000000000	SIFA	CON	0,0	B2, B3 SAVE AREA	CDCM	2248
1420	00000000000000000000						

**	INF - INITIALIZE FILES.	CDCM	2250
*		CDCM	2251
*	PERFORMS INITIALIZATION OF FILES USED BY CDCM AS FOLLOWS:	CDCM	2252
*		CDCM	2253
*	- FOR THE INPUT FILE:	CDCM	2254
*	- GETS THE INPUT FILE NAME FROM ENTRY POINT *LFNI* AND	CDCM	2255
*	STORES IT IN FET *I*.	CDCM	2256
*	- ISSUES A *REWIND* ON *I* (UNLESS THE FILE NAME = *INPUT*).	CDCM	2257
*	- ISSUES THE FIRST *READ* ON *I*.	CDCM	2258
*	- IF LIST OUTPUT IS SPECIFIED:	CDCM	2259
*	- GETS THE LIST FILE NAME FROM ENTRY POINT *LFNL* AND	CDCM	2260
*	STORES IT IN FET *L*.	CDCM	2261
*	- DETERMINES PRINT DENSITY TO USE (VIA CALL TO *GETPAGE*).	CDCM	2262
*	IF 8LPI, WRITES CONTROL CHARACTER TO LIST FILE.	CDCM	2263
*	- PLACES THE DATE AND TIME IN TITLE LINE FOR LIST FILE.	CDCM	2264
*	- FOR THE SCRATCH FILES, WHICH MAY OR MAY NOT BE NEEDED:	CDCM	2265
*	- STORES THE TWO FILE NAMES DEFINED BY *DFLT* AND *DFLT*	CDCM	2266
*	IN FETS *X* AND *Y*, RESPECTIVELY, AND ISSUES A *RETURN*	CDCM	2267
*	ON EACH OF THEM.	CDCM	2268
*		CDCM	2269
*	ENTRY (B1) = 1.	CDCM	2270
*	(LFNI) = NAME OF INPUT FILE.	CDCM	2271
*	(LFNL) = NAME OF LIST FILE.	CDCM	2272
*		CDCM	2273
*	EXIT (B1) = 1.	CDCM	2274
*		CDCM	2275
*	USES X - ALL.	CDCM	2276
*	B - ALL.	CDCM	2277
*	A - ALL.	CDCM	2278
*		CDCM	2279
*	CALLS CIO=, CPM=, SYS=, WTW=.	CDCM	2280
		CDCM	2281
		CDCM	2282
1421	0400401421 + INF EQ **1S17 ENTRY / EXIT	CDCM	2283
1422	5110000017 + SA1 LFNI NAME OF INPUT FILE	CDCM	2284
	5120001607 + SA2 I	CDCM	2285
1423	43052 MX0 42 SAVE LOWER 18 BITS OF FET(0)	CDCM	2286
	15620 BX6 -X0*X2	CDCM	2287
	12661 BX6 X6+X1	CDCM	2288
	54620 SA6 A2	CDCM	2289
1424	5140012057 + SA4 =0LINPUT	CDCM	2290
	37314 IX3 X1-X4	CDCM	2291
1425	0303001427 + ZR X3,INF1 IF NAME = *INPUT*, DO NOT REWIND	CDCM	2292
	7120001607 + REWIND I	CDCM	2293
1427	7120001607 + INF1 READ I INITIATE FIRST READ (AKA 'PRIME THE PUMP')	CDCM	2294
1431	5110000020 + SA1 LFNL NAME OF OUTPUT FILE	CDCM	2295
	0301001452 + ZR X1,INF3 IF NO LIST OUTPUT	CDCM	2296
1432	5120001614 + SA2 L	CDCM	2297
	43052 MX0 42 SAVE LOWER 18 BITS OF FET(0)	CDCM	2298
	15620 BX6 -X0*X2	CDCM	2299
1433	12661 BX6 X6+X1	CDCM	2300
	54620 SA6 A2	CDCM	2301
	7110001543 + GETPAGE WRTMP DETERMINE PRINT DENSITY TO USE	CDCM	2302
1435	5110001543 + SA1 WRTMP	CDCM	2303
	43464 MX4 -8	CDCM	2304
	21124 AX1 12+8 POSITION TO *PS*	CDCM	2305
1436	15614 BX6 -X4*X1	CDCM	2306

		5160001545 +	SA6	LINEMAX		CDCM	2307
1437	5160001546 +		SA6	LINECT	SET TO PUT OUT TITLE FIRST TIME	CDCM	2308
	43470		MX4	-4		CDCM	2309
		21110	AX1	8	POSITION TO *PD*	CDCM	2310
1440	15614		BX6	-X4*X1		CDCM	2311
	21603		AX6	3	0 IF 6LPI, 1 IF 8LPI	CDCM	2312
		5160001550 +	SA6	PAGEPD		CDCM	2313
1441	0306001444 +		ZR	X6,INF2	IF 6LPI	CDCM	2314
	6160001552 +		WRITEW	L,LPI8,1	WRITE PAGE CONTROL FOR 8LPI	CDCM	2315
1444	7160241115	INF2	DATE	TDATE	GET DATE FOR TITLE	CDCM	2316
1447	7160241115		CLOCK	TTIME	GET TIME FOR TITLE	CDCM	2317
1452	5110012060 +	INF3	SA1	=0L"DFLTX"	NAME OF SCRATCH FILE 1	CDCM	2318
		5130001621 +	SA3	X		CDCM	2319
1453	43052		MX0	42	SAVE LOWER 18 BITS OF FET(0)	CDCM	2320
	15630		BX6	-X0*X3		CDCM	2321
		12661	BX6	X6+X1		CDCM	2322
		54630	SA6	A3		CDCM	2323
1454	74230		RETURN	A3,RCL	RETURN SCRATCH FILE 1	CDCM	2324
1456	5120012061 +		SA2	=0L"DFLTY"	NAME OF SCRATCH FILE 2	CDCM	2325
	5140001626 +		SA4	Y		CDCM	2326
1457	15740		BX7	-X0*X4		CDCM	2327
	12772		BX7	X7+X2		CDCM	2328
	54740		SA7	A4		CDCM	2329
	74240		RETURN	A4,RCL	RETURN SCRATCH FILE 2	CDCM	2330
1461	0400001421 +		EQ	INF	RETURN	CDCM	2331

1412THE

**	NXTLINE - READ NEXT LINE.	CDCM	2333
*		CDCM	2334
*	READS THE NEXT LINE OF THE INPUT FILE INTO THE WORKING	CDCM	2335
*	BUFFER. LINES ARE IGNORED IF THEY CONSIST OF ANY OF THE	CDCM	2336
*	FOLLOWING:	CDCM	2337
*		CDCM	2338
*	- ALL-BLANK LINE.	CDCM	2339
*	- * IN COLUMN 1 (COMMENT).	CDCM	2340
*	- , IN COLUMN 1 (CONTINUATION LINES CURRENTLY IGNORED).	CDCM	2341
*		CDCM	2342
*	ENTRY (B1) = 1.	CDCM	2343
*		CDCM	2344
*	EXIT (X1) = 0 - LINE READ INTO *ILINE*.	CDCM	2345
*	= NZ - EOF/EOI ENCOUNTERED.	CDCM	2346
*	(B1) = 1.	CDCM	2347
*		CDCM	2348
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	2349
*	B - 2, 3, 4, 5, 6, 7.	CDCM	2350
*	A - 1, 2, 3, 4, 6, 7.	CDCM	2351
*		CDCM	2352
*	CALLS CIO=, RDH=.	CDCM	2353
		CDCM	2354
		CDCM	2355
1462	0400401462 + NXTLINE EQ **1S17 ENTRY / EXIT	CDCM	2356
1463	6160001332 + NXT1 READH I,I,LINE,LINELTH READ SOURCE LINE TO WORKING BUFFER	CDCM	2357
1465	0301001471 + ZR X1,NXT2 IF DATA READ (NO EOR/EOF/EOI)	CDCM	2358
	0331001462 + MI X1,NXTLINE IF EOF/EOI, EXIT	CDCM	2359
1466	7120001607 + READ I RE-ISSUE THE READ	CDCM	2360
1470	0400001463 + EQ NXT1 LOOP	CDCM	2361
		CDCM	2362
1471	5140001332 + NXT2 SA4 ILINE CHECK FOR LINES TO BE IGNORED	CDCM	2363
	43266 MX2 -6	CDCM	2364
	20406 LX4 6	CDCM	2365
1472	15342 BX3 -X2*X4 1ST CHAR OF LINE	CDCM	2366
	7263777730 SX6 X3-1R*	CDCM	2367
1473	0306001463 + ZR X6,NXT1 SKIP IF * IN COL 1	CDCM	2368
	7273777721 SX7 X3-1R,	CDCM	2369
1474	0307001463 + ZR X7,NXT1 SKIP IF , IN COL 1	CDCM	2370
	0400001462 + EQ NXTLINE RETURN, (X1) = 0	CDCM	2371

** WRITEX - COMPLETE LIST FILE.

CDCM 2373

*

CDCM 2374

*

- WRITES LINE CONTAINING COUNT OF POTENTIAL CODE-MODIFICATION

CDCM 2375

*

PROBLEMS.

CDCM 2376

*

- WRITES ** PRINT LIMIT EXCEEDED ** LINE IF NECESSARY.

CDCM 2377

*

- RESETS PRINT DENSITY IF IT WAS SET TO 8LPI.

CDCM 2378

*

- ISSUES EOR WRITE.

CDCM 2379

*

CDCM 2380

*

ENTRY (B1) = 1.

CDCM 2381

*

CDCM 2382

*

EXIT NONE.

CDCM 2383

*

CDCM 2384

*

USES X - 0, 1, 2, 3, 4, 6, 7.

CDCM 2385

*

B - 2, 3, 4, 5, 6, 7.

CDCM 2386

*

A - 1, 2, 3, 4, 6, 7.

CDCM 2387

*

CDCM 2388

*

CALLS CDD=, CIO=, WRTITL, WTW=.

CDCM 2389

CDCM 2390

CDCM 2391

1475 0400401475 +

WRITEX

EQ

**1S17

ENTRY / EXIT

CDCM 2392

1476 5120000023 +

SA2

PRINTL

PRINT LIMIT

CDCM 2393

5110000022 +

SA1

PRINTCT

ACTUAL NUMBER OF LINES DETECTED

CDCM 2394

1477 37021

IX0

X2-X1

CDCM 2395

0100000000 X

RJ

=XCDD=

CONVERT ACTUAL TO DECIMAL DISPLAY

CDCM 2396

1500 43760

MX7

8*6

SET TO PRINT SHORTER LINE

CDCM 2397

6170000011

SB7

ELINEL1

CDCM 2398

1501 0320001504 +

PL

X0,WTX1

IF PRINT LIMIT NOT EXCEEDED

CDCM 2399

5120000021 +

SA2

LOOPT

CDCM 2400

1502 0312001504 +

NZ

X2,WTX1

IF SHORT LISTING SELECTED

CDCM 2401

43774

MX7

10*6

SET TO PRINT LONGER LINE

CDCM 2402

1503 6170000015

SB7

ELINEL2

CDCM 2403

1504 11774

WTX1

BX7

X7*X4

CDCM 2404

5170001602 +

SA7

ELINEV

STORE COUNT IN LINE

CDCM 2405

76070

SX0

B7

(X0) = LINE LENGTH

CDCM 2406

1505 5120001545 +

SA2

LINEMAX

CDCM 2407

5130001546 +

SA3

LINECT

CDCM 2408

1506 37623

IX6

X2-X3

CDCM 2409

7266777774

SX6

X6-3

CDCM 2410

1507 0326001510 +

PL

X6,WTX2

IF FINAL LINE WILL FIT ON THIS PAGE

CDCM 2411

0100001533 +

RJ

WRTITL

CDCM 2412

1510 6160001572 +

WTX2

WRITEW

L,ELINE,X0

WRITE FINAL LINE

CDCM 2413

1512 5110001550 +

SA1

PAGEPD

CDCM 2414

0301001515 +

ZR

X1,WTX3

IF 6LPI

CDCM 2415

1513 6160001551 +

WRITEW

L,LPI6,1

RESET PRINTER CONTROL TO 6LPI

CDCM 2416

1515 7120001614 +

WTX3

WRITER

L,RCL

WRITE END OF RECORD

CDCM 2417

1517 0400001475 +

EQ

WRITEX

RETURN

CDCM 2418

**	WRLINE - WRITE LINE TO LIST FILE.	CDCM	2420
*		CDCM	2421
*	WRITES A LINE TO THE LIST FILE VIA *WRITEH*. KEEPS TRACK OF	CDCM	2422
*	LINE COUNT AND CALLS *WRTITL* WHEN NECESSARY TO START A NEW	CDCM	2423
*	PAGE.	CDCM	2424
*		CDCM	2425
*	ENTRY (B1) = 1.	CDCM	2426
*	(B6) = FWA OF LINE.	CDCM	2427
*	(B7) = LINE LENGTH IN WORDS.	CDCM	2428
*		CDCM	2429
*	EXIT NONE.	CDCM	2430
*		CDCM	2431
*	USES X - 1, 2, 3, 4, 6, 7.	CDCM	2432
*	B - 2, 3, 4, 5, 6, 7.	CDCM	2433
*	A - 1, 2, 3, 4, 6, 7.	CDCM	2434
*		CDCM	2435
*	CALLS WRTITL, WTH=.	CDCM	2436
		CDCM	2437
		CDCM	2438
1520 0400401520 +	WRLINE EQ **1S17 ENTRY / EXIT	CDCM	2439
1521 5140001546 +	SA4 LINECT ADVANCE LINE/PAGE COUNT	CDCM	2440
5130001545 +	SA3 LINEMAX	CDCM	2441
1522 73641	SX6 X4+B1	CDCM	2442
54640	SA6 A4	CDCM	2443
37243	IX2 X4-X3	CDCM	2444
1523 0332001531 +	MI X2,WRL1 IF NOT PAGE OVERFLOW	CDCM	2445
76660	SX6 B6 SAVE B6, B7	CDCM	2446
76770	SX7 B7	CDCM	2447
1524 5160001543 +	SA6 WRTEMP	CDCM	2448
54761	SA7 A6+B1	CDCM	2449
1525 7170000004	SX7 4 RESET LINE COUNT	CDCM	2450
54740	SA7 A4	CDCM	2451
1526 0100001533 +	RJ WRTITL WRITE TITLE LINE	CDCM	2452
1527 5130001543 +	SA3 WRTEMP RESTORE B6, B7	CDCM	2453
54431	SA4 A3+B1	CDCM	2454
63630	SB6 X3	CDCM	2455
1530 63740	SB7 X4	CDCM	2456
1531 7120001614 +	WRL1 WRITEH L,B6,B7 WRITE CODED LINE	CDCM	2457
1532 0400001520 +	EQ WRLINE RETURN	CDCM	2458

** WRTITL - WRITE TITLE LINE. CDCM 2460
* CDCM 2461
* ADVANCES PAGE NUMBER AND WRITES THE TITLE LINE TO THE LIST CDCM 2462
* FILE. CDCM 2463
* CDCM 2464
* ENTRY (B1) = 1. CDCM 2465
* CDCM 2466
* EXIT NONE. CDCM 2467
* CDCM 2468
* USES X - 1, 2, 3, 4, 6, 7. CDCM 2469
* B - 2, 3, 4, 5, 6, 7. CDCM 2470
* A - 1, 2, 3, 4, 6, 7. CDCM 2471
* CDCM 2472
* CALLS CDD=, WTW=. CDCM 2473
CDCM 2474

1533 0400401533 + WRTITL EQ **1S17 ENTRY / EXIT
1534 5110001547 + SA1 PAGENO ADVANCE PAGE NUMBER
73611 SX6 X1+B1
54610 SA6 A1
1535 0100000000 X RJ =XCDD= CONVERT TO DECIMAL DISPLAY
1536 20630 LX6 4*6 STORE PAGE NUMBER IN TITLE
43160 MX1 -2*6 INSERT LINE TERMINATOR
11616 BX6 X1*X6
1537 5160001567 + SA6 TPAGE
6160001553 + WRITEW L,TITL,TITLL WRITE TITLE
1542 0400001533 + EQ WRTITL RETURN

1543	2	WRTEMP	BSS	2	REGISTER SAVE AREA	CDCM	2488
1545	00000000000000000000	LINEMAX	CON	0	MAXIMUM LINES PER PAGE	CDCM	2489
1546	00000000000000000000	LINECT	CON	0	NUMBER OF LINES WRITTEN ON CURRENT PAGE	CDCM	2490
1547	00000000000000000001	PAGENO	CON	1	PAGE NUMBER FOR NEXT TITLE TO BE WRITTEN	CDCM	2491
1550	00000000000000000000	PAGEPD	CON	0	0 - 6LPI, 1 - 8LPI	CDCM	2492
1551	23555555411420110000	LPI6	DATA	8LS 6LPI		CDCM	2493
1552	24555555431420110000	LPI8	DATA	8LT 8LPI		CDCM	2494
1553	34555555555555555514	TITL	DATA	50H1 L I N E S W I T H C O D E M O D I F I		CDCM	2495
1560	03550155245511551755		DATA	20HC A T I O N		CDCM	2496
1562	03040315553457335555		DATA	20HCDCM 1.0		CDCM	2497
1564	55555555555555555555	TDATE	DATA	10H		CDCM	2498
1565	55555555555555555555	TTIME	DATA	10H		CDCM	2499
1566	55555555555520010705		DATA	10H PAGE		CDCM	2500
1567	00000000000000000000	TPAGE	CON	0		CDCM	2501
1570	55550000000000000000		DATA	2L		CDCM	2502
1571	55550000000000000000		DATA	2L		CDCM	2503
	17	TITLL	EQU	*-TITL		CDCM	2504
						CDCM	2505
1572	55550000000000000000	ELINE	DATA	2L ,2L		CDCM	2506
1574	55555555555555555555		DATA	30H L I N E S W I T H P O T E N T I A L		CDCM	2507
1577	55031704054615170411		DATA	30H CODE-MODIFICATION PROBLEMS -		CDCM	2508
1602	00000000000000000000	ELINEV	DATA	0		CDCM	2509
	11	ELINEL1	EQU	*-ELINE		CDCM	2510
1603	55555555555555555555		DATA	38L *** PRINT LIMIT EXCEEDED ***		CDCM	2511
	15	ELINEL2	EQU	*-ELINE		CDCM	2512
						CDCM	2513
		*		FETS AND BUFFERS.		CDCM	2514
						CDCM	2515
1607	11000000000000000003	I	FILEB	IBUF,IBUFL	INPUT FILE FET	CDCM	2516
1614	14000000000000000003	L	FILEB	LBUF,LBUFL	OUTPUT FILE FET	CDCM	2517
1621	30000000000000000003	X	FILEB	XBUF,XBUFL	INTERMEDIATE FILE-1 FET	CDCM	2518
1626	31000000000000000003	Y	FILEB	YBUF,YBUFL	INTERMEDIATE FILE-2 FET	CDCM	2519
						CDCM	2520
	2001	IBUFL	EQU	2001B	LENGTH OF INPUT CIO BUFFER	CDCM	2521
1633	2001	IBUF	BSS	IBUFL	INPUT CIO BUFFER	CDCM	2522
						CDCM	2523
	2001	LBUFL	EQU	2001B	LENGTH OF OUTPUT CIO BUFFER	CDCM	2524
3634	2001	LBUF	BSS	LBUFL	OUTPUT CIO BUFFER	CDCM	2525
						CDCM	2526
	2001	XBUFL	EQU	2001B	LENGTH OF INTERMEDIATE FILE-1 BUFFER	CDCM	2527
5635	2001	XBUF	BSS	XBUFL	INTERMEDIATE FILE-1 BUFFER	CDCM	2528
						CDCM	2529
	2001	YBUFL	EQU	2001B	LENGTH OF INTERMEDIATE FILE-2 BUFFER	CDCM	2530
7636	2001	YBUF	BSS	YBUFL	INTERMEDIATE FILE-2 BUFFER	CDCM	2531
						CDCM	2532
		*				CDCM	2533
	11637 +	OR.FIX	EQU	*	BEGINNING OF FIXED-LENGTH STORAGE AREA	CDCM	2534
		*				CDCM	2535

1412THE

**

FIXED-LENGTH STORAGE.

