

79
19
09
65
85
25
95
55
45
35
25
15
05
67
87
77
97
57
47
37
27
17
07
66
86
76
96
56
46
36
26
16
06
95
85
75
65
55
45
35
25
15
05
94
84
74
64
54
44
34
24
14
04
93
83
73
63
53
43
33
23
13
03
92
82
72
62
52
42
32
22
12
02
91
81
71
61
51
41
31
21
11
01
90
80
70
60
50
40
30
20
10
00

\$\$ 1248T ENTERED 4.0*1X AT 09.319 ON 12/27/79 T/S 0-08-05

0001	\$	SNUMB	1248T		
0002	\$	COMMENT	TSSUNIT	TSS CARDIN	
0003	\$\$	USERID	TSSUNIT\$		
0004	\$	IDENT	P20ABJ12,HAUGH	.STATION=T	00000000
0005	AS	PROGRAM	SALT,ON4		00001004
0006	\$\$	PRMFL	**R,R,TOOLS/SALT/STARSTAR		00001005
0007	\$	NOTE	G*,COPY,ENDFC		00001006
0008	\$\$	PRMFL	G*,R,S,4VX/VSP/SRC/DISP		00001007
0009	\$	NOTE	G*		00001008
0010	\$	DATA	A*,COPY,ENDFC		00001009
0011	\$	ENDCOPY	A*		00001011
0012	\$	FILE	AB,A1S		00001012
0013	\$	LIMITS	10,40K,,50K		00001013
0014	\$	IF	ABORT,ENDJOB		00001014
0015	\$	IF	18,00PS		00001015
0016	AS	GMAP	NDECK,NSAF,ON4		00001016
0017	\$	LIMITS	10,40K,,50K		00001017
0018	\$\$	PRMFL	**R,R,4VX/MACROS/STARSTAR		00001018
0019	\$	FILE	*1,,99L		00001019
0020	\$\$	PRMFL	G*,R,S,4VX/VSP/SRC/DISP		00001020
0021	\$	FILE	A*,AIR		00001021
0022	\$	OOPS.			00001022
0023	\$	ENDJOB			00001023

TOTAL CARD COUNT THIS JOB = 000024

* ACTY-01 \$CARD #0005 SALT 12/27/79 REAL MODE SW=000400000000

* NORMAL TERMINATION AT 000113 BA=000000200000 I=0502 SW=000400000000

START	9.320	LINES	2	PRC	0.0000	I/O	0.000	IU	5	MAXWST	41K
STOP	9.320	LNLMT	51200	TMLMT	0.1000	IOLMT		CU	5	MINWST	41K
SWAP	0.000	RUPGIN	0	BSPGIN	0	PGFLT	0	PGIOTM	0.000	PGOT	0
LAPSF	0.000	A/PSTK	8	SSSTK	7	M*T	122				

FC	D	TYPE	BUSY	IP/AT	FP/RT	IS/#C	MS/#E	ADDRESS	T#/PK#
**	R	MSU450 P	126	0	0	36	36R	0-08-06	
G*	R	MSU450 X	0	0	0	181	181		
G*	R	MSU450						0-08-08	C418 ONL
A*	R	MSU450 *	89	0	0	1	12	0-08-06	
AB	S	MSU450 *	49	0	1	12	12	0-08-03	
P*		SYOUT							
*A	R	MSU450 *	26	0	0	*	300R	0-08-05	

RC-77 2 LINES

* ACTY-02 \$CARD #0016 GMAP 12/27/79 REAL MODE SW=201400000000

* NORMAL TERMINATION AT 006536 BA=000000200000 I=0500 SW=201400000000

START	9.321	LINES	12439	PRC	0.0182	I/O	0.010	IU	5	MAXWST	43K
STOP	9.402	LNLMT	51200	TMLMT	0.1000	IOLMT		CU	5	MINWST	41K
SWAP	0.000	RUPGIN	0	BSPGIN	0	PGFLT	0	PGIOTM	0.000	PGOT	0
LAPSF	0.081	A/PSTK	8	SSSTK	7	M*T	21360				

FC	D	TYPE	BUSY	TP/AT	FP/RT	IS/#C	MS/#E	ADDRESS	T#/PK#
A*	R	MSU450 *	117	1	1	12	12	0-08-03	
D*	R	MSU450 *	53	0	1	1	1	0-08-02	
**	R	MSU450 X	2310	0	0	4000	4000R		
**	R	MSU450						0-08-08 C418	ONL
*I	R	MSU450 *	23012	0	0	1188	1188	0-08-04	
G*	R	MSU450 X	3900	0	181	181	181		
G*	R	MSU450						0-08-08 C418	ONL
P*		SYOUT							
K*		SYOUT							
C*		SYOUT							
*A	R	MSU450 *	59	0	0	*	24R	0-08-02	

RC-77 2 LINES
 LIST 12436 LINES
 RC-73 1 LINES

SNUMB = 1248T, ACTIVITY # = 01, , REPORT CODE = 77, RECORD COUNT = 000002

1\$\$

UPDATE LIST

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
6

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
6

SNUMB = 1248T, ACTIVITY # = 02, , REPORT CODE = 77, RECORD COUNT = 000002

155

UPDATE LIST

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
6

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
6

SNUMB = 1248T, ACTIVITY # = 02, , RFPOR CODE = 74, RECORD COUNT = 012436

.ENTRY MACRO AND MODULE DEFINITION SECTION

```

*****
* (C) COPYRIGHT 1978 BY HONEYWELL INFORMATION SYSTEMS INC.
*****

```

PREFACE

THIS PROGRAM WILL BE LOADED MOD 8.

```

PROGRAM BREAK 17767
COMMON LENGTH 0
V COUNT BITS 5

```

PRIMARY SYMDEF ENTRY

```

..DISP 0
.TDISP 1615

```

.ENTRY MACRO AND MODULE DEFINITION SECTION

1	LBL	DISP,H6600J7.057					SUBD0032
2	TTL	H6600J7.057	GCOS IV	4VX	DISPATCHER	791219DISP	
3	CPR	H,1978					SUBD0042

.ENTRY MACRO AND MODULE DEFINITION SECTION

Line	Address	Code	Label	Module	Value	Symbol	Value
5		LODM	.A6MAC			*LOAD SYSTEM MACRO	
6		LODST	.A6IOE			*LOAD I/O SYMBOLS	
7	000000	.ENTRY	DISP, IDSP, GRD, DMPE3,				
8	000000	ETC	RLC, ENCC, ENB, PUTQ,				00000020
9	000000	ETC	CCAC, IOTRM, ENDEVT,				
10	000000	ETC	DSCNT, GWAKE, SCK, PMME,				
11	000000	ETC	SSPND, DELAY, WAKS,				
12	000000	ETC	CLDDS, WRAPUP, EVTWT,				00000020
13	000000	ETC	ENBP, EPJT1, SDQC,				00000020
14	000000	ETC	EIDL, CAPT], SHCM,				
15	000000	ETC	[PRIVTY, INIT], ,0				
		INHIB	SAVE, ON				
	000000	..DISP	VFD			3/0, 1/0, 3/.F, 11/.MDISP, 12/.IDISP, 4/1, 2/0	
	000001	TRA	DSP, \$			1	
	000002	TRA	GRD, \$			2	
	000003	TRA	DMPE3, \$			3	
	000004	TRA	RLC, \$			4	
	000005	TRA	ENCC, \$			5	
	000006	TRA	ENB, \$			6	
	000007	TRA	PUTQ, \$			7	
	000010	TRA	CCAC, \$			8	
	000011	TRA	IOTRM, \$			9	
	000012	TRA	ENDEVT, \$			10	
	000013	TRA	DSCNT, \$			11	
	000014	TRA	GWAKE, \$			12	
	000015	TRA	SCK, \$			13	
	000016	TRA	PMME, \$			14	
	000017	TRA	SSPND, \$			15	
	000020	TRA	DELAY, \$			16	
	000021	TRA	WAKS, \$			17	
	000022	TRA	CLDDS, \$			18	
	000023	TRA	WRAPUP, \$			19	
	000024	TRA	EVTWT, \$			20	
	000025	TRA	ENBP, \$			21	
	000026	TRA	EPJT1, \$			22	
	000027	TRA	SDQC, \$			23	
	000030	TRA	EIDL, \$			24	
	000031	TRA	CAPT, \$			25	
	000032	BCI	1,791212				
	000033	TTLDAT					
	000034	DATE					

DISPATCHER DOEWN INFORMATION

```

17 *
18 * DISPATCHER WILL CAUSE THE SYSTEM TO CRASH WITH A ZOP FAULT
19 *
20 * THE WORD WHICH CAUSE THE FAULT HAVE THE FOLLOWING FORMAT
21 *     BITS 0-17     ZOP IN BCD
22 *     BITS 16-29   ZOP CODE
23 *     BITS 30-35   ERROR NUMBER
24 *
25 ZOP  MACRO
26 * * * * *
27 VFD  018/714647,011/0001,7/#1
28 * * * * *
29 ENDM  ZOP
30 *
31 * ZOP 1  A REQUEST HAS BEEN RECEIVED TO PUT A PROCESS IN THE
32 *     DISPATCHER QUEUE. BUT, THERE IS NO PROCESS IN CORE
33 *     WITH THAT NUMBERR.
34 *
35 * ZOP 2  THE PROCESSOR GATE TALLY IS ERROR IN COUNT
36 *     EITHER THE PROCESS LEFT GATES SHUT OR IT OPENED
37 *     GATES WHICH WERE NOT SHUT
38 *
39 * ZOP 3  A MODULE HAS BEEN CALLED FOR WHICH THERE IS NO ENTY
40 *     IN TNE SD.MDD TABLE
41 *
42 * ZOP 4  POPM HAS HAD AN UNRECOVERABLE SYSTEM I/O ERROR
43 *     THE REASON CODE INS IN THE Q REGISTER
44 *     1  CANNOT LOAD SSA MODULE
45 *     2  SSA MODULE CHECKSUM ERROR
46 *     3  CANNOT FIND SSA MODULE
47 *
48 * ZOP 5  .SPUSH HAS TURNED NEGATIVE
49 *     MORE BLOCKS POPEd UP THAN WERE PUSHED DOWN
50 *
51 * ZOP 6  THERE WAS AN ERROR ENTRY IN DDS STACK
52 *     OR POPEd UP MORE THAN THAT STACKED IN
53 *
54 * ZOP 7  DDS STACK OVERFLOW OCCURED
55 *
56 * ZOP 8  UNDEFINED DISPATCHER ENTRY HAS CALLED
57 *

```

.MDISP LOCAL SYMBOL DEFINITION SECTION

29
19
09
65
85
45
95
55
45
35
25
15
05
64
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

29
19
09
65
85
45
95
55
45
35
25
15
05
64
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

		59 *					
		60 *			LEVEL SAVE ENTRY IN DDS SAVE		
		61 *					
	000000	62 D.SSR EQU	0		*SSR SAVE		
	000002	63 D.TEMP EQU	2		*.STEMP SAVE AREA		
	000015	64 D.ELVL EQU	13		*.SELVL SAVE	IMPR6010	
	777777	65 D.DLVL EQU	-1		*.SDLVL SAVE - BACKWARD POINTER		
	000014	66 D.STAT EQU	12		*.STATE SAVE	IMPR6030	
	000016	67 D.STKP EQU	14		*.STKSP SAVE	IMPR6040	
	000017	68 D.SVFT EQU	15		*.SVFLT SAVE	IMPR6045	
	000020	69 D.SSA EQU	16		*.SSA STACK SAVE AREA	IMPR6050	
		70 *					
		71 *			SD.LRM SEGMENT ACCESS SYMBOLS		
		72 *					
	000000	73 L.GATE EQU	0		*GATE WORD OF LRM TABLE		
	000001	74 L.FRST EQU	1		*FIRST ENTRY TIME OF THE TABLE		
	000002	75 L.PTR EQU	2		*POINTER TO THE FIRST AND COUNT OF		
		76			* SAME TIME ENTRIES		
	000004	77 L.LRM EQU	4		*BASE ENTRY ADDRESS TO INDEX BY KPX		
	000000	78 L.YCOM EQU	0		*INTERCOM ENTRY INDEEX		
	777777	79 L.SWAP EQU	-1		*SWAP TIMER ENTRY INDEX		
		80 *					
		81 *			SD.PRQ SEGMENT ACCESS SYMBOLS		
		82 *					
	000000	83 D.GATE EQU	0		*DISPATCHER QUEUE GATE WORD		
	000001	84 D.SSAP EQU	1		*SSA PAGE WAITING QUEUE CONTROL		
	000003	85 D.GMOD EQU	3		*GATED MODULE WAITING QUEUE CONTROL		
	000005	86 D.SIO EQU	5		*SSSA I/O WAITING QUEUE CONTROL		
	000007	87 D.PRF EQU	7		PROCESSOR PROFILE TABLE FOR .SATR		
	000013	88 D.CPU EQU	11		*PROCESSOR STATUS TABLE -U OR DIS KPX		
	000017	89 D.SQUF EQU	15		SUBDISPATCH QUEUF CONTROL (1/PROC.R + 1)	SUBD0100	
	000024	90 D.SQPT EQU	20		SUBDISPATCH QUEUE POINTERS (2/PROC. MAX=5)	SUBD0110	
	000036	91 D.DSP EQU	30		COUNT TALLY	SUBD0120	
	000037	92 D.PRQ EQU	31		DISPATCHER QUEFUE CONTROL WORD	SUBD0130	
		93 *					
		94 *			RSCR OPERATION SYMBOL TO READ CALENDAR CLOCK		
		95 *					
	000040	96 SCUCLK EQU	32				
		97 *					
		98 *			DISPATCH PRIORITY CODE SYMBOL FOR PDP ENTRY		
		99 *					
		100			UPPER HALF		
	200000	101 ZAPRIO BOOL	200000		*ACTIVE A PRIORITY PROCESS		
	100000	102 ZSYSPR BOOL	100000		*SYSTEM ACTIVE PROCESS (POP,GEOT,GEIN)		
	040000	103 ZAENRD BOOL	40000		*PROCESS ENABLED BY A PRIORITY PROCESS		
	034000	104 ZAPCOD BOOL	34000		*A PRIORITY CODE 7 - 0		
	002000	105 ZINTRP BOOL	2000		*INTERRUPTED IN C.C. OR HIGHER LEVEL		
	001400	106 ZEXCOD BOOL	1400		*EXECUTION LEVEL TALLY 3 - 0		
	000200	107 ZAPRWT BOOL	200		*INACTIVE A PRIOR PROCESS		
	000100	108 ZBPRI0 BOOL	100		*B PRIORITY PROCESS		

.MDISP LOCAL SYMBOL DEFINITION SECTION

000040	109	ZIOWEN	BOOL	40	*ENABLED BY IOTERM OR OTHER PROCESS
000020	110	ZSMATN	BOOL	20	/* SYSTEM PROCESS MAIN LEVEL
000017	111	ZIOURC	BOOL	17	*I/O RATIO, URGENCY CODE FIELD (TALLY)
	112				LOWER HALF
100000	113	ZSYSTEM	BOOL	100000	*SYSTEM PROCESS PERMANENTLY
	114				BIT 22-24 A PRIORITY CODE SAVE
	115				BIT 26-27 EXECUTION LEVEL CODE
	116				BIT 31-35 A-PRIO - PJT ENTRY OFFSET
	117				B-PRIO - B-PRIOR TABLE OFFSET
	118				
	119				
000001	120	ZINTER	BOOL	1	/* MINIMUM COUNT OF DISPATCHES BETWEEN RECOMPUTE ZIOURC
	121				
	122				
	123				A PRIORITY RELATED SYMBOLS
	124				ZAPRIO ZSYSPR ZAENBD ZAPCOD
	125				B PRIORITY REALATED SYMBOLS
	126				ZBPRI0
	127				I/O RATIO URGENCY RELATED SYMBOLS
	128				ZIOWEN ZINTER ZIOURC
	129				
	130				*
	131				* ALARM TABLE MASK
000077	132	URMASK	BOOL	77	*URGENCY FIELD OF ENTRY
	133				*
	134				*
	135				* PROCESSOR PROCESS REGISTER
	136				*
004200	137	SYSIR	BOOL	004200	*OVERFLOW MASK. MASTER MODE
204000	138	SYSOR	BOOL	204000	*S/S CACHE ENABLE
	139				*
	140				* .SNTRY WORD BIT DEFINITION
	141				*
004000	142	SN.PRIV	BOOL	004000	*PRIVITY MODULE
020000	143	SN.GAT	BOOL	020000	*GATED MODULE
010000	144	SN.RUS	BOOL	010000	*REUSABLE MODULE
	145				*
	146				* .STATE OT .SRQST BIT TEMPORARY DEFINITION
	147				*
	148				*
	149				* .STATE BIT COMPLEX SYMBOL
	150				*
154020	151	T.SYS	BOOL	.TSOVF+.TGPRS+.TGEPR+.TSWP+.TUSWP	
	152				SYSTEM EVENT PROCESSING, ACCOUNT IT AS OVERHEAD.
000400	153	.ASYSP	BOOL	400	*SYSTEM PRIORITY GRANTED PROCESS. (POP GEIN GEOT)
	154				
	155				*
	156				* MODULE NUMBER FIELD DEFINITION 10 BITS
	157				*
001777	158	MDMSK	BOOL	1777	

.MDISP LOCAL SYMBOL DEFINITION SECTION

159 *
160 * SSA CELL TEMPORARY DEFINITION
161 *

REGISTER ASSIGNMENT DEFINITION GLOBAL IN DISPATCHER

163 *

164 *

INDEX REGISTER ASSIGNMENT BY CONTENTS

165 *

000006

166 KPX

SET

6

*PROCESS INDEX

000007

167 PN

SET

7

*PROCESSOR INDEX

168 *

169 *

INDEX REGISTER ASSIGNMENT FOR INTERFACE OF ROUTINE LINKAGE

170 *

000001

171 Z

SET

1

*BASIC SHUT/OPEN ROUTINE

000002

172 DACNX

SET

2

*DACN ROUTINE

000003

173 ENBLX

SET

3

*ENABLE ROUTINE

000005

174 SETLRX

SET

5

*SET TIMER ALARM ROUTINE

000005

175 RETLRX

SET

5

*RESET TIMER ALARM ROUTINE

000001

176 PUTPRX

SET

1

*PUT PROCESS INTO Q ROUTINE

000001

177 SRTLX

SET

1

*SORT ALARM TABLE ROUTINE

000001

178 CKLMTX

SET

1

*CHECK PROCESSOR TIME ROUTINE

000001

179 SVLVI X

SET

1

*SAVE DISPATCH LEVEL ROUTINE

000001

180 POPQX

SET

1

*PUT MESSAGE INTO POP-Q ROUTINE

000001

181 CKEVTX

SET

1

*CHECK PAYABLE EVENT ROUTINE

000003

182 CEBLX

SET

3

*ENABLE BY EVENT ROUTINE

000001

183 RLSHX

SET

1

*RELEASE SSSA MODULE

184 *

185 *

INDEX REGISTER ASSIGNED BY MODULE INTERFACE

186 *

000004

187 XIOE

SET

4

*I/O ENTRY POINTER

188 *

189 *

POINTER REGISTER ASSIGNED BY BASIC ROUTINE

190 *

000000

191 P.RMS

SET

P0

*REAL MEMORY SEGMENT

000004

192 P.PST

SET

P4

*PROCESS STATUS

000003

193 P.PRQ

SET

P3

*PROCESS QUEUE

000002

194 P.KL

SET

P2

*TIMER ALARM

000002

195 P.LRM

SET

P2

*GATE MODULE TABLE

000002

196 P.GTM

SET

P2

*GATE MODULE TABLE

197

THESE ASSIGNMENT IS MODULE GLOBAL SO FAR AS BASIC

198

ROUTINES ARE USED

199 *

200 *

POINTER REGISTER ASSIGNED BY MODULE INTER FACE

201 *

000001

202 P.IOC

SET

P1

*I/O COMMEND BLOCK

000002

203 P.IOD

SET

P2

*I/O DATA AREA

000002

204 P.IOTM

SET

P2

*I/O TERM BUILD UP DESCRIPTER

DEBUG TOOLS DIFINITION SECTION

	206 *				
	207 *	ZOPS MACRO	CREATS ZOP AND ERROR CODE		
	208 *				
	209	ZOPS	MACRO		
	210	ZOPCOD	SET	ZOPCOD+1	
	211	ZOP	ZOPCOD		
	212	ENDM	ZOPS		
000040	213	ZOPCOD	SET	32	
	214 *				
	215 *	CHECK ROTINE	SELECT TOOLS		
	216 *				
000001	217	DEBUG	EQU	1	FOR SELECTION
000001	218	PROTEC	EQU	1	PROTECTION LOGIC
000001	219	SECURE	EQU	1	SECURITY OPTION VFOR DEBUG

PRODUCTION MODE SUPPORT SYMBOLS / MACROS

```

221 *
222 *      HFRF DEFINES MACRO AND SYMBOLS FOR PRODUCTION MODE
223 *      PRODUCTION MODE RUNS ON SINGLE CPU SYSTEM.
224 *      AND WHERE NO GATE IS SHUT OR OPENED.
225 *
226 SHUT.  MACRO
227          ORGCSM  .#1S
228          SHUT1   #1
229          ORGCSM  .CRSM.
230          ENDM    SHUT.
231
232 SHUT1  MACRO
233 #2     TSX      Z.#1ST
234 .#1S   SET      .#1S+1
235 .CRSM. SET      .CRSM.+10
236          ENDM    SHUT1
237
238
239 OPEN.  MACRO
240          ORGCSM  .#10
241          OPEN1   #1
242          ORGCSM  .CRSM.
243          ENDM    OPEN.
244
245 OPEN1  MACRO
246 #2     TSX      Z.#10P
247 .#10   SET      .#10+1
248 .CRSM. SET      .CRSM.+10
249          ENDM    OPFN1
250
251
021614    252 .DSPS  SET      9100
022124    253 .DSP0  SET      9300
022434    254 .PSTS  SET      9500
022600    255 .PST0  SET      9600
022744    256 .QGTS  SET      9700
023026    257 .QGTO  SET      9750
023110    258 .GTMS  SET      9800
023172    259 .GTMO  SET      9850
023254    260 .LRMS  SET      9900
023336    261 .LRMO  SET      9950
000012    262 .CRSM. SET      10

```

ERROR CORRECTION PATCH SECTION

264 *

265 * MODULE CORRECTION PATCH AREA LAYS FROM PTCH1 TO 63

266 *

000035 267 PTCH1 SET *-..DISP

000070 268 PTCH1E SET 56

000033 269 PTCH1S SET PTCH1E=PTCH1

000000 400002 000 270 OCTAL OPD 36/2

*PTACH ENTRY

00000070

271 ***** P A T C H L I S T *****

272 COMMENT CODING

ISSUED

273 LOC. CONTENTS 1 8 16 MMDDYY

000035 274 DUP 2,PTCH1S

275

000035 000000 000000 000 276 OCTAL / / / /

276

000036 000000 000000 000 276 OCTAL / / / /

276

000037 000000 000000 000 276 OCTAL / / / /

276

000040 000000 000000 000 276 OCTAL / / / /

276

000041 000000 000000 000 276 OCTAL / / / /

276

000042 000000 000000 000 276 OCTAL / / / /

276

000043 000000 000000 000 276 OCTAL / / / /

276

000044 000000 000000 000 276 OCTAL / / / /

276

000045 000000 000000 000 276 OCTAL / / / /

276

000046 000000 000000 000 276 OCTAL / / / /

276

000047 000000 000000 000 276 OCTAL / / / /

276

000050 000000 000000 000 276 OCTAL / / / /

276

000051 000000 000000 000 276 OCTAL / / / /

276

000052 000000 000000 000 276 OCTAL / / / /

276

000053 000000 000000 000 276 OCTAL / / / /

276

000054 000000 000000 000 276 OCTAL / / / /

276

000055 000000 000000 000 276 OCTAL / / / /

276

000056 000000 000000 000 276 OCTAL / / / /

276

000057 000000 000000 000 276 OCTAL / / / /

276

FRROR CORRECTION PATCH SECTION

000060	000000	000000	000		OCTAL	/	/	/	/	
				276						
000061	000000	000000	000		OCTAL	/	/	/	/	
				276						
000062	000000	000000	000		OCTAL	/	/	/	/	
				276						
000063	000000	000000	000		OCTAL	/	/	/	/	
				276						
000064	000000	000000	000		OCTAL	/	/	/	/	
				276						
000065	000000	000000	000		OCTAL	/	/	/	/	
				276						
000066	000000	000000	000		OCTAL	/	/	/	/	
				276						
000067	000000	000000	000		OCTAL	/	/	/	/	
				277 *					00000070	
				278 *					00000070	
				279 *	THE FOLLOING CELLS CAN BE PATCHED TO CONTROL TRAPPING FOR CONTENTS				00000070	
				280 *	OF SOMF CELL TO HAVE A PARTICULAR PATTERN. THE TRACE ROUTINE TESTS				00000070	
				281 *	TRAPTR ON EVERY TRACE, AND IF NON-ZERO IF MUST BE POINTER TO CELL TO				00000070	
				282 *	BE MONITORED. PATCHING TRAPTR ONLY WILL TEST CELL FOR ZERO. FOR				00000070	
				283 *	ANY OTHER VALUE, TRAPVL SHOULD CONTAIN VALUE. IF ONLY CERTAIN BITS				00000070	
				284 *	SHOULD BE COMPARED, TRAPMK SHOULD CONTAIN MASK. AS CODED, THE TRAP				DISP8A2F	
				285 *	WILL SPRING ON AN EQUAL CONDITION. IF ANOTHER CONDITION SHOULD BE				DISP8A2F	
				286 *	USED, PATCH TRAPER TO CONTAIN THE APPROPRIATE TRANSFER INSTRUCTION				DISP8A2F	
				287 *	TO BE XEC'D. BE SURE TO PRESERVE ASSEMBLED ADDRESS AND TAG FIELDS				DISP8A2F	
				288 *	OF TRAPER.				DISP8A2F	
				289 *					00000070	
				290 *					00000070	
000070	000000	000000	000	291	TRAPTR ZERO	**,**	OFFSET AND SEGID OF CELL TO BE TRAPPED		00000070	
000071	000000	000000	000	292	TRAPVL ZERO	**,**	VALUE OF CELL TO CAUSE TRAP TO SPRING		00000070	
000072	7777777777		000	293	TRAPMK OCT	7777777777	MASK TO BE APPLIED BEFORE TESTING		00000070	
000073	000005	6000	04	000	294	TRAPER TZE	GOTCHA-TRAPEX,IC THE FLAVOR OF TRANSFER TO SNAP TRAP		DISP8A2F	
000074	000000	001761	000	295	TRAPCT ZERO	**.,CTYP	OFFSET FROM TRAPTR, S/D TO CHANGE TYPE		00000070	
				296	INHIB	ON				
				297 *					00000020	
				298 *	SPFCIAL ENTRY POINT FOR MONITOR				00000020	
				299 *					00000020	
000075	003524	7102	00	010	300	EP61	TRA	EXIT0	00000020	
					301 *					
					302 *	SPECIAL ENTRY POINT FOR MODULE COUNT TABLE DUMPER				
					303 *					
000076	003524	7102	00	010	304	EP62	TRA	EXIT0		
					305 *					
					306 *	SPECIAL ENTRY POINT FOR SYSTEM TRACE DUMPER (EP 63)				
					307 *					
000077	003524	7102	00	010	308	EP63	TRA	EXIT0		

MODULE OPTION PATCH AREA

		310 *			
		311 *	MODULE OPTION PATCH AREA		
		312 *			
000100	000000000000	000	313	OPTION OCT	000000000000 DISPATCHER OPTIONS
			314 *		
	000101		315	RPRIOR EQU *	B PRIORITY REQUESTS
	000101		316	BSS 3	
			317 *		
	000104		318	APRIOR BSS 3	A PRIORITY REQUESTS
			319 *		
	000107		320	SPCL BSS 1	
			321 *		
	000110		322	DVOPT BSS 1	DEVELOPMENT OPTION
			323 *		
			324 *		
			325 *		
			326 *	OPTION BIT 0 = 1 I/O RATIO PRIORITY CONTROL SELECTED	
			327 *	BIT 1 = 1 URGENCY PRIORITY CONTROL SELECTED	
			328 *	BIT 18 = 1 CLASS B PRIORITY CONTROL SELECTED	
			329 *	BIT 19 = 1 CLASS A PRIORITY CONTROL SELECTED	
			330 *	BIT 33- 35 CLASS A LEVEL RESERVED FOR OPERATOR	
			331 *		
	400000		332	OIO BOOL 400000	*OPTION BIT DEFINITION SYMBOLS
	200000		333	OUR BOOL 200000	
	200000		334	OA BOOL 200000	
	400000		335	OB BOOL 400000	
	000007		336	OAP BOOL 7	
			337 *		
			338 *	BPRIOR BIT 0 - 29 SNUMB OF B PRIORITY JOB	
			339 *	BIT 33 - 32 TIMES OF NO PRIORITY DISPATCHES	
			340 *	FOR EVERY ONE DISPATCH TO THE B	
			341 *	PRIORITY PROCESS	
			342 *	BIT 33 - 35 TIME SLICE MULTIPLE OF 32 MS	
			343 *		
	000007		344	OBT BOOL 7	*TIME SLICE FIELD
	000070		345	OBR BOOL 70	*ROUND RATE FIELD
			346 *		
			347 *	APRIOR BIT 0 - 29 SNUMB OF A PRIORITY JOB	
			348 *	BIT 33 - 35 PRIORITY LEVEL (1-7)	
			349 *		
	000007		350	OAL BOOL 7	*A-PRIORITY POSITION FIELD
			351 *		
			352 *	SPCL BIT 0 - 17 ADDRESS OF OPTION LIST IN DISPATCHER	
			353 *	SET AT INITIALIZE	
			354 *	BIT 18 = 1 MESUREMENT OPTION. LEAVE SCU CLOCK IN	
			355 *	THE +3 WORD OF EVERY TRACE	
			356 *	BIT 34 = 1 MODULE LOADING/PUSHDOWN I/O COUNT	
			357 *	MODULE CALLING COUNT	
			358 *	BIT 35 = 1 MONITOR OPTION INVOKED	
	400000		359	OMT BOOL 400000	00000020

MODULF OPTION PATCH AREA

000002	360	OMC	BOOL	2	
	361	*			
	362	*	DVOPT		BIT 0 = 1 SYSTEM TRACE DUMPER INTERFACE
	363	*			BIT 1 = 1 SYSTEM MEASUREMENT TOOL
	364	*			BIT 34 = 1 PUT DETAIL TRACE OF .YCALH AND .YEXTH
	365	*			BIT 35 = 1 GATING MODE ON SINGLE CPU SYSTEM
	366	*			
400000	367	OTRD	BOOL	400000	
200000	368	OVF	BOOL	200000	
000002	369	ODTL	BOOL	2	
000001	370	OPRD	BOOL	1	
	371	*			

F N T R Y 1 R E - D I S P A T C H

373 *
 374 * THIS ROUTINE IS ENTRY POINT 1 PROCEDURE
 375 * ENTERS AFTER INTERRUPT PROCESSING OR TIMER RUN OUT
 376 * AFTER START UP ALSO
 377 * MUST RUN ON INHIB TILL LDSS. IF ANY INTERRUPT
 378 * S/S BASE FRAME WILL BE DESTROYED
 379 INHIB ON

						000111	380 DSP	EQU	*	
000111	006063	4706	07	000	381		LDP	P.RMS,SD.RMS,DL	*GET REAL MEMORY	
000112	000002	2313	00	000	382		RSW	2,P.RMS	*READ CPU #	
000113	000003	3752	07	000	383		ANA	3,DL		
000114	000000	6272	05	000	384		EAX	PN,AL	*SET PROCESSOR INDEX	
000115	006133	4726	07	000	385		LDP	P.KL,SD.KL,DL		
000116	200044	2263	17	000	386		LDX	KPX,.KLPRG,PN,P.KL	* PROCESSOR PROCESS	
000117	000311	6012	00	010	387		TNZ	DSCNT	*SLAVE PROCESS RUNNING ON THIS CPU	
000120	200016	7737	37	000	388		LDSS	.KPKPS,PN*,P.KL	*INITIALIZE SSR	
000121	004200	6342	07	000	389		LDT	SYSIR,DL		
000122	001173	7102	00	010	390		TRA	MAIN	*GO TO MAIN DISPATCH	