CDCM

2537

*

CDCM

2538

*

THE FOLLOWING AREA OVERWRITES THE INITIALIZATION ROUTINES.

CDCM

2539

**

OR.REG - REGISTER TABLE.

CDCM

2541

*

CDCM

2542

*

CONTAINS THE NAMES OF THE MOST RECENTLY ENCOUNTERED SYMBOLS

CDCM

2543

*

ASSOCIATED WITH EACH OF THE 24 MACHINE REGISTERS.

CDCM

2544

*

THE NUMBER OF SYMBOLS SAVED FOR EACH REGISTER IS CONTROLLED

CDCM

2545

*

BY *PCSNVAL*.

CDCM

2546

*

CDCM

2547

*

ENTRY = 1 WORD. SAME FORMAT AS *O.LOC* ENTRIES.

CDCM

2548

30

NREG

EQU

24

NUMBER OF REGISTERS

CDCM

2549

60

LE.REG

EQU

NREG*PCSNVAL

TABLE LENGTH

CDCM

2550

11637

60

OR.REG

BSS

LE.REG

CDCM

2551

CDCM

2552

**

OR.LINE - STRING BUFFER.

CDCM

2554

*

CDCM

2555

*

CONTAINS CURRENT LINE IMAGE AS ONE CHARACTER PER WORD WITH

CDCM

2556

*

EACH CHARACTER STORED IN THE LOW-ORDER CHARACTER POSITION.

CDCM

2557

132

LE.LINE

EQU

10*LINELTH

STRING BUFFER LENGTH

CDCM

2558

11717

132

OR.LINE

BSS

LE.LINE

STRING BUFFER

CDCM

2559

12051

00000000000000000000

CON

0

TO END SEARCH FOR NON-BLANK IF ALL-BLANK

CDCM

2560

CDCM

2561

CDCM

2562

CDCM

2563

12052 +

ENDZ

EQU

*

END OF FIXED-LENGTH STORAGE AREA

CDCM

2564

** SCO - SET CONTROL STATEMENT OPTIONS.

*

* THIS ROUTINE IS OVERWRITTEN AFTER INITIALIZATION.

CDCM 2566

CDCM 2567

CDCM 2568

CDCM 2569

CDCM 2570

CDCM 2571

CDCM 2572

CDCM 2573

CDCM 2574

CDCM 2575

CDCM 2576

CDCM 2577

CDCM 2578

CDCM 2579

CDCM 2580

CDCM 2581

CDCM 2582

CDCM 2583

CDCM 2584

CDCM 2585

CDCM 2586

CDCM 2587

CDCM 2588

CDCM 2589

CDCM 2590

CDCM 2591

CDCM 2592

CDCM 2593

CDCM 2594

CDCM 2595

CDCM 2596

CDCM 2597

CDCM 2598

CDCM 2599

CDCM 2600

CDCM 2601

CDCM 2602

CDCM 2603

CDCM 2604

CDCM 2605

CDCM 2606

CDCM 2607

CDCM 2608

CDCM 2609

CDCM 2610

CDCM 2611

CDCM 2612

CDCM 2613

CDCM 2614

CDCM 2615

CDCM 2616

CDCM 2617

CDCM 2618

CDCM 2619

CDCM 2620

CDCM 2621

CDCM 2622

11637

ORG OR.FIX

11637 0400411637 + SCO

QUAL SCO
EQ **1S17 ENTRY / EXIT

* UNPACK CONTROL STATEMENT BY *UPC=.

11640 5150000070

SA5 RA.CCD FWA OF CONTROL STATEMENT

6170011767 +

SB7 ARGLST FWA FOR UNPACKED ARGUMENTS

11641 0100000000 X

RJ =XUPC= UNPACK CONTROL CARD.

11642 66700

SB7

B0

0316011672 +

NZ X6,SCO10 IF ERROR DURING UNPACK

* PROCESS ARGUMENTS.

11643 6120011767 +

SB2 ARGLST (B2) = ARGUMENT POINTER (SKIP NAME CALL)

43052

MX0

42

11644 66221

SCO1

SB2 B2+B1 NEXT ARGUMENT

56120

SA1

B2

0301011657 +

ZR X1,SCO4 IF NO MORE ARGUMENTS

11645 5120012016 +

SA2 PARAMS-1 FWA-1 MAIN PARAMETER LIST

73310

SX3

X1

43500

MX5

0

(X5) = 0 IF NO EQUIVALENCE

11646 0303011651 +

ZR X3,SCO2 IF NOT EQUIVALENCED

7231777723

SX3

X1-1R=

11647 66221

SB2

B2+B1

56520

SA5

B2

(X5) = VALUE IF EQUIVALENCED

0303011651 +

ZR

X3,SCO2

IF EQUIVALENCED

11650 66700

SB7

B0

KEYWORD FOLLOWED BY OTHER THAN , (.) =

0400011672 +

EQ

SCO10

11651 54221

SCO2

SA2 A2+B1 NEXT LIST ENTRY

0302011654 +

ZR

X2,SCO3

IF ARGUMENT NOT FOUND

13312

BX3

X1-X2

11652 11303

BX3

X0*X3

0313011651 +

NZ

X3,SCO2

LOOP

63320

SB3

X2

JUMP TO PROCESSOR

11653 0233000000

JP

B3

11654 11101

SCO3

BX1

X0*X1

66710

SB7

B1

0100000000 X

RJ

=XSFN=

SPACE FILL NAME

11655 20666

LX6

-6

5160012040 +

SA6

SCOERR1

11656 0400011672 +

EQ

SCO10

GO TO ERROR EXIT

* SET UP INSTRUCTION TABLE ACCORDING TO *SM* AND *LM* OPTIONS.

11657 7170000731 +

SCO4

SX7

PCSTA

SET FOR -SM, -LM

5110000025 +

SA1

S0.SM

11660 5120000026 +

SA2

S0.LM

20101

LX1

1

12312

BX3

X1+X2

11661	6263777776		SB6	X3-1		CDCM	2623
	0760011671 +		MI	B6,SC06	IF -SM, -LM	CDCM	2624
11662	7170000737 +		SX7	PCSTB	SET FOR SM, -LM	CDCM	2625
	0461011671 +		EQ	B6,B1,SC06	IF SM, -LM	CDCM	2626
11663	7170000745 +		SX7	PCSTC	SET FOR SM, LM	CDCM	2627
	0716011671 +		GT	B6,B1,SC06	IF SM, LM	CDCM	2628
						CDCM	2629
		*			IF *LM* BUT NOT *SM* WAS SELECTED, MOVE LOCAL MACRO ENTRIES	CDCM	2630
		*			DOWN OVER SYSTEM MACRO ENTRIES, AND SET TARGET LOCATION	CDCM	2631
		*			ACCORDINGLY.	CDCM	2632
						CDCM	2633
11664	6170000006		SB7	PCSTC-PCSTB	(B7) = NUMBER OF LOCAL MACROS	CDCM	2634
	7170000737 +		SX7	PCSTA+PCSTC-PCSTB		CDCM	2635
11665	0470011671 +		ZR	B7,SC06	IF NO LOCAL MACRO ENTRIES	CDCM	2636
	7120000737 +		SX2	PCSTB	FETCH ADDRESS = START OF LOCAL MACROS	CDCM	2637
11666	7130000731 +		SX3	PCSTA	STORE ADDRESS = START OF SYSTEM MACROS	CDCM	2638
	43073		MX0	-1		CDCM	2639
11667	53420	SC05	SA4	X2	MOVE LOOP	CDCM	2640
	10644		BX6	X4		CDCM	2641
	37220		IX2	X2-X0	ADVANCE FETCH ADDRESS	CDCM	2642
	53630		SA6	X3		CDCM	2643
11670	67771		SB7	B7-B1		CDCM	2644
	37330		IX3	X3-X0	ADVANCE STORE ADDRESS	CDCM	2645
	0570011667 +		NZ	B7,SC05	LOOP	CDCM	2646
11671	5170000746 +	SC06	SA7	PCSTT	SET TARGET LOCATION FOR INSTRUCTION TABLE	CDCM	2647
	0400011637 +		EQ	SCO	RETURN	CDCM	2648
						CDCM	2649
		*			ERROR PROCESSING.	CDCM	2650
						CDCM	2651
11672	7110012062 +	SC010	MESSAGE	(=C/ CDCM ABORT - CONTROL STATEMENT ERROR/),,RCL		CDCM	2652
11674	0470011700 +		ZR	B7,SC012	IF SYNTAX ERROR	CDCM	2653
	6160012040 +		SB6	SCOERR1	SET FOR APPROPRIATE 2ND MESSAGE	CDCM	2654
11675	0471011676 +		EQ	B7,B1,SC011	IF MAIN PARAM NOT RECOGNIZED	CDCM	2655
	6160012043 +		SB6	SCOERR2	OPTION NOT RECOGNIZED	CDCM	2656
11676	76160	SC011	MESSAGE	B6,,RCL		CDCM	2657
11700	7160041121	SC012	ABORT			CDCM	2658
						CDCM	2659
		*			*I* PARAMETER.	CDCM	2660
						CDCM	2661
11702	0315011703 +	PR.I	NZ	X5,I.1	IF NAME SPECIFIED	CDCM	2662
	5150011705 +		SA5	DEF.I	SET 2ND DEFAULT	CDCM	2663
11703	10655	I.1	BX6	X5		CDCM	2664
	5160000017 +		SA6	LFNI	SET INPUT FILE NAME	CDCM	2665
11704	0400011712 +		EQ	L.1	GO TO COMMON CODE	CDCM	2666
						CDCM	2667
11705	03171520111405000000	DEF.I	DATA	0LCOMPILE	KEYWORD ONLY DEFAULT FOR INPUT FILE	CDCM	2668
						CDCM	2669
		*			*L* PARAMETER.	CDCM	2670
						CDCM	2671
11706	0305011644 +	PR.L	ZR	X5,SC01	RETURN IF NAME NOT SPECIFIED	CDCM	2672
	10655		BX6	X5		CDCM	2673
11707	5160000020 +		SA6	LFNL	SET OUTPUT FILE NAME	CDCM	2674
	7120000033		SX2	1R0	CHECK FOR L=0	CDCM	2675
11710	20606		LX6	6		CDCM	2676
	13626		BX6	X2-X6		CDCM	2677
	0316011712 +		NZ	X6,L.1	IF NOT L=0	CDCM	2678
11711	43700		MX7	0		CDCM	2679

54760
0400011644 +

SA7
EQ A6
SC01

ZERO OUTPUT FILE NAME

CDCM 2680
CDCM 2681
CDCM 2682

11712 66700 L.1
73450
0314011672 +

SB7 B0
SX4 X5
NZ X4,SC010

SET FOR SYNTAX ERROR
IF NAME NOT FOLLOWED BY , . ()

CDCM 2683
CDCM 2684
CDCM 2685

11713 11105
0100011757 +
11714 0316011672 +

BX1 X0*X5
RJ CFN
NZ X6,SC010

CHECK FOR VALID FILE NAME
IF FILE NAME BAD

CDCM 2686
CDCM 2687
CDCM 2688

0400011644 +

EQ SC01

RETURN TO MAIN LOOP

CDCM 2689

* *LO* PARAMETER.

CDCM 2690
CDCM 2691

11715 0305011644 + PR.LO
66700

ZR X5,SC01
SB7 B0

RETURN IF OPTION NOT SPECIFIED
SET FOR SYNTAX ERROR

CDCM 2692
CDCM 2693
CDCM 2694

73450
11716 0314011672 +
5110012025 +

SX4 X5
NZ X4,SC010
SA1 LSTLO

IF OPTION NOT FOLLOWED BY , . ()

CDCM 2695
CDCM 2696
CDCM 2697

11717 13215 L0.1
0301011754 +
73710

BX2 X1-X5
ZR X1,S0.8
SX7 X1

IF ILLEGAL OPTION
OPTION VALUE

CDCM 2698
CDCM 2699
CDCM 2700

11720 11202
54111
0312011717 +

BX2 X0*X2
SA1 A1+B1
NZ X2,L0.1

NEXT ENTRY
LOOP

CDCM 2701
CDCM 2702
CDCM 2703

11721 5170000021 +
0400011644 +

SA7 LOOPT
EQ SC01

SET *LO* OPTION
RETURN TO MAIN ROUTINE

CDCM 2704
CDCM 2705
CDCM 2706

* *PL* PARAMETER.

11722 0305011644 + PR.PL
66700
73450

ZR X5,SC01
SB7 B0
SX4 X5

RETURN IF NO VALUE SPECIFIED
SET FOR SYNTAX ERROR

CDCM 2707
CDCM 2708
CDCM 2709

11723 0314011672 +
66710
66620

NZ X4,SC010
SB7 B1
SB6 B2

IF VALUE NOT FOLLOWED BY , . ()
SPECIFY DECIMAL
SAVE B2

CDCM 2710
CDCM 2711
CDCM 2712
CDCM 2713

11724 0100000000 X
11725 66700

RJ =XDXB=
SB7 B0

CONVERT DISPLAY CODE TO BINARY

CDCM 2714
CDCM 2715

43052
66260

MX0 42
SB2 B6

RESTORE X0
RESTORE B2

CDCM 2716
CDCM 2717
CDCM 2718

11726 0314011672 +
5160000023 +
11727 0400011644 +

NZ X4,SC010
SA6 PRINTL
EQ SC01

IF ERROR
SAVE PRINT LIMIT VALUE
RETURN TO MAIN ROUTINE

CDCM 2719
CDCM 2720
CDCM 2721

* *S0* PARAMETER.