ENTRY 2 ROADBLOCK

```

392 *
393 * THIS ROUTINE IS ENTRY POINT 2 PROCEDURE
394 * ROAD BLOCK THE PROCESS TILL ALL I/O TERMINATE
395 *
000000 396 XTMP SET 0
000123 397 GRD EQU *
000123 398 VDCN1V SHUT. DSP *SHUT DISP GATE
000124 600017 2203 00 000 399 LDX XTMP,.STATE,.P.SSA /* ROADBLOCK MUST IN MAIN LEVEL
000125 000404 3002 03 000 400 CANX XTMP,.TINCC+.TSYCC,DU IF NOT, CC CAN'T WAIT ANOTHER ENDC
000126 000132 6002 00 010 401 TZE GR1 *OK NOT IN CC
000127 402 VDCN2V OPEN. DSP *OPEN GATE TO ABORT
000130 000006 2362 07 000 403 LDQ .AC006,DL I2 ABORT CODE, GROAD IN C.C. 00000020
000131 003625 7102 00 010 404 TRA BRT1.3 /* GOTO .MBRT1,3
000132 002422 7022 00 010 405 GR1 EQU *
406 TSX DACNX,DACN *TAKE PROCESS OUT OF EXEC
000133 407 SHUT. QGT *SHUT I/O QUEUE GATE
000134 600117 2203 00 000 408 LDX XTMP,.SRQST,.P.SSA *IF GEPR NEEDED
000135 600233 0543 00 000 409 AOS .STREC,.P.SSA /* COUNT OF WAIT - EXC.REPRT
000136 010000 3002 03 000 410 CANX XTMP,.RGEPR,DU *GEPR IS SAME AS I/O
000137 000151 6012 00 010 411 TNZ GR3
000140 600160 2203 00 000 412 LDX XTMP,.SRQCT,.P.SSA *ANY I/I
000141 001155 6002 00 010 413 TZF ENDSPI *NO EXPLICIT I/O OUTSTAND
000142 600005 2203 00 000 414 LDX XTMP,.SATTR,.P.SSA *IS THIS A TDS EXECUTIVE
000143 040000 3002 03 000 415 CANX XTMP,.ATDSE,DU
000144 000151 6002 00 010 416 TZE GR3 *NO, INCLUDE REMOTE I/O IN ROADBLOCK
000145 600157 2353 00 000 417 LDA .SREMT,.P.SSA *TDS - DO NOT INCLUDE REMOTE I/O
000146 000000 6352 05 000 418 EAA 0,AL *COUNT OF REMOTE I/O
000147 600160 1153 00 000 419 CMPA .SRQCT,.P.SSA * VS LINKED I/O
000150 001155 6002 00 010 420 TZE ENDSPI *EQUAL, PUT IN QUEUE
000151 600017 2353 00 000 421 GR3 EQU *
422 LDA .STATE,.P.SSA /* UPDATE .STATE
000152 423 OPFN. QGT *OPEN Q GATE
000153 200000 2752 07 000 424 ORA .TRDBK,DL *SHOW IN ROADBLOCK
000154 600017 7553 00 000 425 STA .STATE,.P.SSA
000155 000200 3152 07 000 426 CANA .TALRM,DL *IS THIS HAVE ALARM SET
000156 001167 6002 00 010 427 TZE ENDSPI *
000157 003225 7052 00 010 428 TSX RETLRX,RETLRM *CLEAR ALARM
000160 001167 7102 00 010 429 TRA ENDSPI *GO TO END OF DISPATCH

```


ENTRY 4 RELINQISH

```

431 *
432 * THIS ROUTINE IS ENTRY POINT 4 PROCEDURE
433 * RELINQISH CONTROL TO WAIT ANY I/O TERMINATE
434 *
000000 435 XTMP SET 0
000161 436 RLC EQU *
000161 437 VDCN3V SHUT. DSP *SHUT DSPATCH GATE
000162 002424 7022 00 010 438 TSX DACNX,DACND *TAKE PROCESS OUT OF EXEC
000163 600017 2363 00 000 439 LDQ .STATE,,P.SSA
000164 600233 0543 00 000 440 AOS .STREC,,P.SSA /* COUNT OF WAIT = EXC.REPORT
000165 000200 3162 07 000 441 CANQ .TALRM,DL *ALRM SET
000166 000002 6012 04 000 442 TNZ 2,IC *YES ALARM IS SUFFICIENT
000167 400000 2762 07 000 443 ORQ .TRELC,DL *SET RELINQ BIT
000170 444 SHUT. QGT *SHUT I/O Q
000171 600160 2203 00 000 445 LDX XTMP,,SRQCT,,P.SSA *ANY I/O STANDS
000172 001155 6002 00 010 446 TZE ENDSP1 *NO
000173 600027 1203 00 000 447 SBLX XTMP,,SCCAL,,P.SSA *IF C.C DON T TAKE IN
000174 001155 6002 00 010 448 TZE ENDSP1 *NO EVENT WILL ENABLE
000175 600117 2353 00 000 449 LDA .SRQST,,P.SSA
000176 000400 3752 07 000 450 ANA .RIOTM,DL *IF I/O COMP SINCE LAST DISP
000177 000203 6012 00 010 451 TNZ RLC1
000200 452 OPEN. QGT *OPEN Q GATE
000201 600017 7563 00 000 453 STQ .STATE,,P.SSA *SHOW RELC/ WAKE STATE
000202 001167 7102 00 010 454 TRA ENDSP5
000203 000203 455 RLC1 EQU *
000203 600117 6553 00 000 456 ERSA .SRQST,,P.SSA *RESET I/O TERM INDICATOR
000204 001155 7102 00 010 457 TRA ENDSP1 *PUT IT IN QUEUE FOR THE I/O

```

F N T R Y 5 E N D C O U R T E S Y C A L L

459 *

460 * THIS ENTRY TERMINATES COURTESY CALL PROCESSING

461 *

000205

462 FNCC EQU *

000205

463 SHUT. DSP

000206 600017 2353 00 000

464 LDA .STATE,,P.SSA

000207 000404 3152 03 000

465 CANA .TINCC+.TSYCC,DU *CHECK IF IN C.C.

000210 000214 6012 00 010

466 TNZ EC1 *YES IN C.C.

000211

467 OPEN. DSP

000212 000007 2362 07 000

468 LDQ .AC007,DL NOT IN C.C.

00000020

000213 003625 7102 00 010

469 TRA BRT1.3 /* GO ABORT WITH I6 ABORT CODE

000214

470 FC1 EQU *

471 *

472 * REMOVED ROUTINE WHICH MOVES REGISTER SAVE AREA

473 * IN SLAVE PREFIX BECAUSE S/S STACK IS ENOUGH

474 * TO SAVE REGISTERS.

000214 000040 3752 07 000

475 ANA .TAWSC,DL CHECK FOR AUXILIARY W.S. C.C.

EXTM4800

000215 001043 6002 00 010

476 TZE ENCCEN * NORMAL C.C.

EXTM4810

000216 600017 6553 00 000

477 ERSA .STATE,,P.SSA RESET .TAWSC BIT

EXTM4820

000217 006133 4726 07 000

478 LDP P.KL,SD,KL,DL LOAD REGISTERS NEEDED

EXTM4830

000220 200052 6757 00 000

479 LDD P.SSL,.KLSLV,.P.KL BY EXTENDED MEMORY CALL

EXTM4840

000221

480 EXTMEM UWCCWS UNWIRE THE C.C. WORKING SPACE

EXTM4850

000221 500070 6707 00 000

LDDO DP.EME,.P.SSL

000222

ICLIMB .DRO,,.EX,EAXO

000222 000010713400 000

VFD 18/.EX;09/713,1/1,1/0,1/0,6/M.

000223 000000601770 000

VFD 1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/.DRO

000224 001043 7102 00 010

481 TRA ENCCEN *ENDLVL WITH DSP SHUT

F N T R Y 6 E N A B L E A P R O C E S S

483 *

484 *

THIS ENTRY POINT ENABLES REQUESTED PROCESS.

485 *

UPDATE URGFNCY AND IF IN CORE IT WILL BE PUT INTO DISPATCH

486 *

QUFUE. IF OUT OF CORE, THE POP IS ENABLED TO CATCH THE ENABLE

487 *

REQUEST

488 *

489 *

PRECAL P.CR, P.SSA(OF CALLER) PN, KPX

490 *

Q-REG. BIT 0 - 17 KPX OF ENABLED PROCESS

491 *

18 - 23 URGENCY

492 *

33 - 35 FUNCTION CODE 0 OR 4

493 *

0 = PERMANENT URGENCY ENABLE

494 *

4 = TEMPORARY URGENCY ENABLE

495 *

CALLING .CALL/.CALLX .MDISP,6

496 *

DENIAL RETURN

497 *

NORMAL RETURN

498 *

POST LOST P0 P1 P2 P3 P4

499 *

LOST A Q X0 X1 X2 X3 X5 (X4)

500 *

000225

501 FNB

EQU

*

000225 006133 4726 07 000

502

LDP

P.KL,SD.KL,DL

000226 002733 7032 00 010

503

TSX

ENBLX,ENABL

*GO ENABLE IT

000227 003524 7102 00 010

504

TRA

EXIT0

*DENIAL RETURN

000230 003527 7102 00 010

505

TRA

EXIT1

*ALWAYS EXIT 1

F N T R Y 7 P U T A P R O C E S S I N T O Q

507 *

508 * THIS ENTRY POINT PUT A REQUESTED PROCESS INTO THE DISPATCHER

509 * QUEUE

510 *

511 * PRECAL P.CR. PN P.SSA (OF ANY PROCESS)

512 * KPX = PROCESS NUMBER TO PUT INTO QUEUE

513 * SHUT = .CRDSP

514 * CALLING .CALL/.CALLX .MDISP.7

515 * POST LOST P0 P1 P2 P3 P4

516 * LOST A X0 X1 X2

000231 517 PUTQ EQU *

000231 518 SHUT. PST

000232 003255 7012 00 010 519 TSX PUTPRX,PUTPRQ *PUT IT INTO QUEUE

000233 520 OPEN. PST

000234 003524 7102 00 010 521 TRA EXITO

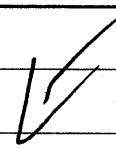
F N T R Y 8 - C L E A R C A C H E

					523 *				00000020
					524 *	THIS ENTRY IS CALLED BY .SHUTL MACRO TO CLEAR CACHE IN OWN			00000020
					525 *	PROCESSOR WHEN CALLING ROUTINE IS A PRIVILEGED SLAVE			00000020
					526 *				00000020
		000235			527 CCAC	NULL			00000020
000235	000000	0116 00	000		528	CCAC	CLEAR CACHE		00000020
000236	003524	7102 00	010		529	TRA	EXIT0	CLEAR CACHE	00000020
							AND RETURN		

ENTRY 9 I/O INTERRUPT SWITCH

531 *
 532 * THIS ENTRY POINT SWITCHES SLAVE PROCESS TO PROCESSOR PROCESS
 533 * FOR I/O INTERRUPT PROCESSING
 534 * AND FOR PARITY FAULT MEMORY SCAN PROCESSING
 535 * INTERRUPTED PROCESS IS PUT IN QUEUE AGAIN
 536 *
 537 * DON'T LOST P2 IOS NEED IT AGAIN *****
 538 * PRECAL P.CR, P.SSA, KPX, PN
 539 * .KLPRG MUST NOT ZERO
 540 * P4 IS P.SSR(T=0) LOADED BY IOS
 541 * .CRDSP IS SHUT BY IOS
 542 * CALLING EPPR P0,*,*3,\$
 543 * XEC .CRCAL,,P.CR
 544 * TRA 9,,P.CR
 545 * RETURN UNDER PROCESSOR PROCESS

000000	546	P.RET	SET	P0	
000005	547	P.SAVE	SET	P5	
000000	548	P.PDP	SET	P0	
000000	549	XPTR	SET	0	
000237	550	IOTRM	EQU	*	
000237 006130 4776 07 000	551	LDP	P.CR,SD.CR,DL	/* RECOVER P.CR AND SAVE RETURN	
000240 000305 4506 17 010	552	STP	P.RET,IOPRET,PN	POINTER	
000241 200000 6357 00 000	553	EPPR	P.SAVE,,,P.IOTM	*SAVE DISCRIPTR	
000242 400005 2353 00 000	554	LDA	.WFTYP,,P4	/* CHECK S/S OVERFLOW INDICATOR	
000243 006133 4726 07 000	555	LDP	P.KL,SD.KL,DL		
000244 700066 7173 00 000	556	XED	.CRNSG+2,,P.CR	/* CHECK IF ANY GATE SHUT EXCEPT .CRDS	
000245 000002 6002 04 000	557	TZE	2.IC		
000246	558	ZOP	2		
000247 000010 7352 00 000	559	ALS	8	*MARK S/S EXTEND PROCESSING	
000250 006036 4706 07 000	560	LDP	P.PDP,SD.PDP,DL		
000251 100000 3752 03 000	561	ANA	.RCFLT,DU	*REQUEST ON .SRQST. IT WILL	
000252 600117 2553 00 000	562	ORSA	.SRQST,,P.SSA	*BE PROCESSED AT NEXT DISPATCH	
000253 000000 2353 16 000	563	LDA	.KPX,P.PDP	/* IF EXECUTING IN C.C. , IN SYSTEM	
000254 001400 3152 07 000	564	CANA	ZEXCOD,DL	OR IF EVENT WAITING,	
000255 000260 6002 00 010	565	TZE	IOTM1		
000256 002000 2752 03 000	566	ORA	ZINTRP,DU	ASSIGN INTERRUPTED PRIORITY	
000257 000000 7553 16 000	567	STA	.KPX,P.PDP		
000260	568	IOTM1	EQU	*	
000002	569	OVHX	SET	2	00000020
000260 006331 7022 00 010	570	IOVHO	TSX	OVHX,OVHT	SET PROCESSOR TIME TO .SPTIM 00000020
000261 700072 2363 17 000	571	LDQ	.CRCCK,PN,P.CR	/* GET TIME OF INTFRRUPT	
000262 003541 7012 00 010	572	TSX	Z,RSCRB	THEN ACCOUNT TIME	
000263 002430 7022 00 010	573	TSX	DACNX,DACNB	/* PROCESS SWITCH	
000001	574			*AT RETURN FROM DACN	
000264 100000 2362 03 000	575	P.PID	SET	P1	*P1=P.PID AU = PID ENTRY
000265 600117 3763 00 000	576	LDQ	.RCFLT,DU		
000266 000271 6002 00 010	577	ANQ	.SRQST,,P.SSA	*IF S/S OVERFLOW OCCURED	
000267 000300 6362 00 000	578	TZE	IOTMO	*EXTEND 3 FRAMES FOR NEXT LDSS	
000270 100002 0563 01 000	579	EAQ	192	*IN RE-DISPATCH	
	580	ASQ	2,AU,P.PID		



F N T R Y 9 I / O I N T E R R U P T S W I T C H

					000271	581	IOTMO	EQU	*		
					000271	582		SHUT.	PST		
	000272	003255	7012	00	010	583		TSX	PUTPRX,PUTPRQ	*PUT THE PROCESS INTO QUEUE	
					000273	584		OPEN.	PST		
						585			CHANGE MACRO INTERFACE	.SSA STACK FOR RE-DISPATCH	
	000274	010000	2352	07	000	586		LDA	STYP1,DL		
	000275	600043	2753	00	000	587		ORA	.SELVL,,P.SSA	/* SET MACRO STACK TYPE 1 (64 S/S)	
	000276	600012	7553	56	000	588		STA	.SSA,ID,P.SSA		
					000277	589	IOTMX	NULL		RETURN HERE AFTER SUB-DISP INTERRUPT	SUBD4770
	000277	006024	4716	07	000	590		LDP	P.PID,SD,PID,DL		
	000300	100004	7727	00	000	591		LDWS	.PNPOP*4,,P.PID		
	000301	100005	7727	00	000	592		LDWS	.PNPOP*4+1,,P.PID		
	000302	500000	6327	00	000	593		EPPR	P.IOTM,,,P.SAVE	*RESTORE FOR IOS	
	000303	000305	4706	17	010	594		LDP	P.RET,IORET,PN		
	000304	000000	7103	00	000	595		TRA	.,P.RET		
					000305	596	IORET	BSS	.NRPRC		
						597	*	TTLS	E N T R Y 1 0 E N D E V E N T		
						598	*ENDEVT	EQU	ENDLVL		

F N T R Y 1 1 D I S C O N N E C T E X E C U T I O N

```

600 *
601 * THIS ROUTINE IS ENTRY POINT 11 PROCEDURE
602 * IT TAKES OUT THE PROCESS OUT OF EXECUTION IF THERE IS ANY
603 * ENABLE REQUEST OR SYSTEM EVENT THAT PAYABLE
604 * THE PROCESS IS PUT IN DISPATCHER QUEUE AGAIN
605 *
000311 606 DSCNT EQU *
000311 607 SHUT. DSP *SHUT DSP GATE
000312 608 DSCNT1 EQU /* ENTRY AFTER SWAPOUT
000312 002422 7022 00 010 609 TSX DACNX,DACN *TAKE IT OUT OF EXEC
000313 600117 2353 00 000 610 LDA .SRQST,.P.SSA /* GET REQUEST
000314 611 SHUT. PST
000315 001000 3152 07 000 612 CANA .RTRO,DL *TIMER RUN OUT ENTRY
000316 001163 6012 00 010 613 TNZ ED3 *YES
000317 400000 3152 03 000 614 CANA .RDEAD,DU *IF THE PROCESS IS FROZEN,
000320 000330 6012 00 010 615 TNZ DC1 PUT OUT OF DISPATCH QUEUE
000321 100000 2352 07 000 616 LDA .TWAKE,DL *SHOW WE WAIT FOR ENABLE BY
000322 400000 2363 16 000 617 LDQ .KPX,P.PST
000323 600017 2553 00 000 618 ORSA .STATE,.P.SSA *ANOTHER PROCESS
000324 002000 3762 07 000 619 ANQ PS.ENB,DL /* IF ANY ENABLE REQUEST
000325 001163 6012 00 010 620 TNZ ED3 *GO INTO ENDSP PUT INTO Q
000326 003713 7012 00 010 621 TSX CKEVTX,CKEVT *IF THERE IS ANY PAYABLE EVENT
000327 001163 7102 00 010 622 TRA ED3 *GO INTO ENDSP PUT INTO Q
000330 001164 7102 00 010 623 DC1 EQU *
624 X.DSCN TRA ED4 *GO INTO ENDSP
625 *IF PRIORITY OPTION, DELETE PRIORITY

```


F N T R Y 1 2 G E W A K E

					627 *				
					628 *	THIS ENTRY POINT SERVICES MME GEWAKE FUNCTION			
					629 *				
					630 *	PRFCAL Q-REG. TIME INTERVAL TO SET ALARM IN 16 MICRO-SEC			00000070
					631 *				00000070
					632 *	ONE IN UPPER IS ABOUT 4 SECONDS			
					633 *				
		556154			634 WAKELM	SET	3000000/16	*3 SEC IN 16 MICRO SEC	
		000331			635 GWAKE	EQU	*		
		000331			636	SHUT.	PST		
	000332	400000	2353	16	000	637	LDA	,KPX,P,PST	*GET PERMANENT URGENCY
	000333	600233	0543	00	000	638	AOS	,STREC,,P,SSA	
	000334	002000	3152	07	000	639	CANA	PS,ENB,DL	*IF ANY ENABLE REQUEST
	000335	000354	6012	00	010	640	TNZ	GW2	*SKIP TO SLEEP THIS TIME
	000336	000077	0362	07	000	641	ADLQ	=077,DL	*TRANCATE AT MILI SEC UNIT
	000337	000006	7732	00	000	642	LRL	6	
	000340	600215	2353	00	000	643	LDA	,STMPQ,,P,SSA	/* GET TIME TO CHECK IF MORE THAN 3 SE
	000341	000006	7762	00	000	644	QLR	6	*URGENCY IN BUT 30-35
	000342	556154	1152	07	000	645	CMPA	WAKELM,DL	*SET URGENCY TO ZERO
	000343	000346	6022	00	010	646	TNC	GW1	*NO
	000344	000100	3352	07	000	647	LCA	=0100,DL	*CLEAR PST URGENCY. URGENCY WILL
	000345	400000	3553	16	000	648	ANSA	,KPX,P,PST	*SAVED IN ALARM ENTRY
		000346				649 GW1	EQU	*	
		000346				650	OPEN.	PST	
	000347	000077	3162	07	000	651	CANQ	=077,DL	/* URGENCY MUST EXIST
	000350	000352	6012	00	010	652	TNZ	GW1A	TO SET ALARM
	000351	000001	2762	07	000	653	ORQ	1,DL	/* EVERY PROCESS MUST HAVE NON-ZERO
		000352				654 GW1A	EQU	*	URGENCY. WHY THIS ONE HAS ZERO
	000352	003126	7052	00	010	655	TSX	SETLRX,SETLRM	*SET ALARM
	000353	000311	7102	00	010	656	TRA	DSCNT	*TAKE OUT OF EXECUTION
		000354				657 GW2	EQU	*	
	000354	002000	2362	07	000	658	LDQ	PS,ENB,DL	
	000355	400000	6563	16	000	659	ERSQ	,KPX,P,PST	*RESET ENABLE REQUEST LAG
		000356				660	OPEN.	PST	
	000357	003524	7102	00	010	661	TRA	EXITO	
	000360	037777777700			000	662 ALMASK	OCT	37777777700	

F N T R Y 1 3 S E T A L A R M C L O C K

664 *

665 *

THIS ENTRY POINT SET ALARM CLOCK

666 *

00000070

667 *

ONE IN UPPER IS ABOUT 4 SECONDS

00000070

668 *

000361

669 SCK

EQU

*

000361 003126 7052 00 010

670

TSX

SETLRX,SETLRM

*THIS IS ALL TO DO

000362 003524 7102 00 010

671

TRA

EXITO

*RETURN

F N T R Y 1 4 P M M E W A K E

673 *

674 * THIS ENTRY POINT SERVICES PMME PRIMITIVE

675 *

676 * PRFCALL Q-REG. - TIME INTERVAL TO SET ALARM IN MILI-SEC

000363

677 PMME EQU *

000363 001750 4022 07 000

678 MPY 1000,DL

*UNIT IN MICRO SEC

000364 000004 7722 00 000

679 QRL 4

*OK IN 16 MICRO SEC

000365 600215 7563 00 000

680 STQ .STMPQ,,P.SSA

PUT ARGUMENT IN .STMPQ

000366 000331 7102 00 010

681 TRA GWAKE

ENTRY 15 SUSPEND A PROCESS

					683 *				
					684 *			THIS ENTRY TAKES OBJECT PROCESS OUT OF DISPATCHER QUEUE	
					685 *				
					686 *			PRECAL Q-REG. KPX OF OBJECT PROCESS	
		000000			687 SSX		SET	0	
		000001			688 SSY		SET	1	
		000367			689 SSPND		EQU	*	
		000367			690		SHUT.	DSP	
		000370			691		SHUT.	PST	
	000371	400000	2353	02	000	692	LDA	,QU,P,PST	*TAKE OUT PROCEXS STATUS
	000372	006042	4736	07	000	693	LDP	P,PRQ,SD,PRQ,DL	
	000373	100000	3152	03	000	694	CANA	PS,EXC,DU	*IF IT IS IN EXECUTION
	000374	000407	6012	00	010	695	TNZ	SS2	*DENIAL TRETURN
	000375	074000	3752	03	000	696	ANA	PS,DWT+PS.SSA+PS.SIO+PS.GAT,DU	
	000376	000404	6002	00	010	697	TZE	SS1	*IT IS NOT IN DISPATCHER QUEUE
	000377	400000	6553	02	000	698	ERSA	,QU,P,PST	*IT IS IN WAITING QUEUE
	000400	300037	2203	02	000	699	LDX	SSX,D,PRQ,QU,P,PRQ	*TAKE IT OUT OF QUEUE
	000401	300037	7213	02	000	700	LXL	SSY,D,PRQ,QU,P,PRQ	
	000402	300037	7403	11	000	701	STX	SSX,D,PRQ,SSY,P,PRQ	
	000403	300037	4413	10	000	702	SXL	SSY,D,PRQ,SSX,P,PRQ	
		000404				703	SS1	EQU	*
		000404				704	OPEN.	PST	
		000405				705	OPEN.	DSP	
	000406	003527	7102	00	010	706	TRA	EXIT1	*NORMAL RETURN
		000407				707	SS2	EQU	*
		000407				708	OPEN.	PST	
		000410				709	OPEN.	DSP	
	000411	003524	7102	00	010	710	TRA	EXIT0	*DENIAL RETURN

ENTRY 16 DELAY EXECUTION

			712 *						
			713 *	THIS ENTRY PUT PROCESS OUT OF EXECUTION AND PUT IT IN					
			714 *	DISPATCHER QUEUE TO DEALAY ITS EXECUTION					
		000000	715 P.PDP	SET	PO				
		000412	716 DELAY	EQU	* 1				
		000412	717	SHUT.	DSP				
	000413	002422	718	TSX	DACNX,DACN		*TAKE IT OUT OF EXECUTION		
	000414	001156	719	TRA	ED2		*GO INTO ENDSP ROUTINE		
			720				*TO PUT IT INTO DISPATCH QUEUE		

F N T R Y 1 7 W A K S

					722 *				
					723 *	THIS ENTRY SERVICES SYSTEM PROGRAM GEWAKE			
					724 *				
					725 *	PRECAL Q-REG. TIME INTERVAL TO SET TIMER			
					726 *	A-REG. BIT 0 = 1 TIMER ENABLE URGENCY OPTION EXISTS			
					727 **	12-17 ENABLE URGENCY			
					728 *	18= 1 SLEEP URGENCY OPTION EXIST			
					729 *				00000070
					730 *	ONE IN UPPER IS ABOUT 4 SECONDS			00000070
					731 *	30-35 SLEEP URGENCY			
			000415		732 WAKS	EQU	*		
			000415		733	SHUT.	PST		
	000416	600214	2353 00 000		734	LDA	.STMPA,,P.SSA	*URGENCY OPTON	
	000417	000422	6042 00 010		735	TMI	WK1	*YES	
	000420	400000	2353 16 000		736	LDA	,KPX,P.PST	*USE URGENCY IN CURRENT PST	
	000421	000423	7102 00 010		737	TRA	WK2		
			000422		738 WK1	EQU	*		
	000422	000022	7712 00 000		739	ARL	18		
			000423		740 WK2	EQU	*		
	000423	000006	7732 00 000		741	LRL	6		
	000424	400000	2353 16 000		742	LDA	,KPX,P.PST	/* GET PST TO CHECK ENABLE REQUEST	
	000425	000006	7762 00 000		743	QLR	6	*PREPARE TIMER ENTRY FORMAT	
	000426	002000	3152 07 000		744	CANA	PS.ENB,DL	*SKIP THIS SLEEP REQUEST	
	000427	000354	6012 00 010		745	TNZ	GW2		
	000430	600214	7213 00 000		746	LXL	Z,,STMPA,,P.SSA	*A-REG. BIT 18	
	000431	000436	6052 00 010		747	TPL	WK3	*SLEEP URGENCY NOT SPECIFIED	
	000432	400000	6307 16 000		748	EPPR	PO,,KPX,P.PST		
	000433	000100	1007 00 000		749	MLR	(1),(1)	*MOVE URGENCY 6 BITS	
	000434	600214	5200 01 000		750	ADSC6	.STMPA,5,1,P.SSA	*FROM ARG TO PST ENTRY	
	000435	000000	5200 01 000		751	ADSC6	,5,1,PO		
			000436		752 WK3	EQU	*		
			000436		753	OPEN.	PST		
	000437	000077	3162 07 000		754	CANQ	=077,DL	/* URGENCY MUST NOT BE ZERO	
	000440	000442	6012 00 010		755	TNZ	WK4	TO SET ALARM	
	000441	000001	2762 07 000		756	ORQ	1,DL	/* WHY ZERO	
			000442		757 WK4	EQU	*		
	000442	003126	7052 00 010		758	TSX	SETLRX,SETLRM	*SET ALARM	
	000443	000311	7102 00 010		759	TRA	DSCNT	*TAKE OUT OF EXECUTION	

F N T R Y 1 8 C L E A R D D S / S S A / G A T E

					761 *				
					762 *				THIS ENTRY CLEARES DDS STACK , RELEASE SSA PAGES AND
					763 *				OPEN MODULF GATE
					764 *				CALLED BY .MBRTI (AT TERMINATION)
					765 *				CALLED BY .MPOPA (AT DISASTER) X5 = DISASTERD PROCESS KPX
					766 *				
	000000				767	XOLDTL	SET	0	*CURRENT TAIL PAGE OF .SRM EMPTY Q
	000001				768	XNEWTL	SET	1	*NEW RELEASED PAGE QUEUE TAIL
	000005				769	XOBJ	SET	5	*OBJECT PROCESS KPX
	000003				770	XZERO	SET	3	*CONTENTS IS ZERO TO CLEAR GTM ENTRY
	000002				771	XCOUNT	SET	2	*COUNTER OF WAITING GATE PROCESSES
					772				
	000001				773	XPTR	SET	1	*GTM ENTRY POINTER
	000000				774	XTMP	SET	0	
					775				
	000001				776	P.SRM	SET	P1	
	000001				777	P.PID	SET	P1	
	000000				778	P.SPX	SET	P0	
	000001				779	P.PSH	SET	P1	
	000001				780	P.EIS	SET	P1	
					781		INHIB		SAVE,OFF
					782	CLDDS	EQU	*	
	000444	000000	6350	16	000	783	EAA		,KPX
	000445	000001	1060	03	000	784	CMPX		KPX,.PNPOP,DU
	000446	000454	6010	00	010	785	TNZ		CLE1
	000447	000000	6350	15	000	786	EAA		,XOBJ /* THIS IS POP. SO DISASTER HANDLING
	000450	006024	4714	07	000	787	LDP		P.PID,SD.PID,DL CHANGE WSR TO ACCESS OBJECT PROCESS
	000451	000002	7350	00	000	788	ALS		2
						789	INHIB		RESTORE
	000452	100001	7727	01	000	790	LDWS		1,AU,P.PID
	000453	000002	7712	00	000	791	ARL		2
						792	CLE1		EQU *
	000454	000000	6252	01	000	793	EAX		XOBJ,,AU *SET OBJECT PROCESS KPX
						794	SHUT.		DSP
	000456	006204	4716	07	000	795	LDP		P.PSH,SD.PSH,DL
	000457	600105	0323	00	000	796	LDQC		.SI.OAD+3,,P.SSA /* MOVE .SNTY WORD TO SLAVE PREFIX
	000460	100006	6707	00	000	797	LDD		P.SPX,PH.SPX,,P.PSH
	000461	000015	7563	00	000	798	STQ		.XNTRY,,P.SPX
	000462	600102	7203	00	000	799	LXL		XTMP,,SLOAD,,P.SSA
	000463	000516	6002	00	010	800	TZE		CLE5 *NO GATED MODULE
	000464	600017	2363	00	000	801	LDQ		.STATE,,P.SSA *RESET .TGATE BIT TO SHOW NO
	000465	001000	3762	03	000	802	ANQ		.TGATE,DU *GATED MODULE IN USE
	000466	000022	7712	00	000	803	ARL		18
	000467	600017	6563	00	000	804	ERSQ		.STATE,,P.SSA
						805	SHUT.		GTM
	000471	200001	7203	00	000	806	LXLO		1,,P.GTM
	000472	000000	6232	00	000	807	EAX		XZFRO,0 *INITIALIZE VALUE TO LOOP
	000473	000000	6222	00	000	808	EAX		XCOUNT,0
	000474	000002	6212	00	000	809	EAX		XPTR,2
						810	CLE2		EQU *