CDCM 2722
CDCM 2723

11730 5130012030 + PR.S0
11731 54431 S0.0
0303011734 +

SA3 LSTS0
SA4 A3+B1
ZR X3,S0.1

SET UP ALL 2ND DEFAULT VALUES
WORD 2 OF TABLE ENTRY
IF END OF TABLE

CDCM 2724
CDCM 2725
CDCM 2726
CDCM 2727

20436
11732 73740
53730

LX4 30
SX7 X4
SA7 X3

FETCH 2ND DEFAULT VALUE

CDCM 2728
CDCM 2729
CDCM 2730

54341
11733 0400011731 +

SA3 A4+B1
EQ S0.0

LOOP

CDCM 2731
CDCM 2732
CDCM 2733

11734 0305011644 + S0.1
5110012030 +
11735 54211 S0.2

ZR X5,SC01
SA1 LSTS0
SA2 A1+B1

RETURN IF NO OPTIONS SELECTED
SET UP ALL INITIAL VALUES
WORD 2 OF ENTRY

CDCM 2734
CDCM 2735
CDCM 2736

		0301011737 + 73620		ZR	X1,S0.3	IF END OF TABLE	CDCM	2737
				SX6	X2		CDCM	2738
11736	53610			SA6	X1		CDCM	2739
		54121		SA1	A2+B1	NEXT TABLE ENTRY WORD 1	CDCM	2740
		0400011735 +		EQ	S0.2	LOOP	CDCM	2741
							CDCM	2742
11737	5140012037 + 37445		S0.3	SA4	ZEROVAL		CDCM	2743
		11404		IX4	X4-X5		CDCM	2744
				BX4	X0*X4		CDCM	2745
11740	0314011743 +			NZ	X4,S0.5	IF NOT A ZERO VALUE	CDCM	2746
		5110012030 +		SA1	LSTS0	CLEAR ALL OPTIONS	CDCM	2747
11741	0301011751 +		S0.4	ZR	X1,S0.7	IF END OF TABLE	CDCM	2748
		43600		MX6	0		CDCM	2749
		53610		SA6	X1		CDCM	2750
11742	5011000002			SA1	A1+2	NEXT TABLE ENTRY WORD 1	CDCM	2751
		0400011741 +		EQ	S0.4	LOOP	CDCM	2752
							CDCM	2753
11743	7225777731		S0.5	SX2	X5-1R-	CHECK FOR PRECEDING MINUS SIGN	CDCM	2754
		5110012030 +		SA1	LSTS0		CDCM	2755
11744	66311			SB3	B1+B1		CDCM	2756
		76610		SX6	B1	SET FOR SETTING OPTION	CDCM	2757
		0312011746 +		NZ	X2,S0.6	IF OPTION NOT PRECEDED BY MINUS SIGN	CDCM	2758
11745	76600			SX6	B0	SET FOR CLEARING OPTION	CDCM	2759
		66221		SB2	B2+B1	FETCH OPTION	CDCM	2760
		56520		SA5	B2		CDCM	2761
11746	13215		S0.6	BX2	X1-X5	SEARCH TABLE OF *S0* OPTIONS	CDCM	2762
		0301011754 +		ZR	X1,S0.8	IF ILLEGAL OPTION	CDCM	2763
		11202		BX2	X0*X2		CDCM	2764
11747	63410			SB4	X1	ADDRESS TO SET OR CLEAR OPTION	CDCM	2765
		54113		SA1	A1+B3	NEXT TABLE ENTRY	CDCM	2766
		0312011746 +		NZ	X2,S0.6	LOOP	CDCM	2767
11750	56640			SA6	B4	SET OR CLEAR OPTION	CDCM	2768
11751	73150		S0.7	SX1	X5		CDCM	2769
		0301011644 +		ZR	X1,SC01	IF NO MORE OPTIONS	CDCM	2770
		66700		SB7	B0	SET FOR SYNTAX ERROR	CDCM	2771
11752	7225777727			SX2	X5-1R/		CDCM	2772
		0312011672 +		NZ	X2,SC010	ERROR IF NOT FOLLOWED BY , (.) /	CDCM	2773
11753	66221			SB2	B2+B1	NEXT OPTION	CDCM	2774
		56520		SA5	B2		CDCM	2775
		0400011737 +		EQ	S0.3	LOOP	CDCM	2776
							CDCM	2777
11754	66711		S0.8	SB7	B1+B1	SET FOR *UNKNOWN OPTION* MESSAGE	CDCM	2778
		11105		BX1	X0*X5		CDCM	2779
		0100000000 X		RJ	=XSFN=	SPACE FILL NAME	CDCM	2780
11755	20666			LX6	-6		CDCM	2781
		5160012043 +		SA6	SCOERR2	SET NAME	CDCM	2782
11756	0400011672 +			EQ	SC010	GO TO ERROR EXIT	CDCM	2783
							CDCM	2784
			*		SUBROUTINE TO CHECK FOR VALID FILE NAME.		CDCM	2785
			*		ENTRY - (X1) = NAME LEFT JUSTIFIED ZERO FILL.		CDCM	2786
			*		EXIT - (X6) = 0 IF NAME VALID.		CDCM	2787
			*		NZ IF NAME NOT VALID.		CDCM	2788
			*		USES - X2, X3, X4, X6.		CDCM	2789
							CDCM	2790
							CDCM	2791
11757	0400411757 +		CFN	EQ	**+1S17	ENTRY / EXIT	CDCM	2792
11760	7160000033			SX6	1RZ+1	PRESET ERROR RETURN AND ALLOW ONLY A - Z	CDCM	2793

		73210		SX2	X1	FOR FIRST CHAR	CDCM	2794
		43366		MX3	-6	CHAR MASK	CDCM	2795
	11761	0301011757 +		ZR	X1,CFN	IF ZERO NAME	CDCM	2796
		0312011757 +		NZ	X2,CFN	ERROR IF MORE THAN 7 CHARS	CDCM	2797
	11762	10211		BX2	X1		CDCM	2798
	11763	20206	CFN1	LX2	6	LOOK AT NEXT CHAR	CDCM	2799
		15423		BX4	-X3*X2		CDCM	2800
		0304011766 +		ZR	X4,CFN2	IF NO MORE CHARS	CDCM	2801
	11764	37446		IX4	X4-X6	CHECK 1ST CHAR ALPHA, REMAINING ALPHANUM	CDCM	2802
		0324011757 +		PL	X4,CFN	IF	CDCM	2803
	11765	7160000045		SX6	1R+	ALLOW A - 9 FOR REMAINING CHARS	CDCM	2804
		0400011763 +		EQ	CFN1	LOOP	CDCM	2805
							CDCM	2806
	11766	43600	CFN2	MX6	0	NORMAL RETURN	CDCM	2807
		0400011757 +		EQ	CFN		CDCM	2808

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** CONTROL STATEMENT TABLES AND VALUES.

CDCM 2810

*

CDCM 2811

* ARGUMENTS ARE FETCHED FROM RA+70FF BY *UPC=*.

CDCM 2812

*

CDCM 2813

11767 30 ARGLSTL EQU 30B LENGTH OF ARGUMENT LIST

CDCM 2814

30 ARGLST BSS ARGLSTL ARGUMENT LIST FORMED BY *UPC=*

CDCM 2815

** THE MAIN PARAMETER TABLE CONSISTS OF ONE-WORD ENTRIES AND IS
* TERMINATED BY A ZERO WORD. ENTRY FORMAT IS AS FOLLOWS:

CDCM 2816

CDCM 2817

CDCM 2818

*

CDCM 2819

*

VFD 42/PAR,18/PADR

CDCM 2820

*

CDCM 2821

*

WHERE PAR = PARAMETER NAME (1-7 CHARS IN LENGTH, LEFT

CDCM 2822

*

JUSTIFIED ZERO FILL).

CDCM 2823

*

PADR = ADDRESS OF PROCESSOR.

CDCM 2824

*

CDCM 2825

12017 110000000000000011702 + PARAMS VFD 42/OLI,18/PR.I I - INPUT FILE

CDCM 2826

12020 140000000000000011706 + VFD 42/OLL,18/PR.L L - LIST FILE

CDCM 2827

12021 141700000000000011715 + VFD 42/OLLO,18/PR.LO LO - LIST OPTIONS

CDCM 2828

12022 201400000000000011722 + VFD 42/OLPL,18/PR.PL PL - PRINT LIMIT

CDCM 2829

12023 231700000000000011730 + VFD 42/OLSO,18/PR.SO SO - SCANNING OPTIONS

CDCM 2830

12024 00000000000000000000 VFD 60/0 END OF LIST

CDCM 2831

CDCM 2832

CDCM 2833

** TABLE OF OPTIONS FOR THE *LO* PARAMETER. CONSISTS OF ONE-WORD
* ENTRIES AND IS TERMINATED BY A ZERO WORD.

CDCM 2834

CDCM 2835

CDCM 2836

*

CDCM 2837

*

VFD 42/OPT,18/VAL

CDCM 2838

*

CDCM 2839

*

WHERE OPT = NAME OF OPTION.

CDCM 2840

*

VAL = VALUE OF OPTION.

CDCM 2841

CDCM 2842

12025 01000000000000000000 LSTLO VFD 42/OLA,18/0 LO=A

CDCM 2843

12026 230000000000000000001 VFD 42/OLS,18/1 LO=S

CDCM 2844

12027 00000000000000000000 CON 0 END OF TABLE

CDCM 2845

CDCM 2846

** TABLE OF OPTIONS FOR THE *SO* PARAMETER. CONSISTS OF TWO-WORD
* ENTRIES AND IS TERMINATED BY A ZERO WORD. THE SECOND DEFAULT

CDCM 2847

CDCM 2848

*

CDCM 2849

*

AND THE INITIAL VALUES FOR ALL OPTIONS ARE SET FROM THE 2ND

CDCM 2850

*

WORD OF EACH ENTRY.

CDCM 2851

*

CDCM 2852

*

VFD 42/OPT,18/ADRS

CDCM 2853

*

VFD 30/DEF2,30,IV

CDCM 2854

*

CDCM 2855

*

WHERE OPT = NAME OF OPTION

CDCM 2856

*

ADRS = ADDRESS TO STORE VALUE

CDCM 2857

*

DEF2 = 2ND DEFAULT

CDCM 2858

*

IV = INITIAL VALUE

CDCM 2859

12030 122000000000000000024 + LSTSO VFD 42/OLJP,18/SO.JP SO=JP

CDCM 2860

12031 000000000100000000001 VFD 30/1,30/1

CDCM 2861

12032 231500000000000000025 + VFD 42/OLSM,18/SO.SM SO=SM

CDCM 2862

12033 000000000100000000001 VFD 30/1,30/1

CDCM 2863

12034 141500000000000000026 + VFD 42/OLLM,18/SO.LM SO=LM

CDCM 2864

12035 000000000100000000000 VFD 30/1,30/0

CDCM 2865

12036 000000000000000000000 CON 0 END OF TABLE

CDCM 2866

12037	330000000000000000050	ZEROVAL	VFD	6/1H0,48/0,6/1H/	ZERO SPECIFICATION IN OPTION LIST	CDCM	2867
12040	55555555555555555555	SCOERR1	DATA	C*	UNRECOGNIZABLE*	CDCM	2868
12043	55555555555555555555	SCOERR2	DATA	C*	UNKNOWN OPTION*	CDCM	2869
12066		END	CDCM			CDCM	2872

72400B CM STORAGE USED 3677 STATEMENTS 1870 SYMBOLS 000040 INVENTED SYMBOLS
PARALLEL CPU ASSEMBLY 1.795 SECONDS 1176 REFERENCES

SYMBOLIC REFERENCE TABLE.

ADW	1206	PROGRAM*	12/34	26/22	39/48	42/56	45/17
			25/42	26/28	42/49	44/41 L	
ADWSV	1223	PROGRAM*	44/50 S	45/07	45/19 L		
ADW1	1207	PROGRAM*	44/42 L	45/10			
ADW2	1216	PROGRAM*	44/52	45/03 L			
ADW3	1217	PROGRAM*	45/01	45/07 L			
ADW4	1221	PROGRAM*	44/47	45/12 L			
ANT	112	PROGRAM*	12/18 L	12/33	12/36	24/56	37/20 40/21
ANT1	116	PROGRAM*	12/28 L	12/30			
ANT2	120	PROGRAM*	12/20	12/34 L			
AWS	1225	PROGRAM*	46/33 L	47/03	47/08	47/26	47/31 54/38
AWSM	1252	PROGRAM*	46/36	47/33 L	54/31		
AWS1	1233	PROGRAM*	46/49	46/51 L			
AWS2	1237	PROGRAM*	46/54	47/05 L			
AWS3	1241	PROGRAM*	46/39	47/12 L			
AWS4	1243	PROGRAM*	47/18	47/20 L			
AWS5	1251	PROGRAM*	46/44	47/13	47/30 L		
B1=1	0						
CDCM	37	PROGRAM*	10/05 E	10/06 L			
CDDFM1	104	PROGRAM*	11/34	11/46 L			
CDDFM2	106	PROGRAM*	11/37	11/47 L			
CDD=	0	EXTERNAL*	11/36	59/24	61/21		
CD10	42	PROGRAM*	10/19 L	10/22			
CD20	45	PROGRAM*	10/20	10/29 L			
CD21	46	PROGRAM*	10/30 L	10/44	11/19	11/21	11/24 11/28
CD22	52	PROGRAM*	10/40 L	10/43			
CD23	53	PROGRAM*	10/42 L	10/52	11/06		
CD24	55	PROGRAM*	10/41	10/48 L			
CD25	60	PROGRAM*	10/57 L	11/02			
CD26	63	PROGRAM*	10/33	11/15 L			
CD50	72	PROGRAM*	10/31	11/30 L			
CD51	74	PROGRAM*	11/31	11/34 L			
CIO=	0	EXTERNAL*	33/26	53/35	56/44	57/18	58/28
			53/27	53/36	56/45	57/24	59/45
CMM.ALV	0	EXTERNAL*	44/57	47/01			
CMM.GFS	0	EXTERNAL*	49/39				
CMM.GLV	0	EXTERNAL*	45/05	47/06			
COMCOL	254	PROGRAM*	19/27 L	21/34	31/09	38/13	41/23
			21/22	23/50	37/12	40/13	42/24
CONCAT	65		5/03 D	20/41			
CPM=	0	EXTERNAL*	56/53				
CRT	122	PROGRAM*	13/18 L	13/25	35/49	41/36	
CRT1	124	PROGRAM*	13/22 L	13/24			

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56/43	56/45	L					
57/08	57/10	L					
56/47	57/12	L					
10/32	11/25		33/38	35/25	51/29 S	52/10	
10/40	33/33		34/41	35/32	51/53	52/13	L
3/08 D	11/25		27/53	33/36	51/48	52/13	
10/39	27/35		28/03	35/33	52/10		
9/39 L	51/43		53/22 S				
16/15 S	16/29		17/57 S	18/17	18/30	19/28	L
56/48	57/09		59/41	59/44	59/45	60/38	61/26 62/30 L
62/30	62/30		62/30	62/30	62/38 L		
62/30	62/37 D		62/38				
63/30 D	63/31						
13/20	63/18 D		63/19				
9/05 L	56/35		65/43 S				
9/07 L	11/18		11/30	56/46	65/52 S		
57/02 S	59/36		60/21	62/03 L			
3/21 D	20/42		35/33	52/10	58/25		
11/26	27/38		51/48	52/14	63/30		
57/01 S	59/35		60/22	62/02 L			
9/09 L	11/20		59/28	66/25 S			
59/44	62/06 L						
57/09	62/07 L						
3/41 D	49/43						
3/57 D	50/02						
47/23 S	47/24		49/55	49/56	50/17 L		
5/13 D							
11/34	11/43		65/30	65/35			
14/17	17/17		19/21	19/29 L	20/55 S		
23/18	24/42		26/52	27/22	63/17 D	63/18	
10/19	58/24 L		58/27	58/39			
58/25 L	58/29		58/36	58/38			
58/26	58/31 L						
62/47 D	64/06						
14/18	19/22		20/34	63/31 L			
13/22 S	23/17 S		24/33	26/51 S	27/13	63/19 L	
7/18 L	32/51		34/21	35/44 S	37/19		
7/33 L	24/55		33/51	35/45 S	40/20		
7/51 L	26/21		32/47	35/50	39/47		
10/48	26/27		34/54	39/21			
8/12 L	25/22		35/46 S	38/27	42/29		
8/31 L	35/47 S		42/55	43/14			
61/18	62/04 L						
57/07 S	59/42		62/05 L				
10/21	20/30 L		27/43	27/44			
21/03	27/52 L						
22/54	26/08		27/48 L	31/18	35/43 S	41/17	41/33 S
24/24 S	27/08		27/53 L				
27/44 D	37/15		38/17	38/42	38/55	39/25	39/49 40/23
31/28	37/17		38/26	38/48	39/01	39/37	40/16 43/25
36/13	37/22		38/29	38/53	39/04	39/44	40/18
21/16	21/42		27/47 L	35/41 S			
22/38	28/31 L						
21/20 S	26/23		27/55 L	31/25	39/42		
23/16	24/35		25/51	26/42	27/15	28/03 D	28/05 63/18
21/50 S	23/23		27/56 L				
22/57 S	26/09		27/49 L	31/21 S	41/21 S		

PCSPROC	450	PROGRAM*	27/45 D	31/23	41/30	41/35	41/37	41/44		
PCSPVL	514	PROGRAM*	26/12	27/50 L	31/27 S					
PCSQI	515	PROGRAM*	26/16	27/31	27/51 L	35/48 S	39/09	39/43	42/57 S	43/24 S
PCSRCG	525	PROGRAM*	23/09 S	26/35	28/01 L					
PCSRRL	524	PROGRAM*	22/25 S	23/14	24/11 S	26/37	27/12	27/57 L		
PCSSTF	526	PROGRAM*	23/37 S	23/44 S	23/56	24/10 S	24/21	27/10	28/02 L	
PCSTA	731	PROGRAM*	29/42 L	64/53	65/13	65/16				
PCSTB	737	PROGRAM*	29/50 L	65/03	65/12	65/13	65/15			
PCSTC	745	PROGRAM*	30/02 L	65/05	65/12	65/13				
PCSTT	746	PROGRAM*	22/34	30/04 L	65/25 S					
PCSVALC	521	PROGRAM*	24/32	25/50	27/54 L					
PCSVALS	527	PROGRAM*	24/38 S	26/01 S	26/48	28/05 L				
PCSZ	531	PROGRAM*	21/04	28/06 L						
PCS1	264	PROGRAM*	20/43 L	20/49	20/53					
PCS10	301	PROGRAM*	21/18	21/21 L						
PCS11	305	PROGRAM*	21/14	21/17	21/34 L					
PCS2	266	PROGRAM*	20/47	20/49 L						
PCS20	307	PROGRAM*	21/24	21/40 L						
PCS21	314	PROGRAM*	21/43	21/49 L						
PCS22	322	PROGRAM*	22/04	22/09 L						
PCS23	332	PROGRAM*	22/18	22/21	22/25 L					
PCS24	334	PROGRAM*	21/30	21/57	22/07	22/11	22/13	22/24	22/34 L	
PCS25	336	PROGRAM*	22/39 L	22/41						
PCS26	342	PROGRAM*	22/49	22/52 L						
PCS3	272	PROGRAM*	21/05 L	21/07						
PCS30	352	PROGRAM*	23/17 L	23/20						
PCS31	355	PROGRAM*	23/12	23/23 L						
PCS32	363	PROGRAM*	23/26	23/30	23/33	23/37 L				
PCS33	364	PROGRAM*	23/36	23/40 L						
PCS50	366	PROGRAM*	23/38	23/43	23/49 L					
PCS51	376	PROGRAM*	24/06	24/08	24/10 L					
PCS52	377	PROGRAM*	23/57	24/12 L						
PCS53	404	PROGRAM*	24/18	24/21 L						
PCS54	407	PROGRAM*	24/29 L	24/34	26/04					
PCS55	410	PROGRAM*	24/14	24/16	24/20	24/30 L				
PCS56	412	PROGRAM*	24/33 L	24/43						
PCS57	417	PROGRAM*	24/30	24/47 L						
PCS58	423	PROGRAM*	24/54	25/04 L						
PCS59	427	PROGRAM*	25/06	25/15 L						
PCS60	434	PROGRAM*	25/32 L	25/34						
PCS61	437	PROGRAM*	25/25	25/37	25/42 L					
PCS62	441	PROGRAM*	25/11	25/40	25/48 L					
PCS63	443	PROGRAM*	24/49	24/57	25/50 L					
PCS80	450	PROGRAM*	23/05	23/21	24/25	25/08	25/16	25/49	26/08 L	
			23/08	24/22	24/36	25/10	25/18	25/52	27/45	
PCS81	456	PROGRAM*	26/18	26/23 L						
PCS82	461	PROGRAM*	26/15	26/24	26/35 L					
PCS83	467	PROGRAM*	26/43	26/46	26/48 L	26/55				
PCS84	472	PROGRAM*	26/53	26/55 L						
PCS85	473	PROGRAM*	26/36	26/39	27/08 L					
PCS86	500	PROGRAM*	27/18 L	27/25						
PCS87	503	PROGRAM*	27/09	27/31 L						
PCS90	510	PROGRAM*	21/36	21/47	22/52	24/02	27/26	43/01	43/06	
			21/41	22/43	23/52	27/11	27/43 L	43/04	43/08	
PC.BSS	747	PROGRAM*	29/29	29/30	31/07 L					
PC.END	761	PROGRAM*	29/34	32/41 L						
PC.ENT	1057	PROGRAM*	29/35	29/36	37/10 L					