F N T R Y 1 8 C L E A R D D S / S S A / G A T E

000475	777777	2362	03	000	811	LDQ	-1,DU		
000476	000000	5202	01	000	812	RPTX	,1		
000477	200000	2113	11	000	813	CMK	,XPTR,P,GTM	*SEARCH FOR THE KPX	
000500	000510	6012	00	010	814	TNZ	CLE4	END OF SEARCH	
000501	277777	4433	11	000	815	SXL	XZERO,-1,XPTR,P,GTM		
000502	000506	6052	00	010	816	TPL	CLE3		
000503	400000	2362	03	000	817	LDQ	=0400000,DU		
000504	000001	6222	12	000	818	EAX	XCOUNT,1,XCOUNT	/* COUNT UP WAITING ONE	
000505	277777	6563	11	000	819	ERSQ	-1,XPTR,P,GTM		
		000506			820	CLE3	EQU	*	
000506	776000	3002	03	000	821	CANX0	=0776000,DU		
000507	000475	6012	00	010	822	TNZ	CLE2	*NOT ENT GO RETRY	
		000510			823	CLE4	EQU	*	
		000510			824	OPEN.	GTM		
000511	000000	6222	12	000	825	EAX	XCOUNT,,XCOUNT	*IF ANY PROCESS WAIT	
000512	000516	6002	00	010	826	TZE	CLE5	*ENABLE THOSE	
000513	010000	2362	03	000	827	LDQ	PS,GAT,DU	*TELL PROCESSOR PROCESS GLOBAL EVENT H	
000514	001402	2562	00	010	828	ORSQ	DSPEVT	*OCCURED FOR GATE WAIT	
000515	000001	0112	07	000	829	I.CLF4	NOP	MPENB-MPBASE,DL	
					830	*		IF MULTI-PROCESSOR,CHECK THE OTHER PROCESSOR.	
					831	*		IF IDLE, PAT HIM ON THE SHOULDER.	
					832	*	TSX	PUTPRX,MPENB	
					833				
		000516			834	CLE5	EQU	*	
000516	006133	4726	07	000	835	LDP	P,KL,SD,KL,DL		00000020
000517	600224	7223	00	000	836	LXL	XPAGE,,SRMWK,,P,SSA		
000520	000522	6002	00	010	837	TZE	CLE5A		
000521	005577	7012	00	010	838	TSX	RLSHX,RLSH	*RELEASE SSSA	
		000001			839	P.PSH	SET	P1	
		000000			840	P.DDS	SET	P0	
		000000			841	P.SSR	SET	P0	
		000522			842	CLE5A	EQU	*	
000522	600224	2223	00	000	843	LDX	XPAGE,,SRMWK,,P,SSA	*ANY OTHER PAGE	
000523	000532	6002	00	010	844	TZE	CLE5B	*NO	
000524	600172	1023	00	000	845	CMPX	XPAGE,,SSPRQ,,P,SSA	*IS IT IN PRIVATE SSA QUEUE	
000525	000532	6002	00	010	846	TZE	CLE5B		
000526	500000	6317	00	000	847	EPPR	P1,,P5		
		000005			848	P.SRM	SET	P5	/* FOR INTERFACE WITH LINK
000527	006047	4756	07	000	849	LDP	P,SRM,SD,SRM,DL	*IT IS TRANSIENT PAGE	
000530	006253	7032	00	010	850	TSX	LINKX,LINK	*LINK IT INTO QUEUE	
000531	100000	6357	00	000	851	EPPR	P5,,P1		
		000001			852	P.SRM	SET	P1	/* RESET
		000532			853	CLE5B	EQU	*	
000532	600172	0323	00	000	854	LDQC	,SSPRQ,,P,SSA	*RELEASE	
000533	000563	6002	00	010	855	TZE	CLE8	*NO MODULE IN CORE	
000534	006133	4726	07	000	856	LDP	P,KL,SD,KL,DL		
000535	006047	4716	07	000	857	LDP	P,SRM,SD,SRM,DL		
000536	006042	4736	07	000	858	LDP	P,PRQ,SD,PRQ,DL		
000537	200054	7203	00	000	859	LXL	XOLDTL,,KLSRM,,P,KL		
000540	000546	6002	00	010	860	TZE	CLE6		

ENTRY 18 CLEAR DDS / SSA / GATE

000541	000000	6212	06	000	861	EAX	XNEWTL,,QL	
000542	177777	7563	10	000	862	STQ	-1,XOLDTL,P,SRM	
000543	100001	7403	02	000	863	STX	XOLDTL,1,QU,P,SRM	
000544	200054	4413	00	000	864	SXL	XNEWTL,,KLSRM,,P,KL	
000545	000547	7102	00	010	865	TRA	CLE7	
		000546			866	CLE6	EQU	*
000546	200054	7563	00	000	867	STQ	.KLSRM,,P,KL	
		000547			868	CLE7	EQU	*
					869			ENABLE IF ANY WAIT
000547	600102	0343	00	000	870	LDAC	.SLOAD,,P,SSA	
000550	300002	7203	00	000	871	LXL	XTMP,D,SSAP+1,,P,PRQ	
000551	000000	6352	01	000	872	EAA	,AU	
000552	300001	0553	00	000	873	ASA	D,SSAP,,P,PRQ	/* COUNT UP FREE PAGES
000553	000014	7712	00	000	874	ARL	12	
000554	000000	5312	00	000	875	NEG		
000555	300001	0553	00	000	876	ASA	D,SSAP,,P,PRQ	/* COUNT DOWN USED PAGE NO.
000556	777743	1002	03	000	877	CMPX	XTMP,D,SSAP+1=D,PRQ,DU	/* IF ANY ONE WAITING
000557	000563	6002	00	010	878	TZE	CLE8	
000560	020000	2352	03	000	879	LDA	PS,SSA,DU	*TELL PROCESSOR PROCESS SSA WAIT EVENT
000561	001402	2552	00	010	880	ORSA	DSPEVT	*HAS OCCURED
000562	000001	0112	07	000	881	I.CLE7	NOP	MPENB=MPBASE,DL
					882	*		IF MULTI-PROCESSOR,CHECK THE OTHER PROCESSOR.
					883	*		IF IDLE, PAT HIM ON THE SHOULDER.
					884	*	TSX	PUTPRX,MPENB
		000563			885	CLE8	EQU	*
		000563			886		OPEN.	DSP
000564	600154	4503	00	000	887	STZ	.SPUSH,,P,SSA	*RELEASE SSA MODULE IN DISK
000565	600155	4503	00	000	888	STZ	.SPUSH+1,,P,SSA	
000566	600156	4503	00	000	889	STZ	.SPUSH+2,,P,SSA	
000567	600031	4503	00	000	890	STZ	.SDLVL,,P,SSA	
000570	000001	1062	03	000	891	CMPX	KPX,,PNPOP,DU	*IF POP, RETURN TO HIS ADDRESS SPACE
000571	003524	6012	00	010	892	TNZ	EXITO	
000572	006024	4716	07	000	893	LDP	P,PID,SD,PID,DL	
000573	100005	7727	00	000	894	LDWS	.PNPOP*4+1,,P,PID	
000574	003524	7102	00	010	895	TRA	EXITO	

ENTRY 19 PAY WRAP-UP

							897 *				
							898 *	THIS ENTRY PAYS USER'S WRAP-UP PROCESS			
							899 *	.MBRT2 ISSUES .GOTO .MDISP,19 TO RELEASE SSA MODULE			
							900 *	PRECALL .DR3 HAS ENTRY DESCRIPTOR TO WRAP UP ROUTINE			
							901 *				
							902 WRAPUP EQU *				
05			000575				903	EAA	.SSAWK		
06			000575	000340	6352	00	000	904	STA	.SSA,,P,SSA	
07			000576	600012	7553	00	000	905	STZ	.SELVL,,P,SSA	*PAY IN LEVEL 0
08			000577	600043	4503	00	000	906	SZN	.SATTR,,P,SSA	IF NATIVE MODE, DON'T CHECK ENTRY LOC
09			000600	600005	2343	00	000	907	TPL	WRPAOK	AGAINST LAST USED ISR BOUND DISPOPNP
10			000601	000612	6052	00	010	908	STD3	.STMPA,,P,SSA	DISPOPNP
11			000602	600214	0537	00	000	909	LDP	P,SSR,,SSR,DL	*LOAD SST TO ACCESS DATA
12			000603	001764	4706	07	000	910	LDP	P,SSR,,CTYP,DL	*CHANGE TYPE
13			000604	001761	4706	07	000	911	LDA	.WISR,,P,SSR	*GET BOUNDARY OF INSTRUCTION SEGMENT
14			000605	000010	2353	00	000	912	CMPA	.STMPA,,P,SSA	*CHECK ENTRY LOC IF IN THE SEGMENT
15			000606	600214	1153	00	000	913	TRC	WRPAOK	
16			000607	000612	6032	00	010	914	LDO	.AC234,DL	ABORT, ILLEGAL LOOP/WRAPUP ADDRESS 00000020
17			000610	000234	2362	07	000	915	TRA	BRT1,3	* GO TO .MBRT1,3
18			000611	003625	7102	00	010				
19								916 WRPAOK EQU *			
20								917	LDO	.TWRAP,DU	TURN ON THE WRAPUP FLAG 00000020
21			000612	000002	2202	03	000	918	ORSXO	.STATE,,P,SSA	00000020
22			000613	600017	2403	00	000	919	LDP	P,PSH,SD,PSH,DL	
23			000614	006204	4716	07	000	920	LDP	P,PSH,,CTYP,DL	
24			000615	001761	4716	07	000	921	LDAQ	PH,AP,,P,PSH	/* RESET ASR, PSR
25			000616	100030	2373	00	000	922	ANA	=0177377,DL	ASR IS EMPTY
26			000617	177377	3752	07	000	923	STAQ	.STMPA,,P,SSA	
27			000620	600214	7573	00	000	924	LDAS	.STMPA,,P,SSA	
28			000621	600214	7707	00	000	925	LDPS	.STMPA,,P,SSA	
29			000622	600214	7717	00	000	926	LDDSA	WRPDAR	/* RESET DATA STACK POINTER
30			000623	000642	1706	00	010	927	LDAQ	PH,SS,,P,PSH	
31			000624	100014	2373	00	000	928	ADLA	64,DU	/* RESET SSR TO MAKE FRAME
32			000625	000100	0352	03	000	929	SBLQ	64*4,DL	AT BOTTOM OF SS SEGMENT
33			000626	000400	1362	07	000	930	STAQ	.STMPA,,P,SSA	
34			000627	600214	7573	00	000	931	LDSS	.STMPA,,P,SSA	
35			000630	600214	7737	00	000	932	ICLIMB	.DR3,,SLAVE	
36									VFD	18/,09/713,1/1,1/0,1/0,6/M.	
37			000631	000000713400			000		VFD	1/0,9/0,8/0,1/,N,1/,0,2/0,2/0,12/,DR3	
38			000632	000000001773			000	933	LDP	P,RMS,SD,RMS,DL	/* RESET PROCESSOR NO.
39			000633	006063	4706	07	000	934	RSW	2,,P,RMS	
40			000634	000002	2313	00	000	935	ANA	3,DL	
41			000635	000003	3752	07	000	936	EAX	PN,,AL	
42			000636	000000	6272	05	000	937	.CALL	.MFALT,8	/* S/S UNDER FLOW FAULT
43									INHIB	SAVE,ON	
44									EPPRO	*+3,\$	
45			000637	000003	6306	04	642		TRA	.CRCAL,,P,CR	
46			000640	700002	7103	00	000		ZERO	.MFALT,8	
47			000641	000065	000010		000		INHIB	RESTORE	
48									ZERO		
49			000642	000000	000000		000	938 WRPDAR	ZERO		
50			000643	000000011207			000				

1248T 02 12-27-79 09.322

H6600J7.057

GCOS IV

4VX

DISPATCHER

791219DISP

PAGE

35

F N T R Y 1 9 P A Y W R A P - U P

000644	777777600640	000	939 P.NULLEVFC	.DRO,,,NONE
000645	000000001770	000		

F N T R Y 2 0 S P E C I F I C E V E N T W A I T

941 *
 942 * THIS ENTRY IS CALLED BY MACRO IN .MDISP
 943 * TO PUT THE PROCESS IN SPECIFIC EVENT WAIT STATUS
 944 * SPECIFIC EVENT IS DIFFERENT FROM COMMON EVENT OF ENABLE
 945 * ENABLE SO PS.ENB BIT IN PST IS NOT CHANGED BY THIS CALL
 946 * PROCESS MAY DISPATCHED IF SPECIFIC EVENT OCCURE OR
 947 * COMMON ENABLE REQUEST COME. AT THAT TIME HIGHER EVENT
 948 * SUB PROCESS MAY OR MAY NOT TAKE CONTROL
 949 *
 950 * PRECAL X2 SPECIFY EVENT 0 = MODULE GATE OPEN
 951 * 1 = SSAPAGE BECOME FREE
 952 * 2 = SSSA LOADING COMPLETE
 953 * PST, DSP MUST BE SHUT
 954 * GTM MAY BE SHUT
 955 *

		000002	956	XRQE	SET	2			
		000000	957	XBACK	SET	0			
		000000	958	XPST	SET	0			
		000001	959	XQCB	SET	1			
		000646	960	EVTWT	EQU	*			
000646	006136	4746 07 000	961		LDP		P.PST,SD.PST,DL		
000647	006042	4736 07 000	962		LDP		P.PRQ,SD.PRQ,DL		
000650	003713	7012 00 010	963		TSX		CKEVTX,CKEVT	*CHECK IF ANY EVENT PAYABLE	
000651	000672	7102 00 010	964		TRA		EVTWTD	*YES. SO PUT INTO QUEUE FOR DISPATCH	
000652	000674	2202 12 010	965		LDX		XPST,EVLST,XRQE		
000653	400000	2403 16 000	966		ORSX		XPST,,KPX,P.PST		
			967					*SHOW WE WAIT FOR SPECIFIC EVENT	
000654	000674	7212 12 010	968		LXL		XQCB,EVLST,XRQE	*GET QCBB ADDRESS RELATIVE TO D.PRQ	
000655	300037	7203 11 000	969		LXL		XBACK,D.PRQ,XQCB,P.PRQ		
000656	300037	4403 16 000	970		SXL		XBACK,D.PRQ,KPX,P.PRQ		
000657	300037	7413 16 000	971		STX		XQCB,D.PRQ,KPX,P.PRQ		
000660	300037	7463 10 000	972		STX		KPX,D.PRQ,XBACK,P.PRQ		
000661	300037	4463 11 000	973		SXL		KPX,D.PRQ,XQCB,P.PRQ		
		000662	974	FVTWTE	EQU	*			
		000662	975		OPEN.		PST		
000663	000000	6222 12 000	976		EAX		XRQE,,XRQE	*IF GATE WAIT. OPEN GTM GATE TOO	
000664	000667	6012 00 010	977		TNZ		EVWI		
000665	006027	4726 07 000	978		LDP		P.GTM,SD.GTM,DL		
		000666	979		OPEN.		GTM		
		000667	980	FVWI	EQU	*			
000667	002422	7022 00 010	981		TSX		DACNX,DACN	*TAKE THE PROCESS OUT OF EXEC	
		000670	982		OPEN.		DSP		
000671	001173	7102 00 010	983		TRA		MAIN		
		000672	984	EVTWTD	EQU	*			
000672	003255	7012 00 010	985		TSX		PUTPRX,PUTPRQ	*PUT INTO DISP QUEUE	
000673	000662	7102 00 010	986		TRA		EVTWTE		
		000674	987	EVLST	EQU	*			
000674	010000	777745 000	988		ZERO		PS.GAT,D.GMOD+1-D.PRQ		
000675	020000	777743 000	989		ZERO		PS.SSA,D.SSAP+1-D.PRQ		
000676	004000	777747 000	990		ZERO		PS.SIO,D.SIO+1-D.PRQ		