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Y	1626	PROGRAM*	54/51	57/20	62/32 L		
YBUF	7636	PROGRAM*	62/32	62/32	62/32	62/32	62/44 L
YBUFL	2001		62/32	62/43 D	62/44		
(MEM)	0		47/24 D	49/55 D			

SYMBOL QUALIFIER = SCO

ARGLST	11767	PROGRAM*	64/13	64/20	69/06 L		
ARGLSTL	30		69/05 D	69/06			
CFN	11757	PROGRAM*	66/08	67/56 L	68/03	68/04	68/10 68/15
CFN1	11763	PROGRAM*	68/06 L	68/12			
CFN2	11766	PROGRAM*	68/08	68/14 L			
DEF.I	11705	PROGRAM*	65/41	65/46 L			
I.1	11703	PROGRAM*	65/40	65/42 L			
LO.1	11717	PROGRAM*	66/19 L	66/24			
LSTLO	12025	PROGRAM*	66/18	69/34 L			
LSTSO	12030	PROGRAM*	66/46	66/56	67/11	67/19	69/51 L
L.1	11712	PROGRAM*	65/44	65/56	66/04 L		
PARAMS	12017	PROGRAM*	64/25	69/18 L			
PR.I	11702	PROGRAM*	65/40 L	69/18			
PR.L	11706	PROGRAM*	65/50 L	69/19			
PR.LO	11715	PROGRAM*	66/14 L	69/20			
PR.PL	11722	PROGRAM*	66/30 L	69/21			
PR.SO	11730	PROGRAM*	66/46 L	69/22			
SCO	11637	PROGRAM*	10/07	64/08 L	65/26		
SCOERR1	12040	PROGRAM*	64/48 S	65/32	70/03 L		
SCOERR2	12043	PROGRAM*	65/34	67/46 S	70/04 L		
SC01	11644	PROGRAM*	64/22 L	66/02	66/14	66/30	66/55
			65/50	66/10	66/26	66/42	67/34
SC010	11672	PROGRAM*	64/16	64/49	66/06	66/17	66/40 67/47
			64/34	65/30 L	66/09	66/33	67/37
SC011	11676	PROGRAM*	65/33	65/35 L			
SC012	11700	PROGRAM*	65/31	65/36 L			
SC02	11651	PROGRAM*	64/28	64/32	64/36 L	64/40	
SC03	11654	PROGRAM*	64/37	64/44 L			
SC04	11657	PROGRAM*	64/24	64/53 L			
SC05	11667	PROGRAM*	65/18 L	65/24			
SC06	11671	PROGRAM*	65/02	65/04	65/06	65/14	65/25 L
S0.0	11731	PROGRAM*	66/47 L	66/53			
S0.1	11734	PROGRAM*	66/48	66/55 L			
S0.2	11735	PROGRAM*	66/57 L	67/05			
S0.3	11737	PROGRAM*	67/01	67/07 L	67/40		
S0.4	11741	PROGRAM*	67/12 L	67/16			
S0.5	11743	PROGRAM*	67/10	67/18 L			
S0.6	11746	PROGRAM*	67/22	67/26 L	67/31		
S0.7	11751	PROGRAM*	67/12	67/33 L			
S0.8	11754	PROGRAM*	66/20	67/27	67/42 L		
ZEROVAL	12037	PROGRAM*	67/07	70/01 L			

SYMBOL QUALIFIER = MACRO\$

1412THE

ABORT	11700	PROGRAM*	65/36	D				
CLOCK	1447	PROGRAM*	57/11	D				
DATE	1444	PROGRAM*	57/10	D				
ENDRUN	102	PROGRAM*	11/44	D				
FILEB	1633	PROGRAM*	62/29	D	62/30	D	62/31	D 62/32
GETMC	1265	PROGRAM*	49/48	D				
GETPAGE	1433	PROGRAM*	56/53	D				
MEMORY	1271	PROGRAM*	47/24	D	49/55	D		
MESSAGE	11676	PROGRAM*	11/34	D	11/43	D	65/30	D 65/35
READ	1466	PROGRAM*	53/36	D	56/45	D	58/28	D
READH	1463	PROGRAM*	58/25	D				
READW	1324	PROGRAM*	52/10	D				
RETURN	1457	PROGRAM*	53/27	D	57/18	D	57/24	D
REWIND	1425	PROGRAM*	53/35	D	56/44	D		
SYSTEM	1271	PROGRAM*	47/24	D	49/55	D		
WRITEH	1531	PROGRAM*	60/38	D				
WRITE0	1400	PROGRAM*	55/15	D				
WRITER	1515	PROGRAM*	33/26	D	59/45	D		
WRITEW	1537	PROGRAM*	55/03	D	55/52	D	57/09	D 59/41
							59/44	D 61/26

SYMBOL QUALIFIER = PC.BSS

BSS1	754	PROGRAM*	31/15	31/18	L			
BSS2	757	PROGRAM*	31/12	31/17		31/25	L 38/56	

SYMBOL QUALIFIER = PC.END

END1	765	PROGRAM*	33/02	L 33/18				
END10	774	PROGRAM*	32/50	32/54		33/24	L	
END11	776	PROGRAM*	33/25	33/27	L			
END12	777	PROGRAM*	33/31	L 33/44		35/35		
END13	1003	PROGRAM*	33/38	L 33/43				
END14	1005	PROGRAM*	33/41	L 34/17				
END15	1006	PROGRAM*	33/39	33/42	L 35/04		35/17	
END16	1010	PROGRAM*	33/40	33/51	L			
END17	1011	PROGRAM*	33/53	L 34/22				
END18	1014	PROGRAM*	34/07	L 34/09				
END19	1020	PROGRAM*	33/55	34/12		34/19	L	
END2	767	PROGRAM*	33/08	L 33/10				
END20	1022	PROGRAM*	34/19	34/40	L			
END21	1026	PROGRAM*	34/48	34/50		34/53	L 35/20	
END22	1032	PROGRAM*	35/09	L 35/11				
END23	1036	PROGRAM*	35/16	35/25	L			
END24	1040	PROGRAM*	33/34	33/45		35/32	L	
END3	772	PROGRAM*	33/03	33/12		33/17	L	
END50	1043	PROGRAM*	33/32	35/40	L			
END51	1052	PROGRAM*	35/56	L 36/07		36/10		
END52	1055	PROGRAM*	36/03	36/09	L			
END53	1056	PROGRAM*	35/56	36/12	L			

SYMBOL QUALIFIER = PC.ENT

ENT1 1061 PROGRAM* 37/16 L 37/21

SYMBOL QUALIFIER = PC.EQU

EQU1 1076 PROGRAM* 38/37 L 38/39
EQU10 1126 PROGRAM* 39/36 39/42 L
EQU2 1101 PROGRAM* 38/24 38/47 L
EQU3 1106 PROGRAM* 38/51 39/01 L
EQU4 1107 PROGRAM* 38/45 39/03 L
EQU5 1111 PROGRAM* 38/19 39/08 L
EQU6 1114 PROGRAM* 39/10 39/14 L
EQU7 1115 PROGRAM* 39/08 39/17 L 39/40
EQU8 1116 PROGRAM* 39/12 39/15 39/19 L
EQU9 1122 PROGRAM* 39/31 L 39/33

SYMBOL QUALIFIER = PC.EXT

EXT1 1134 PROGRAM* 40/17 L 40/22

SYMBOL QUALIFIER = PC.JUMP

JMP1 1144 PROGRAM* 41/27 L 41/31
JMP2 1147 PROGRAM* 41/31 L 41/42
JMP3 1150 PROGRAM* 41/26 41/32 L 41/43 41/47
JMP4 1154 PROGRAM* 41/28 41/40 L

SYMBOL QUALIFIER = PC.QUAL

QUL1 1166 PROGRAM* 42/39 L 42/41
QUL2 1171 PROGRAM* 42/31 42/44 42/49 L
QUL3 1173 PROGRAM* 42/26 42/54 L
QUL4 1174 PROGRAM* 42/47 42/52 42/55 L
QUL5 1176 PROGRAM* 42/28 43/03 L
QUL6 1205 PROGRAM* 43/17 43/20 43/24 L

1412THE

FWA OF THE LOAD 111
LWA+1 OF THE LOAD 15046

WRITTEN TO FILE CDCMABS

TRANSFER ADDRESS -- CDCM 150

PROGRAM ENTRY POINTS -- CDCM 150

PROGRAM AND BLOCK ASSIGNMENTS.

BLOCK	ADDRESS	LENGTH	FILE	DATE	PROCSSR	VER	LEVEL	HARDWARE	COMMENTS
CDCM	111	12066	CDCMREL	24/05/28	COMPASS	3.7	871		CDCM V1.0 - CHECK DANGEROUS CODE MODIFICATI
CPU.CDD	12177	12	UL-SYSLIB	97/11/04	COMPASS	3.7	871		CONVERT CONSTANT TO DECIMAL DISPLAY CODE.
CPU.CIO	12211	16	UL-SYSLIB	97/11/04	COMPASS	3.7	871		I/O FUNCTION PROCESSOR.
CPU.DXB	12227	17	UL-SYSLIB	97/11/04	COMPASS	3.7	871		CONVERT DISPLAY CODE TO BINARY.
CPU.MVE	12246	64	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MOVE BLOCK OF DATA.
CPU.RDH	12332	43	UL-SYSLIB	97/11/04	COMPASS	3.7	871		READ CODED LINE, *H* FORMAT.
CPU.RDW	12375	144	UL-SYSLIB	97/11/04	COMPASS	3.7	871		READ WORDS TO WORKING BUFFER.
CPU.SFN	12541	7	UL-SYSLIB	97/11/04	COMPASS	3.7	871		SPACE FILL NAME, RIGHT JUSTIFIED ZEROES.
CPU.SYS	12550	40	UL-SYSLIB	97/11/04	COMPASS	3.7	871		PROCESS SYSTEM REQUEST.
CPU.UPC	12610	26	UL-SYSLIB	97/11/04	COMPASS	3.7	871		UNPACK CONTROL CARD.
CPU.WTH	12636	34	UL-SYSLIB	97/11/04	COMPASS	3.7	871		WRITE CODED LINE, *H* FORMAT.
CPU.WTO	12672	17	UL-SYSLIB	97/11/04	COMPASS	3.7	871		WRITE ONE WORD.
CPU.WTW	12711	115	UL-SYSLIB	97/11/04	COMPASS	3.7	871		WRITE WORDS FROM WORKING BUFFER.
CPU.CPM	13026	5	UL-SYSLIB	23/09/20	COMPASS	3.7	871		87/02/06. 92/09/17. CPUREL - CONTROL POINT
CMF.ALV	13033	270	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMF.GFS	13323	66	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMF.GXV	13411	243	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.MEM	13654	7	UL-SYSLIB	97/11/04	COMPASS	3.7	871		
CMM.R	13663	214	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.RLS	14077	114	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.VAF	14213	111	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.VFA	14324	22	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.VGF	14346	20	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.VM	14366	441	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -
CMM.VSQ	15027	17	UL-SYSLIB	97/11/04	COMPASS	3.7	871		MM V1.1 -

ENTRY POINTS.

ENTRY	ADDRESS	PROGRAM	REFERENCES
CMM.GOA	*WEAK*		CMF.ALV 13061 13071 CMF.GXV 13423 13433 13532 13542
CMM.SV	*WEAK*		CMM.VM 14534
CMM.POA	*WEAK*		CMM.RLS 14101 14115 14124 14130
CDCM	150	CDCM	
CDD=	12202	CPU.CDD	CDCM 207 1610 1646
CIO=	12221	CPU.CIO	CDCM 1106 1461 1464 1465 1537 1541 1566 1571 1600 1627
		CPU.RDW	12444 12513 12523 12535

ENTRY	ADDRESS	PROGRAM	REFERENCES
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			CPU.WTO	12707								
			CPU.WTW	12756	13015	13024						
			CDCM	12035								
			CMM.VM	14530								
			CDCM	1575								
			CDCM	1436								
			CPU.RDH	12351	12354	12356	12363	12371				
			CPU.RDH	12341								
			CDCM	11765	12065							
			CDCM	214	1360	1364	1405	1557	1562	12012		
			CPU.CIO	12220								
			CPU.CPM	13026								
			CMM.MEM	13660								
			CMM.R	14004	14063							
			CPU.RDW	12460	12516							
			CPU.WTW	12762	13021							
			CPU.CIO	12211								
			CPU.WTO	12704								
			CDCM	206	212	12004	12010					
			CMM.R	14002	14061							
			CDCM	11752								
			CDCM	1642								
			CDCM	1512								
			CDCM	1504	1526	1554	1622	1625	1652			
			CPU.WTH	12654	12665							
			CPU.WTH	12651								
			CDCM	1545								
			CDCM	1325	1346							
			CDCM	1372								
			CDCM	1327	1350							
			CMM.R	13700	13731	13771	13772	14011				
			CMM.RLS	14201								
			CMM.VAF	14274								
			CMM.VM	14606								
			CMM.RLS	14161								
			CMM.VFA	14342								
			CMM.VM	14565								
			CMF.ALV	13062								
			CMF.GFS	13330								
			CMF.GXV	13424	13533							
			CMM.RLS	14102								
			CMF.ALV	13034								
			CMF.GFS	13324								
			CMF.ALV	13065								
			CMF.GXV	13427	13536							
			CMM.RLS	14105	14111							
			CMF.ALV	13161								
			CMF.ALV	13162								
			CMF.ALV	13163								
			CMF.ALV	13164								
			CMF.ALV	13233								
			CMF.GXV	13601	13611	13626						

ENTRY ADDRESS PROGRAM REFERENCES

CMM.RLS	14152	14171	
CMM.VAF	14245	14253	14313
CMM.VFA	14340		
CMM.VGF	14360		
CMF.ALV	13122	13225	
CMF.GXV	13574	13623	
CMM.RLS	14165		
CMM.VAF	14242	14247	14307
CMM.VFA	14333		
CMM.VGF	14354		
CMF.GFS	13347		
CMM.RLS	14142		
CMM.VAF	14232	14240	
CMF.GXV	13633		
CMM.RLS	14175		
CMM.VAF	14260		
CMM.VSQ	15041		
CMF.ALV	13223		
CMF.GXV	13572	13621	
CMM.RLS	14140	14147	14163
CMM.VAF	14235	14305	
CMM.VFA	14330		
CMM.VGF	14352		
CMM.VSQ	15034		
CMF.ALV	13321		
CMF.GXV	13451	13560	
CMF.GXV	13522		
CMF.ALV	13231		
CMF.GXV	13600	13610	13625
CMM.RLS	14151	14170	
CMM.VAF	14244	14251	14311
CMM.VFA	14336		
CMM.VGF	14356		
CMF.ALV	13165		

CMM.VSQ 15027 CMM.VSQ

.034 CP SECONDS 32100B CM STORAGE USED 1 TABLE MOVE

	RECORD	TYPE	FILE	DATE	COMMENT
1		SRT5LIB	ULIB	PRODOLD	99/12/09.
2	REPLACED	SYSLIB	ULIB	TPROD	24/05/28.
3		SYMLIB	ULIB	PRODOLD	99/12/09.
4		FTN5LIB	ULIB	PRODOLD	99/12/09.
5		FORTTRAN	ULIB	PRODOLD	99/12/09.
6		SRVLIB	ULIB	PRODOLD	99/12/09.
7		PFGLIB	ULIB	PRODOLD	99/12/09.
8		PASCLIB	ULIB	PRODOLD	99/12/09.
9		NVERELS	ULIB	PRODOLD	99/12/09.
10		NETIO	ULIB	PRODOLD	24/05/24.
11		NETIOD	ULIB	PRODOLD	24/05/24.
12		NETXIO	ULIB	PRODOLD	24/05/24.
13		NETXIOD	ULIB	PRODOLD	24/05/24.
14		MACLIB	ULIB	PRODOLD	24/05/24.
15		NFMLIB	ULIB	PRODOLD	99/12/09.
16		BIT8LIB	ULIB	PRODOLD	99/12/09.
17		SFLIB	ULIB	PRODOLD	99/12/09.
18		QSFLIB	ULIB	PRODOLD	99/12/09.
19		DMSLIB	ULIB	PRODOLD	99/12/09.
20		BAMLIB	ULIB	PRODOLD	99/12/09.
21		AAMLIB	ULIB	PRODOLD	99/12/09.
22		TRANLIB	ULIB	PRODOLD	99/12/09.
23		LCNLIB	ULIB	PRODOLD	99/12/09.
24		COBOL5	ULIB	PRODOLD	99/12/09.
25		MSAMLIB	ULIB	PRODOLD	99/12/09.
26		CMRD01	TEXT	PRODOLD	
27		EQPD01	TEXT	PRODOLD	
28		RBF2P0	ABS	PRODOLD	24/05/27. RBF MAIN OVERLAY, ROLLIN AND OVERLAY LOADER
29		RBF0100	OVL	PRODOLD	24/05/27.
30		RBF0101	OVL	PRODOLD	24/05/27. - RBF - MAIN EXECUTION OVERLAY.
31		RBF0102	OVL	PRODOLD	24/05/27. - RBF/SMP - SUPERVISORY MESSAGE PROCESSOR.
32		RBF0103	OVL	PRODOLD	24/05/27. - RBF/COMMAND - COMMAND PROCESSOR.
33		RBF0104	OVL	PRODOLD	24/05/27. - RBF/EXTCMD - TERMINAL CONTROL MODULE.
34		RBF0105	OVL	PRODOLD	24/05/27. - RBF/DIS - DISPLAY PROCESSOR.
35		RBF0106	OVL	PRODOLD	24/05/27. - RBF/DCM - DOWNLINE CONTROL MODULE.
36		RBF0107	OVL	PRODOLD	24/05/27. - RBF/UCM - UPLINE CONTROL MODULE.
37		RBF0110	OVL	PRODOLD	24/05/27. - RBF/NEW - NEW CONNECTION PROCESSOR.
38		RBF0111	OVL	PRODOLD	24/05/27. - RBF/CON\$END - TERMINATE CONNECTION PROCESSOR.
39		RBF0112	OVL	PRODOLD	24/05/27. - RBF/FIN\$CON - FINISH TERMINATION PROCESSOR.
40		RBF0113	OVL	PRODOLD	24/05/27. - RBF/FIN\$DEV - BATCH DEVICE TERMINATION PROCESSOR.
41		RBF0114	OVL	PRODOLD	24/05/27. - RBF/QCM - QUEUE CONTROL BLOCK.
42		RBF0115	OVL	PRODOLD	24/05/27. - RBF/UPDKDS - RBF K-DISPLAY PROCESSOR.
43		RBF0200	OVL	PRODOLD	24/05/27. - RBF/DMP - DUMP PROCESSOR.
44		IPRD01	TEXT	PRODOLD	
45		SES	ABS	PRODOLD	84/10/09.
46		ZSEI010	OVL	PRODOLD	84/10/09.
47		ZSEI020	OVL	PRODOLD	84/10/09.
48		ZSEI030	OVL	PRODOLD	84/10/09.
49		ZSEE031	OVL	PRODOLD	84/10/09.
50		ZSEE032	OVL	PRODOLD	84/10/09.
51		ZSEE033	OVL	PRODOLD	84/10/09.
52		ZSEE034	OVL	PRODOLD	84/10/09.
53		ZSEE035	OVL	PRODOLD	84/10/09.
54		ZSEE036	OVL	PRODOLD	84/10/09.
55		ZSEE037	OVL	PRODOLD	84/10/09.
56					
57					
58					
59					
60					

RECORD	TYPE	FILE	DATE	COMMENT
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ZSEE038	OVL	PRODOLD	84/10/09.	
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ZSEE039	OVL	PRODOLD	84/10/09.	
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ZSEE03A	OVL	PRODOLD	84/10/09.	
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ZSEE03B	OVL	PRODOLD	84/10/09.	
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ZSEE03C	OVL	PRODOLD	84/10/09.	
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ZSEE03D	OVL	PRODOLD	84/10/09.	
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ZSEE03E	OVL	PRODOLD	84/10/09.	
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SEMSG	ABS	PRODOLD	80/03/03.	CONDITIONALLY WRITE MESSAGE TO FILE
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EXTRACT	ABS	PRODOLD	80/04/08.	
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ACQUIRE	ABS	PRODOLD	80/06/02.	
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EDT	ABS	PRODOLD	84/10/05.	
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CCTCPIO	ULIB	PRODOLD	24/05/19.	
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HTF	ABS	PRODOLD	24/05/19.	
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NBF	ABS	PRODOLD	24/05/19.	
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NSQUERY	ABS	PRODOLD	24/05/19.	
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REXEC	ABS	PRODOLD	24/05/19.	
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REXEC	ABS	PRODOLD	24/05/19.	
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REXEC	ABS	PRODOLD	24/05/19.	
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REXEC	ABS	PRODOLD	24/05/19.	
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PIP	PP	PRODOLD	24/05/24.	PIP - RHP/PRU INTERFACE DRIVER FOR FRONT ENDS 79/12/01.
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1IL	PP	PRODOLD	24/05/24.	1IL/PIP - RHP/PRU INTERFACE DRIVER NPU I/O SUPPORT.
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1IP	PP	PRODOLD	24/05/24.	1IP/PIP - RHP/PRU INTERFACE DRIVER MDI I/O SUPPORT.
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3IL	PP	PRODOLD	24/05/24.	3IL/PIP - RHP/PRU INTERFACE DRIVER SUPPORT/COMMAND PROCESSORS.
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2IQ	PP	PRODOLD	24/05/24.	2IQ/PIP - RHP/PRU INTERFACE DRIVER STATE/COMMAND PROCESSORS.
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3IQ	PP	PRODOLD	24/05/24.	3IQ/PIP - RHP/PRU INTERFACE DRIVER COMMAND/SUPPORT PROCESSORS.
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4IQ	PP	PRODOLD	24/05/24.	4IQ/PIP - RHP/PRU INTERFACE DRIVER COMMAND PROCESSORS.
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5IQ	PP	PRODOLD	24/05/24.	5IQ/PIP - RHP/PRU INTERFACE DRIVER COMMAND PROCESSORS.
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2IP	PP	PRODOLD	24/05/24.	2IP/PIP - RHP/PRU INTERFACE DRIVER COMMAND PROCESSORS.
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3IP	PP	PRODOLD	24/05/24.	3IP/PIP - RHP/PRU INTERFACE DRIVER WORKLIST PROCESSORS.
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4IP	PP	PRODOLD	24/05/24.	4IP/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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2IM	PP	PRODOLD	24/05/24.	2IM/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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3IM	PP	PRODOLD	24/05/24.	3IM/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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4IM	PP	PRODOLD	24/05/24.	4IM/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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2IO	PP	PRODOLD	24/05/24.	2IO/PIP - RHP/PRU INTERFACE DRIVER A-A PROCESSORS.
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3IO	PP	PRODOLD	24/05/24.	3IO/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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4IO	PP	PRODOLD	24/05/24.	4IO/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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5IO	PP	PRODOLD	24/05/24.	5IO/PIP - RHP/PRU INTERFACE DRIVER SUPPORT PROCESSORS.
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1IE	PP	PRODOLD	24/05/24.	1IE/PIP - RHP/PRU INTERFACE DRIVER TERMINATION.
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2IE	PP	PRODOLD	24/05/24.	2IE/PIP - RHP/PRU INTERFACE DRIVER ERROR PROCESSORS.
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3IE	PP	PRODOLD	24/05/24.	3IE/PIP - RHP/PRU INTERFACE DRIVER ERROR PROCESSORS.
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4IE	PP	PRODOLD	24/05/24.	4IE/PIP - RHP/PRU INTERFACE DRIVER DIAGNOSTICS.
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2PE	PP	PRODOLD	24/05/24.	2PE/PIP - RHP/PRU INTERFACE DRIVER ERROR STATUS.
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0IP	PP	PRODOLD	24/05/24.	0IP/PIP - RHP/PRU INTERFACE DRIVER CONTROL TABLES.
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2IN	PP	PRODOLD	24/05/24.	2IN/PIP - RHP/PRU INTERFACE DRIVER DRIVER INITIALIZATION.
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3IN	PP	PRODOLD	24/05/24.	3IN/PIP - RHP/PRU INTERFACE DRIVER PRESET MAIN DRIVER.
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NETTEXT	OVL	PRODOLD	24/05/24.	
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NIP	ABS	PRODOLD	24/05/24.	BPSY
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NIPPRIM	OVL	PRODOLD	24/05/24.	BSY
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BLDACB	OVL	PRODOLD	24/05/24.	BSY
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BLDLLCB	OVL	PRODOLD	24/05/24.	BSY
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COMPCON	OVL	PRODOLD	24/05/24.	BSY
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HFNTSM	OVL	PRODOLD	24/05/24.	BSY
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HCACRQA	OVL	PRODOLD	24/05/24.	BSY
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HCNONFL	OVL	PRODOLD	24/05/24.	BSY
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HCONCBU	OVL	PRODOLD	24/05/24.	BSY
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RECORD TYPE FILE DATE COMMENT

HCONEND OVL PRODOLD 24/05/24. BSY
HCRCBU OVL PRODOLD 24/05/24. BSY
HCRIAPR OVL PRODOLD 24/05/24. BSY
HCRRCNR OVL PRODOLD 24/05/24. BSY
HCRTRMN OVL PRODOLD 24/05/24. BSY
HCSUPCB OVL PRODOLD 24/05/24. BSY
HLGLERR OVL PRODOLD 24/05/24. BSY
HPGTF OVL PRODOLD 24/05/24. BSY
HPNONAP OVL PRODOLD 24/05/24. BSY
HPNONSr OVL PRODOLD 24/05/24. BSY
HPSHISD OVL PRODOLD 24/05/24. BSY
HPRUONX OVL PRODOLD 24/05/24. BSY
HSFCBRK OVL PRODOLD 24/05/24. BSY
HSFCINA OVL PRODOLD 24/05/24. BSY
HSINITR OVL PRODOLD 24/05/24. BSY
HSINTRU OVL PRODOLD 24/05/24. BSY
HSWACNB OVL PRODOLD 24/05/24. BSY
HTCHAR OVL PRODOLD 24/05/24. BSY
INIPD OVL PRODOLD 24/05/24. BSY
KAPIGP OVL PRODOLD 24/05/24. BSY
KAPPMOD OVL PRODOLD 24/05/24. BSY
KCHANGE OVL PRODOLD 24/05/24. BSY
KDISRC OVL PRODOLD 24/05/24. BSY
KSTPAGE OVL PRODOLD 24/05/24. BSY
KHOPDIS OVL PRODOLD 24/05/24. BSY
KNAMCOM OVL PRODOLD 24/05/24. BSY
KNAMMOD OVL PRODOLD 24/05/24. BSY
KNAMDFL OVL PRODOLD 24/05/24. BSY
KPCLNUP OVL PRODOLD 24/05/24. BSY
KPTRACE OVL PRODOLD 24/05/24. BSY
KSTTUPD OVL PRODOLD 24/05/24. BSY
KSENDHM OVL PRODOLD 24/05/24. BSY
NBADBSN OVL PRODOLD 24/05/24. BSY
NCREGCP OVL PRODOLD 24/05/24. BSY
NICNTEA OVL PRODOLD 24/05/24. BSY
NICTEAX OVL PRODOLD 24/05/24. BSY
NNPIIN OVL PRODOLD 24/05/24. BSY
NPBRK OVL PRODOLD 24/05/24. BSY
NPREGCN OVL PRODOLD 24/05/24. BSY
NPRLB OVL PRODOLD 24/05/24. BSY
NTCNTAN OVL PRODOLD 24/05/24. BSY
NTCNTAR OVL PRODOLD 24/05/24. BSY
ODAYFL OVL PRODOLD 24/05/24. BSY
OSCPSI OVL PRODOLD 24/05/24. BSY
RELACB OVL PRODOLD 24/05/24. BSY
RELLLCB OVL PRODOLD 24/05/24. BSY
RELNCNB OVL PRODOLD 24/05/24. BSY
SENDACC OVL PRODOLD 24/05/24. BSY
STPHERR OVL PRODOLD 24/05/24. BSY
STPNERR OVL PRODOLD 24/05/24. BSY
STRTSW OVL PRODOLD 24/05/24. BSY
UPACNB4 OVL PRODOLD 24/05/24. BSY
UPDNCNB OVL PRODOLD 24/05/24. BSY
XENDNAM OVL PRODOLD 24/05/24. BSY
XERRMSG OVL PRODOLD 24/05/24. BSY

	RECORD	TYPE	FILE	DATE	COMMENT	
	XSAPPD	OV	PROD	24/05/24.	BSY	
1	HAPFAIL	OV	PROD	24/05/24.	BSY	1
2	HCHGICT	OV	PROD	24/05/24.	BSY	2
3	HDCSTMR	OV	PROD	24/05/24.	BSY	3
4	HDCTRU	OV	PROD	24/05/24.	BSY	4
5	HFSPAWN	OV	PROD	24/05/24.	BSY	5
6	HLSTD	OV	PROD	24/05/24.	BSY	6
7	HLONOFF	OV	PROD	24/05/24.	BSY	7
8	HPDBGST	OV	PROD	24/05/24.	BSY	8
9	HPFL	OV	PROD	24/05/24.	BSY	9
10	HPKDISP	OV	PROD	24/05/24.	BSY	10
11	HPNOFF	OV	PROD	24/05/24.	BSY	11
12	HPNOFFN	OV	PROD	24/05/24.	BSY	12
13	HPNON	OV	PROD	24/05/24.	BSY	13
14	HPNONVF	OV	PROD	24/05/24.	BSY	14
15	HPNONSA	OV	PROD	24/05/24.	BSY	15
16	HPNPDR	OV	PROD	24/05/24.	BSY	16
17	HPRUON	OV	PROD	24/05/24.	BSY	17
18	HPRUSM	OV	PROD	24/05/24.	BSY	18
19	HPUTF	OV	PROD	24/05/24.	BSY	19
20	HVLLCB	OV	PROD	24/05/24.	BSY	20
21	KADD	OV	PROD	24/05/24.	BSY	21
22	KDEL	OV	PROD	24/05/24.	BSY	22
23	KPTYPIN	OV	PROD	24/05/24.	BSY	23
24	KOVDIS	OV	PROD	24/05/24.	BSY	24
25	KRIGHT	OV	PROD	24/05/24.	BSY	25
26	KRIGHTD	OV	PROD	24/05/24.	BSY	26
27	MSETPTR	OV	PROD	24/05/24.	BSY	27
28	NGIGO	OV	PROD	24/05/24.	BSY	28
29	NLOIP	OV	PROD	24/05/24.	BSY	29
30	NPESTOF	OV	PROD	24/05/24.	BSY	30
31	NPHECP	OV	PROD	24/05/24.	BSY	31
32	NPHOPMS	OV	PROD	24/05/24.	BSY	32
33	NPICMD	OV	PROD	24/05/24.	BSY	33
34	NPININD	OV	PROD	24/05/24.	BSY	34
35	NPISM	OV	PROD	24/05/24.	BSY	35
36	NPNPIDD	OV	PROD	24/05/24.	BSY	36
37	NPPCT	OV	PROD	24/05/24.	BSY	37
38	NPPSM	OV	PROD	24/05/24.	BSY	38
39	NPREGCP	OV	PROD	24/05/24.	BSY	39
40	NPREGLL	OV	PROD	24/05/24.	BSY	40
41	NPREGHH	OV	PROD	24/05/24.	BSY	41
42	NPREGST	OV	PROD	24/05/24.	BSY	42
43	NRPWL	OV	PROD	24/05/24.	BSY	43
44	NTOTBTS	OV	PROD	24/05/24.	BSY	44
45	XABTAPP	OV	PROD	24/05/24.	BSY	45
46	XCHKABC	OV	PROD	24/05/24.	BSY	46
47	XCHKCET	OV	PROD	24/05/24.	BSY	47
48	XCHKPCR	OV	PROD	24/05/24.	BSY	48
49	XENDRPV	OV	PROD	24/05/24.	BSY	49
50	XNBRLC	OV	PROD	24/05/24.	BSY	50
51	XSAPP	OV	PROD	24/05/24.	BSY	51
52	INIP	OV	PROD	24/05/24.	BSY	52
53	KDSTIN	OV	PROD	24/05/24.	BSY	53
54	MGBGCLT	OV	PROD	24/05/24.	BSY	54
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RECORD	TYPE	FILE	DATE	COMMENT
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STRTCN	OVL	PRODOLD	24/05/24.	BSY
DLFP	ABS	PRODOLD	24/05/24.	BPSY
LISTPPM	ABS	PRODOLD	24/05/24.	LISTPPM - LIST PERIPHERAL PROCESSOR MEMORY DUMP.
NDLP	ABS	PRODOLD	24/05/24.	NDLP OVERLAY(0,0)
INITOVL	OVL	PRODOLD	24/05/24.	INITIALISATION(1,0)
PSS1OVL	OVL	PRODOLD	24/05/24.	PASS 1 OVERLAY (2,0)
NCFOVLY	OVL	PRODOLD	24/05/24.	NCF OVERLAY(3,0)
NETOVLY	OVL	PRODOLD	24/05/24.	NETWORK OVERLAY(3,1)
COMOVLY	OVL	PRODOLD	24/05/24.	COMMUNICATION(3,2)
NTRMOVL	OVL	PRODOLD	24/05/24.	NET TERM OVERLAY(3,3)
LCFOVLY	OVL	PRODOLD	24/05/24.	LCF OVERLAY(4,0)
LISTOVL	OVL	PRODOLD	24/05/24.	LIST OVERLAY(5,0)
LFG	ABS	PRODOLD	24/05/24.	LFG - NETWORK LOAD FILE GENERATOR
NDA	ABS	PRODOLD	24/05/24.	NDA - NPU DUMP ANALYZER
NS	ABS	PRODOLD	24/05/24.	NS NETWORK SUPERVISOR
NSIOVLY	OVL	PRODOLD	24/05/24.	NS INITIALIZATION OVERLAY (1,0)
CRAOVLY	OVL	PRODOLD	24/05/24.	NS CONTROL STATEMENT CRACKER OVERLAY (1,1)
NONOVLY	OVL	PRODOLD	24/05/24.	NS NETON PROCESSOR OVERLAY (1,2)
BNCTOVL	OVL	PRODOLD	24/05/24.	NS BUILD NODE CONNECTION TABLE OVERLAY (1,3)
BNPTOVL	OVL	PRODOLD	24/05/24.	NS BUILD NPU TABLE OVERLAY (1,4)
IDNOVLY	OVL	PRODOLD	24/05/24.	NS NPU DUMP INDEX INITIALIZER OVERLAY (1,5)
HSMOVLY	OVL	PRODOLD	24/05/24.	NS HOST INTERFACE OVERLAY (2,0)
BRKOVLY	OVL	PRODOLD	24/05/24.	NS HOP BREAK PROCESSOR OVERLAY (2,1)
ENDOVLY	OVL	PRODOLD	24/05/24.	NS HOP END PROCESSOR OVERLAY (2,2)
HCPOVLY	OVL	PRODOLD	24/05/24.	NS HOP COMMAND PROCESSOR OVERLAY (2,3)
HFIOVLY	OVL	PRODOLD	24/05/24.	NS FILE COMMAND PROCESSOR OVERLAY (2,4)
HHIOVLY	OVL	PRODOLD	24/05/24.	NS HISTORY COMMAND PROCESSOR OVERLAY (2,5)
HNOOVLY	OVL	PRODOLD	24/05/24.	NS NOFILE COMMAND PROCESSOR OVERLAY (2,6)
HSTOVLY	OVL	PRODOLD	24/05/24.	NS STATUS COMMAND PROCESSOR OVERLAY (2,7)
KDDOVLY	OVL	PRODOLD	24/05/24.	NS K DISPLAY DIAGNOSTIC OVERLAY (2,8)
PAGOVLY	OVL	PRODOLD	24/05/24.	NS HOP PAGE PROCESSOR OVERLAY (2,9)
PCMOVLY	OVL	PRODOLD	24/05/24.	NS PROGRAM COMMAND PROCESSOR OVERLAY (2,10)
STROVLY	OVL	PRODOLD	24/05/24.	NS HOP START PROCESSOR OVERLAY (2,11)
MKDOVLY	OVL	PRODOLD	24/05/24.	NS K DISPLAY MANAGER OVERLAY (3,0)
DAROVLY	OVL	PRODOLD	24/05/24.	NS NPU ABNORMAL RESP PROCESSOR OVERLAY (4,0)
ERROVLY	OVL	PRODOLD	24/05/24.	NS ERROR PROCESSOR (5,0)
N00OVLY	OVL	PRODOLD	24/05/24.	NS LOAD REQUEST PROCESSOR OVERLAY
N04OVLY	OVL	PRODOLD	24/05/24.	NS NDCB RESPONSE PROCESSOR OVERLAY
TVF1	ABS	PRODOLD	24/05/24.	BES
NAMI	ABS	PRODOLD	24/05/24.	BES
COLLECT	ABS	PRODOLD	24/05/24.	BES
CS	ABS	PRODOLD	24/05/24.	BEPSY
CSLSIT	OVL	PRODOLD	24/05/24.	BESY
CSLEVT	OVL	PRODOLD	24/05/24.	BESY
CSLOIO	OVL	PRODOLD	24/05/24.	BESY
CSLCMR	OVL	PRODOLD	24/05/24.	BESY
CSLCMP	OVL	PRODOLD	24/05/24.	BESY
CSLOSS	OVL	PRODOLD	24/05/24.	BESY
NVF	ABS	PRODOLD	24/05/24.	BEPSY
NVFLAAC	OVL	PRODOLD	24/05/24.	BESY
NVFLAEP	OVL	PRODOLD	24/05/24.	BESY
NVFLIAP	OVL	PRODOLD	24/05/24.	BESY
NVFLOPC	OVL	PRODOLD	24/05/24.	BESY
NVFLOPE	OVL	PRODOLD	24/05/24.	BESY
NVFLRAP	OVL	PRODOLD	24/05/24.	BESY