ENTRY 21 ENABLE NEW PROCESS

```

992 *
993 * THIS ENTRY PUT A NEW PROCESS INTO DISPATCHER QUEUE
994 * AND IF THERE ARE PRIORITY OPTION, SET PDP ENTRY TO
995 * PROPER PRIORITY VALUE.
996 *
000004 997 XOBJ SET 4
000001 998 P.PDP SET P1
000677 999 ENBP EQU * *ENABLE IT IF THERE ARE NO PRIORITY
1000 *CONTROL OPTION
1001 *IF ANY OPTION THIS INSTRUCTION WILL
1002 *BE MODIFIED TO ASSIGN PRIORITY
000677 600214 2343 00 000 1003 SZN .STMPA,,P.SSA *IF A=NONZERO. PRIORITY CHANGE
000700 003524 6012 00 010 1004 X.ENBP TNZ EXITO *REQUEST. SO DENY IT
000701 006036 4716 07 000 1005 LDP P.PDP,SD.PDP,DL
000702 100000 2353 14 000 1006 LDA ,XOBJ,P.PDP /* RESET PDP ENTRY
000703 000712 3752 00 010 1007 ANA ENBPDP
000704 000713 2752 00 010 1008 ORA ENBPNW
000705 100000 7553 14 000 1009 STA ,XOBJ,P.PDP
000706 000000 0112 07 000 1010 X.ENFW NOP /* IF PRIORITY OPTION TRA
000707 000000 6362 14 000 1011 EAQ ,XOBJ *OBJECT PROCESS KPX
000710 770002 2762 07 000 1012 ORQ =0770002,DL *URGENCY AND ENABLE CODE
1013 *THIS URGENCY IS DUMMY
000711 000225 7102 00 010 1014 TRA ENB
000712 774260 776377 000 1015 ENBPDP ZERO -1-ZINTRP-ZEXCOD-ZBPRI0-ZIOURC,-1-ZEXCOD
000713 000040 000000 000 1016 ENBPNW ZERO ZIOWEN

```

1248T 02 12-27-79 09.322

H6600J7.057 GCOS IV 4VX DISPATCHER

791219DISP

PAGE 38

F N T R Y 2 2 C H A N G E P R I O R I T Y

1018 *

1019 *

THIS ENTRY POINT CHANGES PRIORITY. IF A/B PRIORITY OPTION CONFIGE

1020 *

000714 003524 7102 00 010 1021 EPJT1 TRA EXITO

E P # 2 3 , S U B - D I S P Q U E U E C O N T R O L

1023 *										SUBD0280
1024 *										SUBD0290
1025 *										SUBD0300
1026 *										SUBD0310
1027 *										SUBD0320
1028 *										SUBD0330
1029 *										SUBD0340
1030 *										SUBD0350
1031	SDQC	NULL								SUBD0360
000715	006042	4736	07	000	1032	LDP	P.PRQ,SD,PRQ,DL			SUBD0370
000716					1033	.SHUT	D.GATE=1,,P,PRQ	SHUT GATE ON CONTROL TABLE		SUBD0380
000721	000000	2232	03	000	1034	LDX3	0,DU	X3 IS SEARCH INDEX		SUBD0390
000722	600214	2353	00	000	1035	LDA	.STMPA,,P,SSA			SUBD0400
000723	000767	6002	00	010	1036	TZF	SDQCE	* REQUEST IS TO DISABLE		SUBD0410
000724	300024	2343	13	000	1037	SDQCD	SZN	D.SQPT,3,P,PRQ		SUBD0420
000725	000763	6012	00	010	1038	TNZ	SDQCC	* ENTRY OCCUPIED		SUBD0430
000726	300024	7553	13	000	1039	STA	D.SQPT,3,P,PRQ	FOUND HOLE, STORE NEW ENTRY		SUBD0440
000727	300017	2213	00	000	1040	LDX1	D.SQUE,,P,PRQ	X1 = PTR TO LAST ENTRY SERV'D		SUBD0450
000730	300025	2223	11	000	1041	LDX2	D.SQPT+1,1,P,PRQ	X2 = PTR IN LAST ENTRY		SUBD0460
000731	300025	7423	13	000	1042	STX2	D.SQPT+1,3,P,PRQ	MAKE NEW ENTRY POINT WHERE LAST DID		SUBD0470
000732	300025	7433	11	000	1043	STX3	D.SQPT+1,1,P,PRQ	AND LAST ONE POINT TO NEW		SUBD0480
000733	300017	0543	00	000	1044	AOS	D.SQUE,,P,PRQ	ADD TO * PROCSSFS IN QUEUE		SUBD0490
000734					1045	.OPEN	D.GATE=1,,P,PRQ			SUBD0500
000736	006036	4716	07	000	1046	LDP	P.PDP,SD,PDP,DL	CHECK PRIORITY VALUE FOR PROCESS # ONE		SUBD0510
000737	700270	2233	00	000	1047	LDX3	.CRMKP,,P,CR	GREATER THAN MAXIMUM VALUE		SUBD0520
000740	100001	2343	13	000	1048	SZN	1,3,P,PDP	WHICH IS FOR SUB-DISPACHNG		SUBD0530
000741	003527	6012	00	010	1049	TNZ	EXIT1	* EXIT, THIS IS NOT THE FIRST REQUEST		SUBD0540
000742	001777	2222	03	000	1050	LDX2	=01777,DU	*** PRIORITY VALUE FOR SUB-DISP ***		SUBD0550
000743	100001	7423	13	000	1051	STX2	1,3,P,PDP	PUT IT IN .CRMKP+1 ENTRY		SUBD0560
000744					1052	SHUT.	DSP			SUBD0570
000745	000001	6232	13	000	1053	EAX3	1,3	MUST ENTER KPX=MAX+1 IN DISP'R QUEUE		SUBD0580
000746	300037	7243	00	000	1054	LXL4	D,PRQ,,P,PRQ			SUBD0590
000747	000754	6002	00	010	1055	TZE	SDQCB	* NO ENTRY IN DISP'R QUEUE		SUBD0600
000750	100000	1023	14	000	1056	SDQCA	CMPX2	0,4,P,PDP	COMPARE FIXED PRIORITY TO OTHER	SUBD0610
000751	000754	6046	00	010	1057	TMOZ	SDQCB	* FOUND POSITION W/ HIGHER PRIORITY		SUBD0620
000752	300037	7243	14	000	1058	LXL4	D,PRQ,4,P,PRQ	ADV TO NEXT IN QUEUE		SUBD0630
000753	000750	6012	00	010	1059	TNZ	SDQCA	* CONTINUE IF MORE IN QUEUE		SUBD0640
000754	300037	2223	14	000	1060	SDQCB	LDX2	D,PRQ,4,P,PRQ	LINK OUR SUB-DISP ENTRY	SUBD0650
000755	300037	4433	12	000	1061	SXL3	D,PRQ,2,P,PRQ	INTO QUEUE W/ FIXED PRIORITY		SUBD0660
000756	300037	7433	14	000	1062	STX3	D,PRQ,4,P,PRQ			SUBD0670
000757	300037	4443	13	000	1063	SXL4	D,PRQ,3,P,PRQ			SUBD0680
000760	300037	7423	13	000	1064	STX2	D,PRQ,3,P,PRQ			SUBD0690
000761					1065	OPEN.	DSP			SUBD0700
000762	003527	7102	00	010	1066	TRA	EXIT1	RETURN WITH NEW ENTRY MADE		SUBD0710
000763	000002	0232	03	000	1067	SDQCC	ADLX3	2,DU	ADV TO NEXT ENTRY	SUBD0720
000764	000012	1032	03	000	1068	CMPX3	10,DU			SUBD0730
000765	000724	6022	00	010	1069	TNC	SDQCD			SUBD0740
000766	000774	7102	00	010	1070	TRA	SDQCF	DENIAL EXIT, TOO MANY REQUESTS		SUBD0750
000767	300024	1063	13	000	1071	SDQCF	CMPX6	D.SQPT,3,P,PRQ	DISABLE REQUEST, CHECK FOR MATCH	SUBD0760
000770	000777	6002	00	010	1072	TZE	SDQCG	* FOUND MATCH		SUBD0770

F P # 2 3 , S U B - D I S P Q U E U E C O N T R O L

000771	000002	0232	03	000	1073	ADLX3	2,DU		SUBD0780
000772	000012	1032	03	000	1074	CMPX3	10,DU		SUBD0790
000773	000767	6022	00	010	1075	TNC	SDQCE		SUBD0800
		000774			1076	SDQCF	.OPEN	D.GATE-1,,P,PRQ	SUBD0810
000776	003524	7102	00	010	1077	TRA	EXIT0	DENIAL EXIT, NO SUCH PROCESS	SUBD0820
000777	300024	4503	13	000	1078	SDQCG	STZ	D,SQPT,3,P,PRQ FOUND ENTRY, CLEAR IT	SUBD0830
001000	300025	2213	13	000	1079	LDX1	D,SQPT+1,3,P,PRQ	MOVE ITS PTR TO "LAST SERV'D"	SUBD0840
001001	300017	7413	00	000	1080	STX1	D,SQUE,,P,PRQ	SO IT WILL HAVE A VALID ONE	SUBD0850
001002	300025	1033	13	000	1081	CMPX3	D,SQPT+1,3,P,PRQ	MUST UNLINK THIS ENTRY	SUBD0860
001003	001010	6002	00	010	1082	TZF	SDQCH	IT WAS THE ONLY ONE IN TABLE	SUBD0870
001004	000000	2222	03	000	1083	LDX2	0,DU		SUBD0880
001005	300025	1033	12	000	1084	SDQ CJ	CMPX3	D,SQPT+1,2,P,PRQ LOOK FOR ENTRY PNT'G TO THIS ONE	SUBD0890
001006	001033	6012	00	010	1085	TNZ	SDQCI		SUBD0900
001007	300025	7413	12	000	1086	STX1	D,SQPT+1,2,P,PRQ	FOUND IT, LINK IT AROUND THIS ONE	SUBD0910
001010	300025	4503	13	000	1087	SDQCH	STZ	D,SQPT+1,3,P,PRQ AND CLEAR THIS ONE'S PTR	SUBD0920
001011	300017	7223	00	000	1088	LXL2	D,SQUE,,P,PRQ	REDUCE COUNT OF ENTRIES	SUBD0930
001012	000001	1222	03	000	1089	SBLX2	1,DU		SUBD0940
001013	300017	4423	00	000	1090	SXL2	D,SQUE,,P,PRQ		SUBD0950
		001014			1091	.OPEN	D.GATE-1,,P,PRQ		SUBD0960
001016	000000	6222	12	000	1092	EAX2	0,2		SUBD0970
001017	003527	6012	00	010	1093	TNZ	EXIT1	RETURN IF STILL AN ENTRY IN THE TABLE	SUBD0980
001020	006036	4716	07	000	1094	LDP	P,PDP,SD,PDP,DL		SUBD0985
		001021			1095	SHUT.	DSP		SUBD0990
001022	700270	2223	00	000	1096	LDX2	.CRMKP,,P,CR	MUST REMOVE SUB-DISP FROM DISP-QUEUE	SUBD1000
001023	000001	6222	12	000	1097	EAX2	1,2	KPX = MAXIMUM + 1	SUBD1010
001024	100000	4503	12	000	1098	STZ	0,2,P,PDP	CLEAR PRIORITY VALUE FROM TABLE	SUBD1015
001025	300037	2233	12	000	1099	LDX3	D,PRQ,2,P,PRQ		SUBD1020
001026	300037	7243	12	000	1100	LXL4	D,PRQ,2,P,PRQ	LINK AROUND THIS ENTRY	SUBD1030
001027	300037	7433	14	000	1101	STX3	D,PRQ,4,P,PRQ		SUBD1040
001030	300037	4443	13	000	1102	SXL4	D,PRQ,3,P,PRQ		SUBD1050
		001031			1103	OPEN.	DSP		SUBD1060
001032	003527	7102	00	010	1104	TRA	EXIT1	RETURN, OK	SUBD1070
001033	000002	0222	03	000	1105	SDQCI	ADLX2	ADV TO NEXT ENTRY	SUBD1080
001034	000012	1022	03	000	1106	CMPX2	10,DU		SUBD1090
001035	001005	6022	00	010	1107	TNC	SDQ CJ		SUBD1100
001036	000774	7102	00	010	1108	TRA	SDQCF	DENIAL RETURN, NO SUCH ENTRY	SUBD1110

ENTRY 38 DUMMY

	1110 *				
	1111 *	DUMMY ENTRY POINT			
	1112 *				
001037	1113	DMPE3	EQU	*	
001037	1114	ZOP		8	*UNDIFINED ENTRY POINT CALLED

FP # 2 4 , S T A R T A N Y I D L E P R O C ' R

					1116 *	CALLLED BY PARENT PROCESS WHEN MAKING A FIRST		SUBD3670
					1117 *	SUB-DISPATCH QUEUE ENTRY		SUBD3680
					1118 *			SUBD3690
		001040			1119 FIDLP	NULL		SUBD3700
001040	000001	0112 07	000	1120	I.CLF9	NOP	MPFNB=MPBASE,DL (OR, TSX1 MPENB IF MULTI=PROC)	SUBD3710
001041	003524	7102 00	010	1121	TRA	EXITO		SUBD3720

END OF SOFTWARE INTERRUPT

001103	000140	1007	40	000	1173	MLR	(1,1),(1,1)	AND MOVE
001104	000021	0000	01	000	1174	ADSC9	D.SSA+1,,AU,P0	
001105	600340	0000	01	000	1175	ADSC9	.SSAWK,,AU,P.SSA	
001106	100016	2353	10	000	1176	LDA	D.STKP,XPTR,P.DDS	/* RECOVER .STKSP
001107	600216	7553	00	000	1177	STA	.STKSP,,P.SSA	
001110	100015	2353	10	000	1178	LDA	D.ELVL,XPTR,P.DDS	
001111	600043	7553	00	000	1179	STA	.SELVL,,P.SSA	
001112	100017	2353	10	000	1180	LDA	D.SVFT,XPTR,P.DDS	IMPR6140
001113	600221	7553	00	000	1181	STA	.SVFLT,,P.SSA	IMPR6150
001114	100014	2353	10	000	1182	LDA	D.STAT,XPTR,P.DDS	
		000000			1183	XSTT	SET	0
001115	000000	6202	01	000	1184	EAX	XSTT,,AU	
001116	600017	3403	00	000	1185	ANSX	XSTT,,STATE,,P.SSA	*RESET .STATE UPPER
001117	600017	2363	00	000	1186	LDQ	.STATE,,P.SSA	*RESET EVENT WAITING BIT
001120	003704	3762	00	010	1187	ANQ	S.STAT	FOR TERMINATED INTERRUPT PROCESSING
001121	600017	7563	00	000	1188	STQ	.STATE,,P.SSA	*Q-REG NEEDED FOR TRACE
					1189	*IYEFVT	TRA	Y.EEVT
					1190			DELETED
001122	300000	3752	07	000	1191	ANA	.TRDBK+.TWAKE,DL	*IF SAVED PROCESS WAITING SPECIFIC
001123	001162	6002	00	010	1192	TZE	ED1	*EVENT, CHECK THEM AGAIN.
					1193			*ADD .TXXXX IF ANY ADDITIONAL EVENT
001124	200000	3152	07	000	1194	CANA	.TRDBK,DL	*GEROAD EVENT (ALL I/O COMPLETE)
001125	001151	6002	00	010	1195	TZF	EL30	*NO
					1196	SHUT.	QGT	*CHECK I/O REQUEST
001127	600117	2213	00	000	1197	LDX	XTMP,,SRQST,,P.SSA	*GEPR IS SAME AS UNCOMPLETED I/O
001130	010000	3012	03	000	1198	CANX	XTMP,,RGEPR,DU	
001131	001134	6012	00	010	1199	TNZ	EL10	
001132	600160	2213	00	000	1200	LDX	XTMP,,SRQCT,,P.SSA	*ANY I/O OUTSTANDS
001133	001147	6002	00	010	1201	TZE	EL20	*NO. GEROAD EVENT OCCURED
					1202	FL10	EQU	*
					1203	OPEN.	QGT	*GEROAD NOT BROKEN. DON'T DISPATCH
001135	600117	2363	00	000	1204	LDQ	.SRQST,,P.SSA	/* CHECK IF ANY CANCEL ROADBLOCK
001136	000100	3762	07	000	1205	ANQ	.RCRD,DL	REQUEST OUTSTANDS
001137	001145	6012	00	010	1206	TNZ	EL15	
001140	600017	2553	00	000	1207	ORSA	.STATE,,P.SSA	
001141	000000	0112	07	000	1208	X.EL10	NOP	,DL
001142	003713	7012	00	010	1209	TSX	CKEVTX,CKEVT	
001143	001162	7102	00	010	1210	TRA	ED1	*EVENT PAYABLE. SO PUT IT IN QUEUE
001144	001165	7102	00	010	1211	TRA	ED9	
					1212	FL15	EQU	*
001145	600117	6563	00	000	1213	ERSQ	.SRQST,,P.SSA	/* RESET CANCEL REQUEST
001146	001162	7102	00	010	1214	TRA	ED1	AND PUT IN QUEUE
					1215	FL20	EQU	*
					1216	OPEN.	QGT	*OPEN GATE AND PUT IT IN QUEUE
001150	001162	7102	00	010	1217	TRA	ED1	
					1218	FL30	EQU	*
001151	100000	3152	07	000	1219	CANA	.TWAKE,DL	*IF NOT ENABLE WAIT, THEN
001152	001152	6002	00	010	1220	TZE	*	*SOME SPECIFIC EVENT. T.B.D.
001153	600017	2553	00	000	1221	ORSA	.STATE,,P.SSA	*YES. SO PUT IT IN DISPATCH QUEUE
001154	001162	7102	00	010	1222	TRA	ED1	