RECORD TYPE FILE DATE COMMENT

NVFLSIT OVL PRODOLD 24/05/24. BESY

IPPLIB ULIB PRODOLD 24/05/24.

LFGLIB ULIB PRODOLD 24/05/24.

NDLPLIB ULIB PRODOLD 24/05/24.

EXECLIB ULIB PRODOLD 24/05/24.

ADDED CDCM ABS TPROD 24/05/28. CDCM V1.0 - CHECK DANGEROUS CODE MODIFICATION.

ADDED COMPASS ABS TPROD 24/05/28. CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.

ADDED COMP3\$ OVL TPROD 24/05/28. CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.

ADDED COMP3\$A OVL TPROD 24/05/28. CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.

ADDED AIDTEXT OVL TPROD 24/05/28.

ADDED NADTEXT OVL TPROD 24/05/28.

ADDED PRODUCT OPLD ***** 24/05/28.

EOF PRODOLD

RECORD TYPE FILE DATE COMMENT

1		SRT5LIB	TEXT	DIRFOLD	
2	REPLACED	SYSLIB	TEXT	TDIR	
3		SYMLIB	TEXT	DIRFOLD	
4		FTN5LIB	TEXT	DIRFOLD	
5		FORTTRAN	TEXT	DIRFOLD	
6		SRVLIB	TEXT	DIRFOLD	
7		PFGLIB	TEXT	DIRFOLD	
8		PASCLIB	TEXT	DIRFOLD	
9		NVERELS	TEXT	DIRFOLD	
10		NETIO	TEXT	DIRFOLD	
11		NETIOD	TEXT	DIRFOLD	
12		NETXIO	TEXT	DIRFOLD	
13		NETXIOD	TEXT	DIRFOLD	
14		MACLIB	TEXT	DIRFOLD	
15		NFMLIB	TEXT	DIRFOLD	
16		BIT8LIB	TEXT	DIRFOLD	
17		SFLIB	TEXT	DIRFOLD	
18		QSFLIB	TEXT	DIRFOLD	
19		DMSLIB	TEXT	DIRFOLD	
20		BAMLIB	TEXT	DIRFOLD	
21		AAMLIB	TEXT	DIRFOLD	
22		TRANLIB	TEXT	DIRFOLD	
23		LCNLIB	TEXT	DIRFOLD	
24		COBOL5	TEXT	DIRFOLD	
25		MSAMLIB	TEXT	DIRFOLD	
26		RBF5	TEXT	DIRFOLD	
27		SES	TEXT	DIRFOLD	
28		CCTCPIO	TEXT	DIRFOLD	
29		NCCTCP	TEXT	DIRFOLD	
30		EXECLIB	TEXT	DIRFOLD	
31		NDLPLIB	TEXT	DIRFOLD	
32		LFGLIB	TEXT	DIRFOLD	
33		IPPLIB	TEXT	DIRFOLD	
34	ADDED	NAM5	TEXT	DIRFOLD	
35		CPS1	TEXT	TDIR	
36		**EOF**		DIRFOLD	
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RECORD	TYPE	FILE	DATE	COMMENT
REPLACED COMPASS	ABS	GTLGO	24/05/28.	CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.
REPLACED COMP3\$	OVL	GTLGO	24/05/28.	CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.
REPLACED COMP3\$A	OVL	GTLGO	24/05/28.	CYBER 70/ MODEL 835 COMPREHENSIVE ASSEMBLER PROGRAM VERSION 3.7-871.
REPLACED AIDTEXT	OVL	GTLGO	24/05/28.	
REPLACED NADTEXT	OVL	GTLGO	24/05/28.	
SYMPL	ABS	GLOBOLD	97/11/04.	PSR=871, PRD=SYMP, MFT=B, VAR=A
SYMP10	OVL	GLOBOLD	97/11/04.	
SYMP15	OVL	GLOBOLD	97/11/04.	
SYMP16	OVL	GLOBOLD	97/11/04.	
SYMP14	OVL	GLOBOLD	97/11/04.	
SYMP17	OVL	GLOBOLD	97/11/04.	
SYMP13	OVL	GLOBOLD	97/11/04.	
SYMP30	OVL	GLOBOLD	97/11/04.	
SYMP31	OVL	GLOBOLD	97/11/04.	
SYMP32	OVL	GLOBOLD	97/11/04.	
SYMP40	OVL	GLOBOLD	97/11/04.	
SYMP50	OVL	GLOBOLD	97/11/04.	
SYMP51	OVL	GLOBOLD	97/11/04.	
SYMP52	OVL	GLOBOLD	97/11/04.	
CATALOG	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. CATALOG - CATALOG FILE.
MODIFY	ABS	GLOBOLD	23/09/20.	82/02/26. 92/10/15. MODIFY - SOURCE LIBRARY EDITING PROGRAM.
KRONREF	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. KRONREF - SYSTEM CROSS REFERENCE PROGRAM.
OPLEDIT	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. OPLEDIT - OPL EDITING PROGRAM.
COPYB	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. COPYB - BINARY FILES COPIES.
GTR	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. GTR - GET SELECTED RECORDS.
LIBEDIT	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. LIBEDIT - LIBRARY EDITING PROGRAM.
LIBGEN	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. LIBGEN - GENERATE USER LIBRARY.
VERIFY	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. VERIFY - VERIFY FILES.
VFYLIB	ABS	GLOBOLD	23/09/20.	82/02/26. 92/09/17. VFYLIB - VERIFY LIBRARY FILES.
UPDATE	ABS	GLOBOLD	97/11/04.	PSR=871, PRD=UPD1, MFT=A, VAR=A
COPYL	ABS	GLOBOLD	97/11/04.	MERGE RECORDS FROM MASTER AND CORR. FILES.
ITEMIZE	ABS	GLOBOLD	97/11/04.	LIST CONTENTS OF A BINARY FILE.
LDRCNTL	ABS	GLOBOLD	97/11/04.	
LOADU	ABS	GLOBOLD	97/11/04.	USER-CALL LOADER (L 871).
LOADER	ABS	GLOBOLD	97/11/04.	PSR=871, PRD=LDR1, MFT=B, VAR=B
LOADC	OVL	GLOBOLD	97/11/04.	LOADER - PROCESS CARD IMAGES.
LOADG	OVL	GLOBOLD	97/11/04.	LOADER - GENERATE OVERLAYS.
LOADS	OVL	GLOBOLD	97/11/04.	LOADER - GENERATE SEGMENT LOAD.
LOADZ	OVL	GLOBOLD	97/11/04.	LOADER - RESUME OVERLAY GENERATION.
LOADM	OVL	GLOBOLD	97/11/04.	LOADER - WRITE LOAD MAP.
RECLAIM	ABS	GLOBOLD	23/09/20.	88/01/20. 96/06/05. RECLAIM - PERMANENT FILE DUMP/LOAD UTILITY
TDUEX	ABS	GLOBOLD	97/11/04.	PSR=871, PRD=TDU1, MFT=A, VAR=A
LOADUC	OVL	GLOBOLD	97/11/04.	LOADU - PROCESS CARD IMAGES.
LOADUM	OVL	GLOBOLD	97/11/04.	LOADU - WRITE LOAD MAP.
TRAP	OVL	GLOBOLD	97/11/04.	
SEGRES	OVL	GLOBOLD	97/11/04.	SEGMENT LOADER RESIDENT.
LDRTEXT	OVL	GLOBOLD	97/11/04.	LOADER REQUEST SYSTEM MACROS.
PSSTEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. PSSTEXT - PRODUCT SET SUPPORT MACROS.
NOSTEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. NOSTEXT - SYSTEM COMMUNICATION TEXT.
SYSTEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. SYSTEXT - SYSTEM MACROS.
SSYTEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. SSYTEXT - SYSTEM CONTROL POINT TEXT.
PPTEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. PPTEXT - SYSTEM PP TEXT.
CETEXT	OVL	GLOBOLD	23/09/20.	82/02/26. 92/09/17. CETEXT - ENGINEERING SUPPORT TEXT.
CTITEXT	OVL	GLOBOLD	86/08/21.	PSR=871, PRD=CTI0, MFT=C, VAR=A
NETTEXT	OVL	GLOBOLD	24/05/24.	

RECORD	TYPE	FILE	DATE	COMMENT
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IOTEXT	OVL	GLOBOLD	97/11/04.	
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SYSGEN	PROC	GLOBOLD		
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PDU	PROC	GLOBOLD		
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TDU	PROC	GLOBOLD		
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ULIB	PROC	GLOBOLD		
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PANEL	ABS	GLOBOLD	97/11/05.	PSR=871,PRD=NOSB,MFT=A,VAR=A
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UPSTRT	ABS	GLOBOLD	97/11/05.	PROGRAMOPT=2,ROUND= A/ S/ M/-D ARG=UNSPEC
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PASCAL	ABS	GLOBOLD	97/11/04.	PSR=871,PRD=PASC,MFT=A,VAR=A
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NETITF	ABS	GLOBOLD	97/11/05.	BPSY
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NETPLM	ABS	GLOBOLD	97/11/05.	BSY
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NETFM	ABS	GLOBOLD	97/11/05.	PSR=871,PRD=CHA1,MFT=B,VAR=A
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MNFMOVL	OVL	GLOBOLD	97/11/05.	NETFM MAIN OVERLAY
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SORTOVL	OVL	GLOBOLD	97/11/05.	NETFM SORT OVERLAY
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NETBDF	ABS	GLOBOLD	97/11/05.	BPSY
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NETMDF	ABS	GLOBOLD	97/11/05.	BPSY
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NETRDF	ABS	GLOBOLD	97/11/05.	BPSY
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FCOPY	ABS	GLOBOLD	23/09/20.	84/07/09. 92/10/20. FCOPY - FILE COPY.
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NDLP	ABS	GLOBOLD	24/05/24.	NDLP OVERLAY(0,0)
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INITOVL	OVL	GLOBOLD	24/05/24.	INITIALISATION(1,0)
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PSS1OVL	OVL	GLOBOLD	24/05/24.	PASS 1 OVERLAY (2,0)
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NCFOVLY	OVL	GLOBOLD	24/05/24.	NCF OVERLAY(3,0)
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NETOVLY	OVL	GLOBOLD	24/05/24.	NETWORK OVERLAY(3,1)
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COMOVLY	OVL	GLOBOLD	24/05/24.	COMMUNICATION(3,2)
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NTRMOVL	OVL	GLOBOLD	24/05/24.	NET TERM OVERLAY(3,3)
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LCFOVLY	OVL	GLOBOLD	24/05/24.	LCF OVERLAY(4,0)
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LISTOVL	OVL	GLOBOLD	24/05/24.	LIST OVERLAY(5,0)
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LFG	ABS	GLOBOLD	24/05/24.	LFG - NETWORK LOAD FILE GENERATOR
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NPA	PROC	GLOBOLD		
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MANCC	PROC	GLOBOLD		
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ANACD	PROC	GLOBOLD		
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TXTCRM	OVL	GLOBOLD	97/11/04.	
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SPPTXT	OVL	GLOBOLD	97/11/04.	PPU PROGRAM SYSTEM TEXT.
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FCLTEXT	OVL	GLOBOLD	97/11/05.	PSR=871,PRD=FCL4,MFT=B,VAR=A
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FCL5TXT	OVL	GLOBOLD	97/11/05.	PSR=871,PRD=FCL5,MFT=B,VAR=A
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PFMTXT	OVL	GLOBOLD	97/11/04.	PSR=871,PRD=TXIO,MFT=B,VAR=A
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CPCTEXT	OVL	GLOBOLD	97/11/04.	SYSTEM TEXT FOR CPU PROGRAMS USING *CPC*.
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CPUTEXT	OVL	GLOBOLD	97/11/04.	SYSTEM TEXT FOR CPU PROGRAMS USING MACE I/O.
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IPTEXT	OVL	GLOBOLD	97/11/04.	PSR=871,PRD=TEXT,MFT=B,VAR=A
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SCPTXT	OVL	GLOBOLD	97/11/04.	SYSTEM TEXT.
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MATHTXT	OVL	GLOBOLD	97/11/05.	MACROS FOR MATH LIBRARY.
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FTN5	ABS	GLOBOLD	97/11/05.	PSR=871,PRD=FTN5,MFT=B,VAR=A
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FTN510	OVL	GLOBOLD	97/11/05.	FTN5 PRIMARY OVERLAY FOR QCG.
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FTN520	OVL	GLOBOLD	97/11/05.	FTN5 PRIMARY OVERLAY FOR CCG.
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FTN521	OVL	GLOBOLD	97/11/05.	FTN5 FRONT END OVERLAY FOR CCG.
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FTN522	OVL	GLOBOLD	97/11/05.	COMMON CODE GENERATOR OVERLAY.
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FTN523	OVL	GLOBOLD	97/11/05.	FTN5 REAR END OVERLAY FOR CCG.
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COB0L5	ABS	GLOBOLD	97/11/06.	PSR=871,PRD=COB5,MFT=B,VAR=A
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COB5010	OVL	GLOBOLD	97/11/06.	
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COB5020	OVL	GLOBOLD	97/11/06.	
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COB5021	OVL	GLOBOLD	97/11/06.	
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COB5022	OVL	GLOBOLD	97/11/06.	
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COB5023	OVL	GLOBOLD	97/11/06.	
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COB5050	OVL	GLOBOLD	97/11/06.	
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COB5060	OVL	GLOBOLD	97/11/06.	
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COB5070	OVL	GLOBOLD	97/11/06.	
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	RECORD	TYPE	FILE	DATE	COMMENT
	COB5071	OVL	GLOBOLD	97/11/06.	
1	COB5072	OVL	GLOBOLD	97/11/06.	
2	COB5110	OVL	GLOBOLD	97/11/06.	
3	COB5120	OVL	GLOBOLD	97/11/06.	
4	COB5121	OVL	GLOBOLD	97/11/06.	
5	COB5122	OVL	GLOBOLD	97/11/06.	
6	COB5123	OVL	GLOBOLD	97/11/06.	
7	COB5125	OVL	GLOBOLD	97/11/06.	
8	COB5126	OVL	GLOBOLD	97/11/06.	
9	COB5127	OVL	GLOBOLD	97/11/06.	
10	COB5140	OVL	GLOBOLD	97/11/06.	
11	COB5160	OVL	GLOBOLD	97/11/06.	
12	COB5200	OVL	GLOBOLD	97/11/06.	
13	COB5201	OVL	GLOBOLD	97/11/06.	
14	COB5202	OVL	GLOBOLD	97/11/06.	
15	COB5203	OVL	GLOBOLD	97/11/06.	
16	COB5204	OVL	GLOBOLD	97/11/06.	
17	COB5205	OVL	GLOBOLD	97/11/06.	
18	COB5300	OVL	GLOBOLD	97/11/06.	
19	COB5301	OVL	GLOBOLD	97/11/06.	
20	FTN	ABS	GLOBOLD	97/11/05.	PSR=871,PRD=FTI4,MFT=B,VAR=A
21	FTN10	OVL	GLOBOLD	97/11/05.	FTN4 TS COMPILER
22	FTN20	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - BATCH CONTROLLER
23	FTN23	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - ERROR MSG PROCESSING (PASS 1B)
24	FTN21	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - PASS 1(NO DEBUG)
25	FTN25	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - PASS 3(REF MAP/ASSEMBLY)
26	FTN22	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - PASS 2 - RLIST OPTIMIZER
27	FTN24	OVL	GLOBOLD	97/11/05.	FTN4 OPT COMPILER - DEBUG PASS 1
28	FILE	ABS	GLOBOLD	97/11/04.	CRM FILE CONTROL CARD PROCESSOR
29	ADDED CDCM	ABS	GTLGO	24/05/28.	CDCM V1.0 - CHECK DANGEROUS CODE MODIFICATION.
30	ADDED GLOBLIB	OPLD	*****	24/05/28.	
31	**EOF**		GLOBOLD		
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19.14.37.COMPASS.
19.14.37.USER(INSTALL,,)
19.14.37.ABSC, B.
19.14.37.CHARGE(*)
19.14.37. DEFAULT CHARGE NULL.
19.14.37.*
19.14.37.*
19.14.37.RENAME(ZZZPROC=INPUT)
19.14.37.BEGIN(SUBPROC,INSTALL,COMPAS,S,OUTPUT,FULL,NO,PRINT,NONE,,
19.14.37.JOBTYPE=NORM)
19.14.38.* LEVEL 871
19.14.38.IFE( OT .EQ. TXO .AND. $NO$ .EQ. $YES$,RUNIA)
19.14.38.ENDIF(RUNIA)
19.14.38.IFE( OT .NE. BCO .AND. $NO$ .NE. $YES$,SUBMIT)
19.14.38.ENDIF(SUBMIT)
19.14.38.RETURN(USERCHG,USERCG,LGO,NEW,OLD,PFGFILE,IAESMD,GLOBLGO)
19.14.38.BEGIN(STARTUP,INSTALL,COMPAS,S,OUTPUT,NO,PRINT,NONE,) NULL PROC.
19.14.38.REVERT.
19.14.38.*START COMPASS
19.14.38.*START UP TIME *****
19.14.39.SET(EF=0)
19.14.39.SET(EFG=0)
19.14.39.SETTL(*)
19.14.39. TL = UNLIMITED.
19.14.39.SETASL(*)
19.14.39. ASL = UNLIMITED, JSL = UNLIMITED.
19.14.39.SETJSL(*)
19.14.39. ASL = UNLIMITED, JSL = UNLIMITED.
19.14.39.RFL(55000)
19.14.39.WRITER(OUTPUT)
19.14.39.RETURN(ZZZJOB)
19.14.39.BEGIN(ATTGLOB,INSTALL)
19.14.39.* LEVEL 871
19.14.39.* ATTGLOB - ATTACH GLOBLIB
19.14.39.BEGIN(ACCESS,INSTALL,GLOBLIB)
19.14.40.REVERT(EX)CONVERT(MFT=R1G+)
19.14.40.CONVERT(MFT=R1G+)
19.14.40. BEGIN(ACCGLOB,INSTALL,M=R)
19.14.40.***** A C C G L O B *****
19.14.40. ATTACH(GLOBLIB=GLOBLIB)
19.14.40.RETURN(CONVERT)
19.14.40.REVERT. ACCGLOB *****
19.14.40.LIBRARY,GLOBLIB.
19.14.41.REVERT. ATTGLOB
19.14.41.MAP(FULL)
19.14.41.BEGIN(GETUSER,INSTALL,COMPAS,)
19.14.41.***** G E T U S E R *****
19.14.41.REVERT. GETUSER *****
19.14.41.RETURN(XMTPROC,XMTFILE)
19.14.41.NOTE(XMTPROC,NR)+.PROC,IAESMD.
19.14.41.NOTE(XMTPROC,NR)+REWIND(IAESMD)
19.14.41.NOTE(XMTPROC,NR)+SKIPF(IAESMD)
19.14.41.NOTE(XMTPROC,NR)+REVERT. IAESMD
19.14.42.NOTE(XMTPROC,NR)+EXIT. IAESMD
19.14.42.NOTE(XMTPROC,NR)+REVERT(ABORT) IAESMD
19.14.42.PACK(XMTPROC)
19.14.42. PACK COMPLETE.
19.14.42.BEGIN(COMPASS,ZZZPROC)
19.14.42.* LEVEL 871
19.14.42.BEGIN(PRDIN,INSTALL,PRDNAME=CPS1,PN=,PR=,DISK=0)
19.14.42.* LEVEL 871
19.14.42.* PRDIN - GET SOURCE PL FOR PRODUCT *CPS1*
19.14.42.***** P R D I N *****
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19.14.42.RETURN(0,OLDPL)
19.14.42.SET(R1=0)
19.14.42.*
19.14.42.* NOTE THAT IT FIRST TRIES TO FIND THE PL FROM
19.14.42.* THIS USER NUMBER, THEN IF NOT FOUND, TRIES TO
19.14.42.* RECLAIM IT FROM TAPE BUILT BY THE CUSTOMER; IF
19.14.42.* STILL NOT FOUND, WILL TRY TO RECLAIM IT FROM
19.14.42.* CDC'S DUMP TAPES.
19.14.42.*
19.14.42. ATTACH(CPS1=CPS1871/UN=0,PN=,R=,NA)
19.14.43. IF, FILE(CPS1, .NOT. AS) ,PRDIN20.
19.14.43. ENDIF(PRDIN20)
19.14.43.REWIND(CPS1)
19.14.43.IF, ( $NO$ .EQ. $YES$ ) .AND.
19.14.43. ( R1 .EQ. 1 ) ,PRDIN30.
19.14.43.ENDIF(PRDIN30)
19.14.43. COPY(CPS1,OLDPL)
19.14.44. EOI ENCOUNTERED.
19.14.44. EOI. 0 FILES; 49 RECORDS; 213319 WORDS.
19.14.44.REWIND(CPS1)
19.14.44.RETURN(RL)
19.14.44.REVERT. PRDIN *****
19.14.45.BEGIN(UP,INSTALL,RANDOM,PCPL=CPRD,PC=NO,CC=YES,PCDECK=CPS)
19.14.45.* LEVEL 871
19.14.45.* UP - UPDATE 'UPDATE' FORMATED PRODUCT PL'S.
19.14.45.* ***** U P *****
19.14.45.BEGIN(GETPC,INSTALL,PCDECK=CPS,PCPL=CPRD,PC=NO,CC=YES)
19.14.45.* LEVEL 871
19.14.45.* GETPC - GET PC AND CC TYPE CODE FROM CPRD.
19.14.45.* ***** G E T P C *****
19.14.45.RETURN(MODS,CMODS,CODEPL)
19.14.45.IFE($CPRD$.EQ.$CPRD$.OR.$CPRD$.EQ.$CNSP$,L00000)
19.14.45.ATTACH(CODEPL/NA)
19.14.45.ELSE(L00000)
19.14.45.ENDIF(L00000)
19.14.45.IF, FILE(CODEPL,AS) ,GETPC1.
19.14.46.IFE($YES$.EQ.$YES$,L00001)
19.14.46. NOTE(IN);/C,CCPS
19.14.46. UPDATE(P=CODEPL,Q,D,8,*=/,K=CMODS,I=IN)
19.14.46. UPDATE COMPLETE.
19.14.46. IFE(FILE(CMODS,AS),L00001)
19.14.46.ENDIF(L00001)
19.14.46.IFE($NO$.EQ.$YES$,L00003)
19.14.46.ENDIF(L00003)
19.14.46.UNLOAD(CODEPL)
19.14.46.ENDIF(GETPC1)
19.14.46.REVERT. GETPC *****
19.14.46.IFE(FILE(MODS,AS),L00003)
19.14.46.ELSE(L00003)
19.14.46. PACK(USER)
19.14.46. PACK COMPLETE.
19.14.47.IFE(FILE(MODS,AS),L00005)
19.14.47. ELSE(L00005)
19.14.47. RENAME(NEWPL=OLDPL)
19.14.47. ENDIF(L00005)
19.14.47. IFE(0.EQ.0,L00006)
19.14.47. UPDATE(P=NEWPL,F,I=USER,N=NEWER)
19.14.57. UPDATE COMPLETE.
19.14.57. ELSE(L00006)
19.14.57. ENDIF(L00006)
19.14.57.ENDIF(L00003)
19.14.57.*
19.14.57.RETURN(OLDPL,MODS)
19.14.57.REVERT. UP *****
19.14.57.RFL(65000)
19.14.57.COMPASS(A,I,S=PSSTEXT,S=IPTEXT,S=CPUTEXT,L=OUTPUT)
```

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19.15.04. ASSEMBLY COMPLETE.      60600B  CM USED.
19.15.04.      5.669  CPU SECONDS  ASSEMBLY TIME.
19.15.04.COMPASS(A,I,S=PSSTEXT,S=IPTEXT,S=CPUTEXT,L=OUTPUT)
19.15.23. ASSEMBLY COMPLETE.      72700B  CM USED.
19.15.23.      16.641 CPU SECONDS  ASSEMBLY TIME.
19.15.23.COMPASS(A,I,S=0,L=OUTPUT)  AIDTEXT
19.15.24. ASSEMBLY COMPLETE.      42000B  CM USED.
19.15.24.      0.064  CPU SECONDS  ASSEMBLY TIME.
19.15.24.COMPASS(A,I,S=0,L=OUTPUT)  NADTEXT
19.15.24. ASSEMBLY COMPLETE.      43000B  CM USED.
19.15.24.      0.186  CPU SECONDS  ASSEMBLY TIME.
19.15.24.*
19.15.24.* ASSEMBLE CDCM
19.15.24.*
19.15.24.COMPASS(A,I,S=PSSTEXT,S=IPTEXT,S=SPPTTEXT,S=SYSTEXT,L=OUTPUT)
19.15.27. ASSEMBLY COMPLETE.      72400B  CM USED.
19.15.27.      1.892  CPU SECONDS  ASSEMBLY TIME.
19.15.27.GTR(LGO,CDCMREL)REL/CDCM
19.15.27. EDITING COMPLETE.
19.15.27.BEGIN(GETULIB,INSTALL,SYSLIB)
19.15.28.BEGIN(ACCESS,INSTALL,PRODUCT)
19.15.28.REVERT(EX)CONVERT(MFT=R1G+)
19.15.28.CONVERT(MFT=R1G+)
19.15.28.      BEGIN(ACCPROD,INSTALL,M=R)
19.15.28.***** A C C P R O D *****
19.15.28.  ATTACH(PRODUCT=PRODUCT)
19.15.28.RETURN(CONVERT)
19.15.29.REVERT. ACCPROD *****
19.15.29.RETURN(SYSLIB,UUUNF,UUUNF,UUUNF,UUUNF,UUUNF)
19.15.29.GTR(PRODUCT,SYSLIB,U)ULIB/SYSLIB
19.15.30. EDITING COMPLETE.
19.15.30.IFE($UUUNF$.NE.$UUUNF$,GET)
19.15.30.ENDIF(GET)
19.15.30.UNLOAD(PRODUCT)
19.15.30.REVERT.      GETULIB.
19.15.30.LDSET(ERR=ALL,PRESET=ZERO)
19.15.30.LDSET(LIB=SYSLIB)
19.15.30.LOAD(CDCMREL)
19.15.30.NOGO(CDCMABS)
19.15.31.RETURN(CDCMREL)
19.15.31.REWIND(CDCMABS)
19.15.31.COPYBR(CDCMABS,BIN)
19.15.31. COPY COMPLETE.
19.15.31. END. 0 FILES; 1 RECORD; 6645 WORDS.
19.15.31.GTR(LGO,BIN)ABS/* ,OVL/*
19.15.31. EDITING COMPLETE.
19.15.31.GTR(LGO,LIB)REL/CPU.ARG-CPU.ZTB
19.15.31. EDITING COMPLETE.
19.15.31.RENAME(LGO=BIN)
19.15.32.RETURN(COMPILE)
19.15.32.BEGIN(SAVELIB,INSTALL,LIB=LIB,LIBNAME=SYSLIB)
19.15.32.***** S A V E L I B *****
19.15.32.BEGIN(UPXMT,INSTALL,LFN=LIB,PROC=UPLIB,
19.15.32.      PARAM=$,LIBNAME=SYSLIB,NX=0$)
19.15.32.REWIND(LIB)
19.15.32.COPYBF(LIB,XMTFILE)
19.15.32. EOI ENCOUNTERED.
19.15.32. EOI. 1 FILE; 31 RECORDS; 1866 WORDS.
19.15.32.EDIT(XMTPROC,I=ZZZZZIN,L=L)
19.15.32.RETURN(ZZZZZIN)
19.15.33.REVERT. UPXMT
19.15.33.REVERT. SAVELIB *****
19.15.33.REWIND(LGO)
19.15.33.COPYEI(LGO,GLOBLGO)
19.15.33. EOI ENCOUNTERED.
19.15.33. EOI. 0 FILES; 6 RECORDS; 19285 WORDS.
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19.15.33.BEGIN(GENDIR,INSTALL,LIB=20)
19.15.34.BEGIN(GENDIR2,INSTALL,LGO=LGO,DIR=$*ADD LIB20,$)
19.15.34.RETURN(ZZZZDIR)
19.15.34.REWIND(LGO)
19.15.34.GET(GDIR/NA)
19.15.34.IF, FILE(GDIR, .NOT. AS) ,GENDIR1.
19.15.34.ENDIF(GENDIR1)
19.15.34.GDIR(LGO,OP=DIR,L=ZZZZDIR)
19.15.35.ABS/CDCM-OVL/NADTEXT
19.15.35. GDIR COMPLETE.
19.15.35.EDIT(ZZZZDIR,I=ZZZZZIN,L=0)
19.15.35.SKIPEI(DSTDIR)
19.15.35.COPYEI(ZZZZDIR,DSTDIR)
19.15.35. EOI ENCOUNTERED.
19.15.35. EOI. 0 FILES; 1 RECORD; 4 WORDS.
19.15.35.RETURN(EXCAT,ZZZZZIN,ZZZZDIR)
19.15.35.REVERT. GENDIR2(LGO,*ADD LIB20,)
19.15.35.BEGIN(SAVELGO,INSTALL,PRDNAME=CPS1)
19.15.35.RETURN(IAESMD,ZZZZDIR,ZZZULIB)
19.15.35. GTR(LGO,ZZZULIB)ULIB/*
19.15.35. EDITING COMPLETE.
19.15.36. IF, FILE(ZZZULIB, AS) ,SAVELGO1.
19.15.36. ENDF(SAVELGO1)
19.15.36. NOTE(ZZZZDIR,NR)+CPS1
19.15.36. REWIND(DSTDIR)
19.15.36. COPYEI(DSTDIR,ZZZZDIR)
19.15.36. EOI ENCOUNTERED.
19.15.36. EOI. 0 FILES; 1 RECORD; 4 WORDS.
19.15.36. PACK(ZZZZDIR)
19.15.36. PACK COMPLETE.
19.15.36. BEGIN(UPXMT,INSTALL,LFN=LGO,PROC=UPPROD,PARAM=)
19.15.36.REWIND(LGO)
19.15.36.COPYBF(LGO,XMTFILE)
19.15.36. EOI ENCOUNTERED.
19.15.36. EOI. 1 FILE; 6 RECORDS; 19285 WORDS.
19.15.36.EDIT(XMTPROC,I=ZZZZZIN,L=L)
19.15.37.RETURN(ZZZZZIN)
19.15.37.REVERT. UPXMT
19.15.37. BEGIN(UPXMT,INSTALL,LFN=ZZZZDIR,PROC=UPDIR,PARAM=$,PRDNAME=CPS1$)
19.15.37.REWIND(ZZZZDIR)
19.15.37.COPYBF(ZZZZDIR,XMTFILE)
19.15.37. EOI ENCOUNTERED.
19.15.37. EOI. 1 FILE; 1 RECORD; 5 WORDS.
19.15.37.EDIT(XMTPROC,I=ZZZZZIN,L=L)
19.15.37.RETURN(ZZZZZIN)
19.15.37.REVERT. UPXMT
19.15.37.REWIND(XMTFILE,XMTPROC)
19.15.38.COPYBF(XMTPROC,IAESMD)
19.15.38. EOI ENCOUNTERED.
19.15.38. EOI. 1 FILE; 1 RECORD; 25 WORDS.
19.15.38.COPYEI(XMTFILE,IAESMD)
19.15.38. EOI ENCOUNTERED.
19.15.38. EOI. 3 FILES; 41 RECORDS; 21156 WORDS.
19.15.38.RETURN(ZZZULIB,XMTPROC,XMTFILE,DSTDIR,ZZZZDIR)
19.15.38.REVERT.***** SAVELGO
19.15.38.BEGIN(PRDOUT,INSTALL,PRDNAME=CPS1,PNO=,PRO=)
19.15.38.* LEVEL 871
19.15.38.* PRDOUT - WRITE OUTPUT PL FOR PRODUCT *CPS1*
19.15.38.***** P R D O U T *****
19.15.39.REVERT.*PRDOUT - NO OUTPUT SOURCE FILE WRITTEN.
19.15.39.BEGIN(END,INSTALL,MFT=R1G+)
19.15.39.SET(R3=R1G)
19.15.39.SET(R1G=0)
19.15.39.BEGIN(STARTIT,INSTALL)
19.15.39.RETURN(BLDLIBS)
19.15.39.NOTE(BLDLIBS,NR)+START+.PROC,BLDLIB*I.
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19.15.39.NOTE(BLDLIBS,NR)+END+REVERT.BLDLIB+EXIT.BLDLIB+REVERT(ABORT)BLDLIB
19.15.39.REWIND(BLDLIBS)
19.15.39.RETURN(DMPDIR,DSTDIR,OPLDIR,PFGDIR,BASEDST,DCNDIR)
19.15.40.REVERT. STARTIT
19.15.40.BEGIN(ACCESS,INSTALL,PRODUCT,M=W)
19.15.40.REVERT(EX)CONVERT(MFT=R1G+)
1 19.15.40.CONVERT(MFT=R1G+)
2 19.15.41. BEGIN(ACCPROD,INSTALL,M=W)
3 19.15.41.***** A C C P R O D *****
4 19.15.41. ATTACH(PRODLOC=PRODLOC/M=W,WB)
5 19.15.41. PURGE(PRODTMP/NA)
6 19.15.41. PRODTMP NOT FOUND.
7 19.15.41. RETURN(PRODTMP)
8 19.15.41. DEFINE(PRODTMP=PRODTMP/M=R,CT=S)
9 19.15.41. ATTACH(PRODOLD=PRODUCT)
10 19.15.41.RETURN(CONVERT)
11 19.15.41.REVERT. ACCPROD *****
12 19.15.42.BEGIN(,IAESMD)
13 19.15.42.REWIND(IAESMD)
14 19.15.42.SKIPF(IAESMD)
15 19.15.42.BEGIN(UPLIB,INSTALL,LIBNAME=SYSLIB,NX=0)
16 19.15.42.RETURN(ZZZTEST)
17 19.15.42.GTR(BLDLIBS,ZZZTEST,,,NA)SYSLIB
18 19.15.42. MISSING TEXT/SYSLIB
19 19.15.42. GTR ERRORS.
20 19.15.42.IF, FILE(ZZZTEST,.NOT. AS) ,UPLIB1.
21 19.15.42. RETURN(SYSLIB)
22 19.15.42. GTR(PRODOLD,SYSLIB,,,NA)ULIB/SYSLIB
23 19.15.43. EDITING COMPLETE.
24 19.15.43. LIBEDIT(P=BLDLIBS,B=ZZLIBIN,N=ZZZTEST,LO=E,Z)+*I,START,SYSLIB
25 19.15.44. EDITING COMPLETE.
26 19.15.44. RENAME(BLDLIBS=ZZZTEST)
27 19.15.44. LIBEDIT(P=TDIR,B=ZZDIRIN,N=ZZZTEST,LO=E,Z)+*B,*,SYSLIB
28 19.15.44. EDITING COMPLETE.
29 19.15.44. RENAME(TDIR=ZZZTEST)
30 19.15.44.ENDIF(UPLIB1)
31 19.15.44.*
32 19.15.44.* MERGE BINARIES INTO THE PROPER LIBRARY
33 19.15.44.*
34 19.15.44.RETURN(XXXTEMP)
35 19.15.44.COPYBF(IAESMD,XXXXLIB)
36 19.15.44. COPY COMPLETE.
37 19.15.44. END. 1 FILE; 31 RECORDS; 1866 WORDS.
38 19.15.44.LIBEDIT(P=SYSLIB,B=XXXXLIB,N=XXXTEMP,L=0,I=0)
39 19.15.45. EDITING COMPLETE.
40 19.15.45.RENAME(SYSLIB=XXXTEMP)
41 19.15.45.RETURN(ZZLIBIN,ZZDIRIN,ZZZTEST)
42 19.15.45.REVERT. UPLIB (SYSLIB)
43 19.15.45.BEGIN(UPPROD,INSTALL)
44 19.15.45. COPYBF(IAESMD,TPROD)
45 19.15.45. COPY COMPLETE.
46 19.15.45. END. 1 FILE; 6 RECORDS; 19285 WORDS.
47 19.15.45. BKSP(TPROD)
48 19.15.46.REVERT. UPPROD
49 19.15.46.BEGIN(UPDIR,INSTALL,PRDNAME=CPS1)
50 19.15.46.RETURN(ZZZTEMP)
51 19.15.46.COPYBF(IAESMD,ZZDIR)
52 19.15.46. COPY COMPLETE.
53 19.15.46. END. 1 FILE; 1 RECORD; 5 WORDS.
54 19.15.46.LIBEDIT(P=TDIR,B=ZZDIR,LO=E,N=ZZZTEMP,I=0)
55 19.15.46. EDITING COMPLETE.
56 19.15.46.RENAME(TDIR=ZZZTEMP)
57 19.15.46.RETURN(ZZDIR)
58 19.15.46.REVERT. UPDIR (CPS1)
59 19.15.46.REVERT. IAESMD
60 19.15.47.MODIFY(P=0,C=BLDLIB,Z,F,LO=E)/*CREATE,BLDLIBS/*NOSEQ
```