F N D O F D I S P A T C H

					1224 *				
					1225 *	THIS ROUTINE PROCESSES AFTER ROADBLOCK OR RELINQUISH			
					1226 *	ENDSP1 - PROCESS HAS NO EXPLICIT WAITING EVENT			
					1227 *	IF NO SYSTEM EVENT IS WAITING, PUT IT IN TAIL OF DISPATCH QUEUE			
					1228 *				
					1229 *	ENDSP5 - PROCESS HAS SOME WAITING EVENT			
					1230 *	IT IS NOT REQUIRED TO PUT IN QUEUE, IF NO SYSTEM EVENT WAITING			
					1231 *				
					1232	P.PDP	SET	PO	
					001155	1233	ENDSP1	EQU	*
					001155	1234		OPEN.	QGT
					001156	1235	ED2	EQU	*
	001156	003713	7012	00	010	1236		TSX	CKEVTX,CKEVT
	001157	001162	7102	00	010	1237		TRA	ED1
	001160	000000	0112	07	000	1238	IPED	NOP	,DL
	001161	003360	5542	17	010	1239		STC1	PPTAIL,PN
					1240				
					1241				
					1242				
					1243				
					001162	1244	FD1	EQU	*
					001162	1245		SHUT.	PST
					001163	1246	ED3	EQU	*
	001163	003255	7012	00	010	1247		TSX	PUTPRX,PUTPRQ
					001164	1248	FD4	EQU	*
					001164	1249		OPEN.	PST
					001165	1250	FD9	EQU	*
					001165	1251		OPEN.	DSP
	001166	001173	7102	00	010	1252		TRA	MAIN
					001167	1253	ENDSP5	EQU	*
	001167	000000	0112	07	000	1254	X.ED5	NOP	,DL
	001170	003713	7012	00	010	1255		TSX	CKEVTX,CKEVT
	001171	001162	7102	00	010	1256		TRA	ED1
	001172	001165	7102	00	010	1257		TRA	ED9

ALRM CHECK ROUTINE

```

1259 *
1260 * TEST ALRM CLOCK AND ENABLE PROCESS WHOSE ALRM HAS RUNG
1261 * FOR CONTROLAND NON-CONTROL PROCESSOR
1262 * SCU CLOCK IS USED ANY PROCESSOR CAN DO IT
1263 *
1264 INHIB ON
000001 1265 P.PID SET P1
001173 1266 MAIN EQU *
001173 006024 4716 07 000 1267 VDCN4V LDP P.PID,SD.PID,DL
001174 100004 7727 00 000 1268 LDWS .PNPOP*4,,P.PID *PROCESSOR PROCESS RUN IN POP WS
001175 100005 7727 00 000 1269 LDWS .PNPOP*4+1,,P.PID
1270 INHIB SAVE,OFF
001176 006130 4774 07 000 1271 VOVH1V LDP P.CR,SD.CR,DL
001177 006145 4764 07 000 1272 VOVH2V LDP P.SSA,SD.SSA,DL
001200 000000 0110 07 000 1273 NOP .DL *OFF INHIB BY NON-VU OP
001201 000000 0110 07 000 1274 NOP .DL
1275 INHIB RESTORE
001202 001310 2142 00 010 1276 ALMCK EQU *
1277 SZNC ALMGAT *ANY PROCESSOR ALREADY WORKING
001203 001403 6002 00 010 1278 TZE SELECT *YES
001204 006063 4706 07 000 1279 VALM1V LDP P.RMS,SD.RMS,DL *PREPARE FOR RSCR
001205 000040 4133 00 000 1280 RSCR SCUCLK,,P.RMS
1281
001206 000004 7732 00 000 1282 LRL 4
001207 700106 7563 00 000 1283 STQ .CRDAT+2,,P.CR *UPDATE TOD SCU CLOCK
001210 003453 3762 00 010 1284 ANQ SLMASK *CLEAR URGENCY FIELD
001211 001314 7562 00 010 1285 STQ ALMTMP SAVE CURRENT TIME IN TEMP TIL GATE SHUT 00000020
001212 006133 4726 07 000 1286 LDP P.KL,SD.KL,DL
001213 200175 0323 00 000 1287 LDQC .KLLOG,,P.KL *IS HEALS NEEDED
001214 001255 6012 00 010 1288 TNZ ALMCK3 *YES
001215 1289 ALMCK1 EQU *
001215 1290 SHUT. LRM *SHUT LRM GAYE
001216 001314 2362 00 010 1291 LDQ ALMTMP NOW THAT GATE IS SHUT, MOVE CURRENT 00000020
001217 001312 7562 00 010 1292 STQ ALMCRT TIME FROM TEMP TO PERM CELL 00000020
001220 200002 7203 00 000 1293 LXL 0,L.PTR,,P.LRM *ANY ENTRY
001221 001303 6002 00 010 1294 TZE ALMCK9 *NO. SKIP
001222 001312 2372 00 010 1295 ALMCKA EQU *
1296 LDAQ ALMCRT *LIMIT TIME OF CHECK
001223 001313 1152 00 010 1297 CMPA ALMPST
001224 001301 6022 00 010 1298 TNC ALMCK8
001225 200001 1113 00 000 1299 CWL L.FRST,,P.LRM
001226 001303 6012 00 010 1300 TNZ ALMCK9 *NOT TIME YES
001227 200002 2263 00 000 1301 ALMCKB EQU *
1302 LDX KPX,L.PTR,,P.LRM *GRT POINTER--KPX
001230 000001 3362 07 000 1303 LCQ 1,DL
001231 200002 0563 00 000 1304 ASQ L.PTR,,P.LRM *COUNT DOWN ENTRYYS
001232 200004 2353 16 000 1305 LDA L.LRM,KPX,P.LRM *PULL URGENCY
001233 000100 3362 07 000 1306 LCQ =0100,DL
001234 200004 7563 16 000 1307 STQ L.LRM,KPX,P.LRM *CLEAR ENTRY TO ENABLE
001235 000000 1062 03 000 1308 CMPX KPX,L.ICOM,DU *IS IT INTERCOM ALRM
    
```

ALRM CHECK ROUTINE

001236	001260	6002	00	010	1309	TZE	ALMCK4	*YES
001237	777777	1062	03	000	1310	CMPX	KPX,L,SWAP,DU	*IS IT SWAP ALRM
001240	001262	6002	00	010	1311	TZE	ALMCK5	*YES
001241	000077	3752	07	000	1312	ANA	URMASK,DL	*ISOLATE URGENCY
	001242				1313	ALMCK2	EQU	*
001242	000014	7352	00	000	1314	ALS	I2	*MAKE UP ENABLE WORD
001243	000001	2752	07	000	1315	ORA	1,DL	
001244	001311	7552	00	010	1316	STA	ALMENB	*SAVE IT
001245	001311	7462	00	010	1317	STX	KPX,ALMENB	
001246	003376	7012	00	010	1318	TSX	SRTLTX,SRTLRM	*GO RESET ALRM TABLE
	001247				1319	SHUT.	PST	
001250	001000	2352	07	000	1320	LDA	PS,LRM,DL	*SET PST ENTRY TO SHOW
001251	400000	2553	16	000	1321	ORSA	,KPX,P,PST	*ALARM HAS RANG
	001252				1322	OPEN.	PST	
001253	001311	2362	00	010	1323	LDQ	ALMENB	*THEN ENABLE IT
	001254				1324	OPEN.	LRM	
	001255				1325	ALMCK3	EQU	*
001255	002733	7032	00	010	1326	TSX	ENBLX,ENABL	*GO ENABLE IT
	001256				1327	ZOPS		*NO SUCH ENTRY
001257	001215	7102	00	010	1328	TRA	ALMCK1	*THEN NEXT ENNTRY TO ENABLE
	001260				1329	ALMCK4	EQU	*
001260	542001	6232	00	000	1330	EAX	W,.MSCM3*512+1	*LOST INTERCOM HANDLER
001261	001263	7102	00	010	1331	TRA	ALMCK6	
	001262				1332	ALMCK5	EQU	*
001262	441005	6232	00	000	1333	EAX	W,.MPOP6*512+5	*SWAP TROUBLE SHOOTER
	001263				1334	ALMCK6	EQU	*
001263	000000	6352	00	000	1335	EAA	0	
001264	003551	7012	00	010	1336	TSX	Z,POPQ	*SEND MESSAGE TO GPOP
001265	001271	7102	00	010	1337	TRA	ALMCK7	*QUEUE IS FULL RETRUN
001266	000001	6262	00	000	1338	EAX	KPX,.PNPOP	*GET POP KPX
001267	000077	2352	07	000	1339	LDA	=077,DL	*AND HIS URGENCY
001270	001242	7102	00	010	1340	TRA	ALMCK2	*GO ENABLE HIM - GPOP
	001271				1341	ALMCK7	EQU	*
001271	006063	4706	07	000	1342	LDP	P,RMS,SD,RMS,DL	*GET REAL MEMORY
001272	000040	4133	00	000	1343	RSCR	SCUCLK,,P,RMS	*QUEUE IS FULL
001273	310000	0362	07	000	1344	ADLQ	100*64*16,DL	
001274	000004	7722	00	000	1345	QRL	4	*RESET ALRM FOR 100 MILLI SEC
001275	200002	0543	00	000	1346	AOS	L,PTR,,P,LRM	*COUNT UP ENTRY
001276	200004	7563	16	000	1347	STQ	L,LRM,KPX,P,LRM	*STORE IT IN TABLE
001277	003376	7012	00	010	1348	TSX	SRTLTX,SRTLRM	*THEN RESET IT ALL
001300	001222	7102	00	010	1349	TRA	ALMCKA	
	001301				1350	ALMCK8	EQU	*
001301	200001	1113	00	000	1351	CWL	L,FRST,,P,LRM	
001302	001227	6012	00	010	1352	TNZ	ALMCKB	
	001303				1353	ALMCK9	EQU	*
	001303				1354	OPEN.	LRM	*OPEN GATE
001304	001312	2352	00	010	1355	LDA	ALMCRT	*SET WE CHECKED TILL THIS TIME
001305	001313	7552	00	010	1356	STA	ALMPST	
001306	001310	5542	00	010	1357	STC1	ALMGAT	*OPEN PROCEDURE GATE
001307	001403	7102	00	010	1358	TRA	SEI ECT	*RETURN

ALRM CHECK ROUTINE

001310	777777777777	000	1359	ALMGAT DEC	-1		
	001311		1360	ALMENB BSS	1	*ENABLE REQUEST WORD	
	001312		1361	ALMCRTBSS	1	*CURRENT TIME	
	001313		1362	ALMPST BSS	1	*LAST CHECKED TIME	
	001314		1363	ALMTMP BSS	1	TEMP HOME FOR CURRENT TIME	00000020

DISPATCHER WAIT ROUTINE

						1365 *						
						1366 *	ROUTINE TO HOLD A PROCESSOR WHEN THERE IS NOTHING FOR IT TO DO					
						1367 *	THE PROCESSOR IS SENT INTO A DIS STATE					
						1368 *						
						1369	WAIT	EQU	*			
	001315	100001	7727	00	000	1370		LDWS	1,,P,PID	LOAD WSR FOR PROCESSOR PROCESS	00000020	
	001316	001401	2262	00	010	1371		LDX	KPX,BYPAS	/* CHECK IF ANY BYEPASSED		
	001317	001435	6012	00	010	1372		TNZ	SLCT5	YES DISPATCH TO IT		
	001320	001377	4502	00	010	1373		STZ	LOPCK	/* CLEAR LOOP CHECK CELL		
						001321		VSLC1V	OPEN.	PST		
						001322		OPEN.	DSP			
	001323	003536	7012	00	010	1376		TSX	Z,RSCR	*GET INTERVAL TIME AND UPDATE TOD		
	001324	700767	0553	17	000	1377		ASA	.CROVH,PN,P,CR	*ACCONT FOR THIS TIME AS OVERHEAD		
	001325	200060	4503	00	000	1378		STZ	.KLIDI,,P,KL	*CLEAR INTERRUPT TIME		
	001326	006031	4726	07	000	1379		LDP	P,LRM,SD,LRM,DL	*		
	001327	200002	7213	00	000	1380		LXL	Z,I,PTR,,P,LRM	*DOES A JOB HAVE ITS ALARM SET		
	001330	001343	6002	00	010	1381		TZF	WAIT1	*NO. SET TIMER TO MAX VALUE		
	001331	200001	2363	00	000	1382		LDO	L,FRST,,P,LRM	*GET NEAREST TIME TO WAKE		
	001332	000004	7362	00	000	1383		QLS	4			
	001333	700264	1363	00	000	1384		SBLQ	.CRLCK,,P,CR			
	001334	001202	6042	00	010	1385		TMI	ALMCK		PTCH5330	
	001335	000012	7362	00	000	1386		QLS	10	*CONVERT INTERVAL TIME FROM MICRO		
	001336	001750	5062	07	000	1387		DIV	1000,DL	*SEC. UNIT TO 1/64 MILLI SEC. UNITS		
	001337	000010	7362	00	000	1388		QLS	8			
	001340	000001	2762	03	000	1389		ORQ	1,DU	*INSURE MINIMUM OF 1MS		
	001341	003533	7012	00	010	1390		TSX	Z,LDT	*SET TIMER		
	001342	001344	7102	00	010	1391		TRA	WAIT2			
						001343		WAIT1	EQU	*		
	001343	003532	7012	00	010	1393		TSX	Z,LDTMX	*SET TIMER TO MAX		
						001344		WAIT2	EQU	*		
	001344	007325	7102	00	010	1395		IYIDLE	TRA	Y,IDLE	*NOP IF TRACE OFF	
	001345	000000	6352	17	000	1396		EAA	,PN			
	001346	616000	2752	07	000	1397		ORA	DIS,DL	*PROCESSOR # AND DIS OP COSE		
						001347		.SHUTC	WAIT4,,.CRDSP,,P,CR	SHUT DISP GATE, BUT SKIP IF SHUT	00000020	
	001353	300013	7553	17	000	1399		STA	D,CPU,PN,P,PRQ	*BUT WHY		
	001354	700761	0543	00	000	1400		AOS	.CRTWT,,P,CR	*COUNT NO. OF TIMES CPU IS IDLE		
	001355	300036	0113	56	000	1401		NOP	D,DSP,ID,P,PRQ	*COUNT THIS CPU AS WAITING		
						001356		OPEN.	DSP			
						1403		INHIB	SAVE,OFF			
						1404						
						1405						
	001357	000000	6160	00	000	1406		DIS		*PROCESSOR IS IDLE. WAIT FOR INTER-		
						1407				*RUPT OT CIOC WHEN JOB PUT IN QUEUE		
						1408						
						1409		INHIB	RESTORE			
	001360	003532	7012	00	010	1410		TSX	Z,LDTMX			
						001361		SHUT.	DSP			
	001362	300036	0113	54	000	1412		NOP	D,DSP,DI,P,PRQ	*COUNT DOWN WAITING PROCESSORS		
	001363	000001	3352	07	000	1413		LCA	1,DL			
	001364	300013	7553	17	000	1414		STA	D,CPU,PN,P,PRQ	*RESET DIS TO -1		