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19.15.47. MODIFICATION COMPLETE.
19.15.47. BLDLIB.
19.15.47. BEGIN(CRELIB,INSTALL,LIBNAME=SYSLIB,NX=0)
19.15.47. RETURN(ZZZLIB)
19.15.47. REWIND(SYSLIB)
19.15.47. LIBGEN(F=SYSLIB,P=ZZZLIB,N=SYSLIB,NX=0)
19.15.49. LIBRARY GENERATION COMPLETE.
19.15.49. REWIND(ZZZLIB)
19.15.49. COPYBF(ZZZLIB,TPROD)
19.15.49. COPY COMPLETE.
19.15.49. END. 1 FILE; 159 RECORDS; 18764 WORDS.
19.15.49. BKSP(TPROD)
19.15.49. RETURN(SYSLIB,ZZZLIB)
19.15.50. REVERT. CRELIB(SYSLIB)
19.15.50. REVERT. BLDLIB
19.15.50. IF, FILE(TPROD, AS) ,END1.
19.15.50.* UPDATE PRODUCT AND DIRFILE
19.15.50. LIBEDIT(P=PRODOLD,B=TPROD,I=0,N=PRODTMP)
19.16.01. EDITING COMPLETE.
19.16.01. BEGIN(ACCESS,INSTALL,PRODUCT,M=RETURN)
19.16.01. REVERT(EX) CONVERT(MFT=R1G+)
19.16.02. CONVERT(MFT=R1G+)
19.16.02. BEGIN(ACCPROD,INSTALL,M=RETURN)
19.16.02. ***** A C C P R O D *****
19.16.02. PURGE(PRODOLD/NA)
19.16.02. PRODOLD NOT FOUND.
19.16.02. RETURN(PRODTMP,PRODOLD)
19.16.02. CHANGE(PRODOLD=PRODUCT,PRODUCT=PRODTMP)
19.16.02. BEGIN(PERMIT,INSTALL,REALFN=PRODUCT,SYMFN=PRODUCT)
19.16.03.* LEVEL 871
19.16.03.***** P E R M I T *****
19.16.03. PERMIT(PRODUCT,NETADMN=R)
19.16.03. REVERT. PERMIT *****
19.16.03. PURGE(PRODOLD/NA)
19.16.03. RETURN(PRODLOC)
19.16.03. RETURN(CONVERT)
19.16.03. REVERT. ACCPROD *****
19.16.03. BEGIN(ACCESS,INSTALL,DIRFILE,M=W)
19.16.04. REVERT(EX) CONVERT(MFT=R1G+)
19.16.04. CONVERT(MFT=R1G+)
19.16.04. BEGIN(ACCDIRF,INSTALL,M=W)
19.16.04.***** A C C D I R F *****
19.16.04. ATTACH(DIRFLOC=DIRFLOC/M=W,WB)
19.16.04. PURGE(DIRFTMP/NA)
19.16.04. DIRFTMP NOT FOUND.
19.16.04. RETURN(DIRFTMP)
19.16.04. DEFINE(DIRFTMP=DIRFTMP/M=R)
19.16.04. ATTACH(DIRFOLD=DIRFILE)
19.16.05. RETURN(CONVERT)
19.16.05. REVERT. ACCDIRF *****
19.16.05. LIBEDIT(P=DIRFOLD,B=TDIR,I=0,N=DIRFTMP)
19.16.05. EDITING COMPLETE.
19.16.05. BEGIN(ACCESS,INSTALL,DIRFILE,M=RETURN)
19.16.06. REVERT(EX) CONVERT(MFT=R1G+)
19.16.06. CONVERT(MFT=R1G+)
19.16.06. BEGIN(ACCDIRF,INSTALL,M=RETURN)
19.16.06.***** A C C D I R F *****
19.16.06. PURGE(DIRFOLD/NA)
19.16.06. DIRFOLD NOT FOUND.
19.16.06. RETURN(DIRFTMP,DIRFOLD)
19.16.07. CHANGE(DIRFOLD=DIRFILE,DIRFILE=DIRFTMP)
19.16.07. PURGE(DIRFOLD/NA)
19.16.07. RETURN(DIRFLOC)
19.16.07. RETURN(CONVERT)
19.16.07. REVERT. ACCDIRF *****
19.16.07. RETURN(TPROD,TDIR)
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19.16.07.ELSE(END1)
19.16.07.ENDIF(END1)
19.16.07.IF, FILE(GLOBLGO,AS) ,END2.
19.16.07.* UPDATE GLOBLIB
19.16.07. RETURN(GTLGO)
19.16.07. GTR(GLOBLGO,GTLGO)ABS/*,REL/*,OVL/*,PROC/*
1 19.16.08. EDITING COMPLETE.
2 19.16.08. BEGIN(ACCESS,INSTALL,GLOBLIB,M=W)
3 19.16.08.REVERT(EX)CONVERT(MFT=R1G+)
4 19.16.08.CONVERT(MFT=R1G+)
5 19.16.09. BEGIN(ACCGLOB,INSTALL,M=W)
6 19.16.09.***** A C C G L O B *****
7 19.16.09. ATTACH(GLOBLOC=GLOBLOC/M=W,WB)
8 19.16.09. PURGE(GLOBTMP/NA)
9 19.16.09. GLOBTMP NOT FOUND.
10 19.16.09. RETURN(GLOBTMP)
11 19.16.09. DEFINE(GLOBTMP=GLOBTMP/M=R,CT=S)
12 19.16.09. ATTACH(GLOBOLD=GLOBLIB)
13 19.16.09.RETURN(CONVERT)
14 19.16.09.REVERT. ACCGLOB *****
15 19.16.09. LIBEDIT(P=GLOBOLD,B=GTLGO,U,N=GLOBTMP,Z)+*BUILD,GLOBLIB
16 19.16.14. EDITING COMPLETE.
17 19.16.28. LIBRARY GENERATION COMPLETE.
18 19.16.28. BEGIN(ACCESS,INSTALL,GLOBLIB,M=RETURN)
19 19.16.29.REVERT(EX)CONVERT(MFT=R1G+)
20 19.16.29.CONVERT(MFT=R1G+)
21 19.16.29. BEGIN(ACCGLOB,INSTALL,M=RETURN)
22 19.16.29.***** A C C G L O B *****
23 19.16.29. PURGE(GLOBOLD/NA)
24 19.16.29. GLOBOLD NOT FOUND.
25 19.16.29. RETURN(GLOBTMP,GLOBOLD)
26 19.16.29. CHANGE(GLOBOLD=GLOBLIB,GLOBLIB=GLOBTMP)
27 19.16.29. BEGIN(PERMIT,INSTALL,REALFN=GLOBLIB,SYMFN=GLOBLIB)
28 19.16.30.* LEVEL 871
29 19.16.30.***** P E R M I T *****
30 19.16.30. PERMIT(GLOBLIB,NETADMN=R,SYSTEMX=R)
31 19.16.30.REVERT. PERMIT *****
32 19.16.30. PURGE(GLOBOLD/NA)
33 19.16.30. RETURN(GLOBLOC)
34 19.16.30.RETURN(CONVERT)
35 19.16.30.REVERT. ACCGLOB *****
36 19.16.30. RETURN(NEW,GTLGO)
37 19.16.30.ELSE(END2)
38 19.16.30.ENDIF(END2)
39 19.16.31.SET(R1G=R3)
40 19.16.31.REVERT. END
41 19.16.31.REVERT. COMPASS.
42 19.16.31.RETURN(COMPASS,ZZZPROC,ZZZJOB,JSTATUS)
43 19.16.31.BEGIN(JOBPASS,INSTALL,COMPAS,S,OUTPUT,PRINT,NONE)
44 19.16.31.IFE,$COMPAS$.NE.$$AND.$PRINT$.EQ.$WAIT$,L00001.
45 19.16.31.ENDIF,L00001.
46 19.16.31.IFE,$OUTPUT$.EQ.$0$.OR.$COMPAS$.EQ.$$OR.$NONE$.EQ.$NONE$,L00002.
47 19.16.31. REVERT. JOBPASS. NO COMPASL FILE ROUTED.
48 19.16.31.NOTE(JSTATUS,NR);COMPASS; ;
49 19.16.32.SKIP(EXIT)
50 19.16.32.ENDIF(EXIT)
51 19.16.32.*END UP TIME *****
52 19.16.32.IF, ( R1G .EQ. 0 ) ,SUBPROC1.
53 19.16.32.BEGIN(JOBEND,INSTALL,COMPAS,S)
54 19.16.32.* LEVEL 871
55 19.16.32.***** J O B E N D *****
56 19.16.32.NOTE(JOBZZZZ,NR)+COMPASS
57 19.16.32.DAYFILE(JOBZZZZ,FR=$*START COMPASS$)
58 19.16.32. USER DAYFILE PROCESSED.
59 19.16.32.PACK(JOBZZZZ)
60 19.16.32. PACK COMPLETE.
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19.16.32.BEGIN(ACCESS,INSTALL,DAYFILS,M=W)
19.16.33.REVERT(EX)CONVERT(MFT=R1G+)
19.16.33.CONVERT(MFT=R1G+)
19.16.33.    BEGIN(ACCDAYF,INSTALL,M=W)
19.16.33.***** A C C D A Y F *****
19.16.33.    ATTACH(DAYFLOC=DAYFLOC/M=W,NA)
19.16.33.    IF, FILE(DAYFLOC, .NOT. AS) ,ACCDAYF3.
19.16.33.    ENDIF(ACCDAYF3)
19.16.33.    PURGE(DAYFTMP/NA)
19.16.33.    DAYFTMP NOT FOUND.
19.16.34.    RETURN(DAYFTMP)
19.16.34.    DEFINE(DAYFTMP=DAYFTMP/M=R)
19.16.34.    ATTACH(DAYFOLD=DAYFILS/NA)
19.16.34.    IF, FILE(DAYFOLD, .NOT. AS) ,ACCDAYF3.
19.16.34.    ENDIF(ACCDAYF3)
19.16.34.RETURN(CONVERT)
19.16.34.REVERT. ACCDAYF *****
19.16.34.NOTE(IN)+*B *,*
19.16.34.LIBEDIT(P=DAYFOLD,B=JOBZZZZ,L=0,I=IN,N=DAYFTMP)
19.16.35. EDITING COMPLETE.
19.16.35.BEGIN(ACCESS,INSTALL,DAYFILS,M=RETURN)
19.16.35.REVERT(EX)CONVERT(MFT=R1G+)
19.16.35.CONVERT(MFT=R1G+)
19.16.36.    BEGIN(ACCDAYF,INSTALL,M=RETURN)
19.16.36.***** A C C D A Y F *****
19.16.36.    PURGE(DAYFOLD/NA)
19.16.36.    DAYFOLD NOT FOUND.
19.16.36.    RETURN(DAYFTMP,DAYFOLD)
19.16.36.    CHANGE(DAYFOLD=DAYFILS,DAYFILS=DAYFTMP)
19.16.36.    PURGE(DAYFOLD/NA)
19.16.36.    RETURN(DAYFLOC)
19.16.36.RETURN(CONVERT)
19.16.36.REVERT. ACCDAYF *****
19.16.36.ENQUIRE(OP=R,O=JSTATUS)
19.16.36. ENQUIRY COMPLETE.
19.16.36.NOTE(IN)+L:/UP TIME/;+*END
19.16.36.EDIT(JOBZZZZ,I=IN,L=JSTATUS)
19.16.36.PACK(JSTATUS)
19.16.36. PACK COMPLETE.
19.16.37.BEGIN(ACCESS,INSTALL,JOBSTAT,M=W)
19.16.37.REVERT(EX)CONVERT(MFT=R1G+)
19.16.37.CONVERT(MFT=R1G+)
19.16.38.    BEGIN(ACCJOBS,INSTALL,M=W)
19.16.38.***** A C C J O B S *****
19.16.38.RETURN(JOBSTAT)
19.16.38.    ATTACH(JOBSTAT=JOBSTAT/M=W,NA)
19.16.38.    IF, FILE(JOBSTAT, .NOT. AS) ,ACCJOBS2.
19.16.38.    ENDIF(ACCJOBS2)
19.16.38.RETURN(CONVERT)
19.16.38.REVERT. ACCJOBS *****
19.16.39.SKIPEI(JOBSTAT)
19.16.39.COPYBR(JSTATUS,JOBSTAT)
19.16.39. COPY COMPLETE.
19.16.39. END. 0 FILES; 1 RECORD; 54 WORDS.
19.16.39.RETURN(JOBSTAT,JSTATUS,JOBZZZZ)
19.16.39.REVERT. JOBEND *****
19.16.39.ENDIF(SUBPROC1)
19.16.39.IF, (EF.NE.0) ,CHECKEF.
19.16.39.ENDIF(CHECKEF)
19.16.39.REVERT. SUBPROC. COMPASS COMPLETE.
19.16.39.EXIT.
19.16.39.UEAD,      0.002KUNS.
19.16.39.UEPF,      0.305KUNS.
19.16.39.UEMS,     681.925KUNS.
19.16.39.UECP,     34.584SECS.
19.16.39.AESR,     236.622UNTS.
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19.16.39.$OUT(* /OP=E)
19.16.39. NO FILES PROCESSED.
19.16.39.$UNLOAD(* /OP=0)
19.16.39. NO FILES PROCESSED.
19.16.39.$DAYFILE(OUTPUT,JT=D)
19.18.07.UCLP, 17, 031, 61.056KLNS.
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