DISPATCHR WAIT ROUTINE

					001365	1415	OPEN.	DSP	
					001366	1416	WAIT4	NULL	00000020
	001366	003536	7012	00	010	1417	TSX	Z,RSCR	
	001367	700762	0553	17	000	1418	ASA	.CRIDT,PN,P.CR	*ACCUMULATE IDEL TIME
	001370	200060	2343	00	000	1419	SZN	.KLIDI,,P.KL	*ANY INTERRUPT...
	001371	001376	6002	00	010	1420	TZE	WAIT3	*NO
	001372	200060	1353	00	000	1421	SBLA	.KLIDI,,P.KL	*COUNT TIME IN INT. HANDLWR
	001373	700767	0553	17	000	1422	ASA	.CROVH,PN,P.CR	*ACCUMULATE AS OVER HEAD
	001374	000000	5312	00	000	1423	NEG		
	001375	700762	0553	17	000	1424	ASA	.CRIDT,PN,P.CR	*REDUCE IDLE TIME BY TIME IN IOTRM
					001376	1425	WAIT3	EQU	*
	001376	001202	7102	00	010	1426	TRA	ALMCK	*GO LOOK FOR SOME INTO ALMCK
			616000			1427	DIS	BOOL	616000

SELECT A PROCESS TO DISPATCH

```

1429 *
1430 * SELECT A NEW PROCESS TO EXECUTE AFTER RELOC, ROADBLOCK, TR0
1431 * OR INTERRUPT. THE PROCESS IS SELECTED FROM A QUEUE OF
1432 * WAITING PROCESSES FOR DISPATCH AT SD.PROQ .
1433 * * BASIC DISPATCHER TAKE OUT THE FIRST PROCESS
1434 * * IN THE QUEUE TO START EXECUTION.
1435 * THE DISPATCHER WILL START SUB-PROCESS ( GEPR, ABORT, SWAP
1436 * COURTESY CALL) FOR THOSE APPEAR IN .SRQST WORD OF THE PROCESS.
1437 * START OF SUB-PROCESS IS CHECKED BY EXECUTION LEVEL .SELVL
1438 * AND STATUS .STATE.
000000 1439 SLX SET 0
000001 1440 P.PID SET P1
001377 1441 LOPCK BSS 2 /* LOOP PROTECTION KPX SAVE AREA
001401 1442 BYPAS BSS 1 /* BYE PASSED PROCESS BY LOOP CHECK
001402 1443 DSPEVT BSS 1 *EVENT REQUEST TO PROCESSOR PROCESS
001403 1444 SELECT EQU *
1445 INHIB SAVE,OFF
001403 000000 6260 00 000 1446 EAX KPX,0 *INITIAL VALUE TO SEARCH
001404 006024 4714 07 000 1447 LDP P.PID,SD.PID,DL
001405 006133 4724 07 000 1448 LDP P.KL,SD.KL,DL
001406 006042 4734 07 000 1449 LDP P.PRQ,SD.PRQ,DL
001407 000000 0110 07 000 1450 NOP ,DL
001410 000000 0110 07 000 1451 NOP ,DL
1452 INHIB RESTORE
001411 700100 2343 17 000 1453 SZN .CRCMC,PN,P.CR IS PROCESSOR RETIRING 00000020
001412 001416 6052 00 010 1454 TPL SLCT6 NO, CONTINUE 00000020
001413 1455 .GOTO .MFALT,1 YES, PARK IT 00000020
1456 INHIB SAVE,ON
001413 000002 6306 04 1415 EPPRO **2,$
001414 700010 7103 00 000 TRA .CRGT0,,P.CR
001415 000065 000001 000 ZFRO .MFALT,1
1457 INHIB RESTORE
001416 000002 6306 04 1415 NULL 00000020
001416 700037 2143 00 000 1457 SZNC .CROGT+5,,P.CR BEFORE WE GO TO SOME PROCESS, SEE IF DISPOPI
001417 001423 6002 00 010 1458 TZE SLCT9 INTERRUPT HANDLER IS WAITING (0 = NO) DISPOPI
001420 006133 4706 07 000 1459 LDP PO,SD.KL,DL IT HAS UNPROCESSED INTERRUPTS, 50 DISPOPI
001421 000114 4707 00 000 1460 LDP PO,,KLIOS,,PO GET ITS DESCRIPTOR AND GO DISPOPI
001422 000010 7103 00 000 1461 TRA 8,,PO TO ENTRY POINT 8 (.MIOS,8) DISPOPI
001423 1462 SLCT9 NULL DISPOPI
001423 1463 VSLE2V SHUT. DSP
001424 1464 SHUT. PST
001425 001401 4502 00 010 1465 STZ BYPAS /* CLEAR BYE PASSED PROCESS CELL
001426 001402 0342 00 010 1466 LDAC DSPEVT *ANY SYSTEM GLOBAL EVENT
001427 003076 6012 00 010 1467 TNZ DEVT *YES. GO PROCESS IT
001430 1468 SLCT1 EQU *
001430 300037 2263 16 000 1469 X.SLCT LDX KPX,D.PRQ,KPX,P.PRQ /* SELECT A PROCESS. BUT IF TRACE
1470 DUMPER IS ACTIVE, TRA TDCHCK
001431 001315 6002 00 010 1471 TZE WAIT *NO ENTRY
001432 700270 1063 00 000 1472 CMPX KPX,.CRMKP,,P.CR CHECK FOR VALUE GREATER THAN MAX SUBD1130
001433 001435 6022 00 010 1473 TNC SLCT5 LESS THAN MAX SUBD1140
    
```

SELECT A PROCESS TO DISPATCH

001434	002213	6012	00	010	1474	TNZ	SBDSP	* SUB-DISPATCH, GO TRY IT	SUBD1150
		001435			1475	SLCT5	EQU	*	
					1476			CHKCK IF THIS PROCESSOR CAN DO THE JOB	
001435	000000	6352	16	000	1477	EAA	,KPX		
001436	000002	7352	00	000	1478	ALS	2	* KPX*2 B PID INDEX	
001437	100000	2363	01	000	1480	LDQ	,AU,P,PID	*CHECK IF WSR0 IS ONE	
001440	777000	3762	03	000	1481	ANQ	=0777000,DU	*IF NOT, CAN'T PROCESSED	
001441	001000	1162	03	000	1482	CMPQ	=01000,DU		
001442	001444	6002	00	010	1483	TZE	SLCT10		
		001443			1484		ZOPS		
		001444			1485	SLCT10	EQU	*	
001444	100000	7727	01	000	1487	LDWS	,AU,P,PID	*GET ADDRESSABILITY	
001445	100001	7727	01	000	1488	LDWS	1,AU,P,PID	*CHANGE WORKING SPACES	
001446	000000	0112	07	000	1489	I.SLCO	NOP	MP = LDQ .SLWSQ.,P.SSA	00000020
001447	000000	0112	07	000	1490	NOP	,DL	MP = STQ .KLWSQ,PN,P.KL	00000020
		001450			1491	.TCAMP	P.KL	TEST & CLEAR ASSOCIATIVE MEMORY	00000020
						INHIB	SAVE,ON		
001450	200147	2143	17	000		SZNC	.KLCAM,7,P.KL		
001451	000002	6002	04	000		TZF	2,IC		
001452	000000	5326	00	000		CAMP	0		
						INHIB	RESTORE		
001453	600005	2363	00	000	1492	LDQ	.SATTR.,P.SSA	*GET ATTRIBUTE OF PROCESS	
001454	400000	2762	07	000	1493	ORQ	=0400000,DL	"OR" ON BIT FOR "PROC'R IN TEST"	00000020
001455	300007	3163	17	000	1494	CANQ	D.PRF,PN,P,PRQ	*CAN THIS PROCESSOR EXECUTE THIS	
001456	001520	6012	00	010	1495	TNZ	SLCT50	* NO,GO SEE WHY	00000020
001457	001377	2362	00	010	1496	LDQ	LOPCK	/* LOOP CHECK IS DEPTH 2	
001460	001400	1162	00	010	1497	CMPQ	LOPCK+1		
001461	001464	6012	00	010	1498	TNZ	SLCT15	NOT CONTINUOS DISPATCH	
001462	001377	1062	00	010	1499	CMPX	KPX,LOPCK	/* CHECK LOOP	
001463	001515	6002	00	010	1500	I.SLCT	TZE	/* IF PRIORITY PROCESS, IGNORE LOOP	
		001464			1501	SLCT15	EQU	*	
001464	001377	7462	00	010	1502	STX	KPX,LOPCK		
001465	001400	7562	00	010	1503	STQ	LOPCK+1		
		001466			1504	SLCT16	EQU	*	
001466	400000	2363	16	000	1505	LDQ	,KPX,P,PST		
001467	100000	3162	03	000	1506	CANQ	PS.EXC,DU		
001470	001430	6012	00	010	1507	TNZ	SLCT1	*ALREADY HE IS IN EXECUTION	
001471	100000	2762	03	000	1508	ORQ	PS.EXC,DU	*TURN ON IN EXECUTION BIT	
001472	040000	6762	03	000	1509	ERQ	PS.DWT,DU	*AND RESET WAITING BIT	
001473	400000	7563	16	000	1510	STQ	,KPX,P,PST		
001474	100002	7737	01	000	1511	LDSS	2,AU,P,PID	*LOAD SSR	
001475	300037	2203	16	000	1512	LDX	SLX,D,PRQ,KPX,P,PRQ	*TAKE THE PROCESS OUT OF QUEUE	
001476	300037	7213	16	000	1513	LXL	Z,D,PRQ,KPX,P,PRQ		
001477	300037	4413	10	000	1514	SXL	Z,D,PRQ,SLX,P,PRQ		
001500	300037	7403	11	000	1515	STX	SLX,D,PRQ,Z,P,PRQ		
001501	004000	2202	03	000	1516	LDX0	.AEXTM,DU	CHECK FOR EXTENDED MEMORY	EXTM5120
001502	600005	3003	00	000	1517	CANX0	.SATTR.,P.SSA		EXTM5130
001503	001510	6002	00	010	1518	TZF	SLCT20	* NOT EXTENDED MEMORY	EXTM5140
001504	001764	4706	07	000	1519	LDP	PO.,SSR,DL	IT IS EXT-MEM, SO LOAD WSR 4-7	EXTM5150
001505	001761	4706	07	000	1520	LDP	PO.,CTYP,DL	FROM S/S FRAME AND PUT	EXTM5160

SELECT A PROCESS TO DISPATCH

001506	000001	7727	00	000	1521	LDWS	1,,P0	THOSE VALUES IN PID IN CASE	EXTM5170
001507	100001	7527	01	000	1522	STWS	1,AU,P,PID	SOMEONE LOADS THEM FROM THERE	EXTM5180
		001510			1523	SLCT20	EQU	/* ENTRY FOR TRACE DUMPER SELECT	
001510	300037	4503	16	000	1524	STZ	D,PRQ,KPX,P,PRQ	*ENTRY HAS KPX,PN IN EXECUTION TIME	
001511	000000	6202	01	000	1525	EAX0	0,AU		00000020
001512	100000	7403	17	000	1526	STX0	0,PN,P,PID	SAVE PTR TO CURRFNT PID ENTRY	00000020
001513	200044	7463	17	000	1527	STX	KPX,,KLPRG,PN,P,KL	*SHOW WE ARE EXECUTING	
					1528			*GO TO REDSP	
001514	001534	7102	00	010	1529	TRA	REDSP	/* ENTER REDISPATCH	
		001515			1530	SLCT40	EQU	*	
001515	001377	4502	00	010	1531	STZ	LOPCK	/* SHOW ONE CHECK HAPPEN	
001516	001401	7462	00	010	1532	STX	KPX,BYPAS	AND SAVE THE KPX	
001517	001430	7102	00	010	1533	TRA	SLCT1		
001520	400000	3162	07	000	1534	SLCT50	CANQ	=0400000,DL	WHY CAN'T THIS PROC'R XEC THIS PROCESS
001521	001430	6002	00	010	1535	TZF	SLCT1	* SKIP IT, REASON NOT "PROC'R IN TEST"	00000020
001522	006144	4706	07	000	1536	LDP0	SD,SNB,DL		00000020
001523	000100	3362	07	000	1537	LCQ	=0100,DL	PROC'R IS IN TEST AND SO CAN ONLY	00000020
001524	000000	3763	16	000	1538	ANQ	0,6,P0	EXECUTE PROCESSES WITH SNUMB	00000020
001525	001532	1162	00	010	1539	CMPQ	SLCT55	= \$PACT OR \$SOLT	00000020
001526	001466	6002	00	010	1540	TZF	SLCT16		00000020
001527	001533	1162	00	010	1541	CMPQ	SLCT56		00000020
001530	001466	6002	00	010	1542	TZF	SLCT16		00000020
001531	001430	7102	00	010	1543	TRA	SLCT1		00000020
001532	534721236300			000	1544	SLCT55	BCI	1,\$PACT0	00000020
001533	536246436300			000	1545	SLCT56	BCI	1,\$SOLT0	00000020

DISPATCH TO THE PROCESS

95						1547 *						
94						1548 *						
93						1549 *						
92						1550 *						
91						1551 *						
90						1552 *						
89						1553 *						
88						1554 *						
87						1555 FBX						
86					000000	SET						
85					000000	1556 P.PSH	SET					
84					000000	1557 P.PSX	SET					
83					000001	1558 P.ENT	SET					
82					000001	1559 P.IOQ	SET					
81					000001	1560 P.PDP	SET					
80					001534	1561 REDSP	EQU					
79						1562	XEC					
78	001534	700546	7163	17	000	1562	XEC					
77	001535	000027	0112	07	000	1563 T.RDO	NOP					
76	001536	600117	2353	00	000	1564	LDA					
75	001537	000200	3152	07	000	1565	CANA					
74	001540	001546	6002	00	010	1566	TZE					
73					001541	1567 RDO	.CCAC					
72						INHIB	SAVE,ON					
71	001541	000000	0116	00	000	CCAC						
70	001542	700171	7163	00	000	XEC						
69	001543	700040	4133	00	000	RSCR						
68	001544	200240	7573	37	000	STAQ						
67	001545	200000	4503	17	000	STZ						
66						INHIB	RESTORE					
65	001546	600117	2353	00	000	1568 RDOA	LDA					
64	001547	001200	3752	07	000	1569	ANA					
63	001550	600117	6553	00	000	1570	ERSA					
62	001551	204000	2352	07	000	1571	LDA					
61	001552	600116	2553	00	000	1572	ORSA					
60	001553	600116	1727	00	000	1573 X.RED	LDO					
59						1574						
58	001554	600303	6743	04	000	1575	LCPR					
57	001555	006204	4706	07	000	1576	LDP					
56	001556	001761	4706	07	000	1577	LDP					
55	001557	000036	5717	00	000	1578	LDDSD					
54	001560	007304	7102	00	010	1579 TYDISP	TRA					
53	001561	700737	0543	00	000	1580	AOS					
52	001562	600230	0543	00	000	1581	AOS					
51	001563	400000	2353	16	000	1582	LDA					
50	001564	001000	3152	07	000	1583	CANA					
49	001565	001574	6002	00	010	1584	TZE					
48	001566	001000	6752	07	000	1585	ERA					
47	001567	000201	3362	07	000	1586	LCQ					
46	001570	600017	3563	00	000	1587	ANSQ					
45	001571	000020	2362	07	000	1588	LDQ					
44	001572	600017	2563	00	000	1589	ORSQ					

*ENABLE CACHE IF AVAILABLE
 MP = TRA MPCCAC
 *IF SINGLE PROCESSOR CLEAR CACHE
 FOR THE PROCESS WHICH HAS
 I/O COMPLETE. IF MP,
 CLEAR CACHE ON EVERY DISP'H
 *SET SYSTEM NECESSARY OPTION
 TILL INITIALIZED BY STARTER
 *LOAD OPTION REGISTER
 *IF MULTI-PROCESSOR, SET .CRORR/S
 LOAD MODE REGISTER (FOR HEX, OR NOT)
 *CHANGE TYPE
 *LOAD DATA STACK DESC.
 *NOP IF TRACE OFF. PROCESS SWITCH
 *COUNT UP PROCESS SWITCH TO SLAVE
 /* COUNT OF DISPATCH - EXC.REPORT
 *PULL PROCESS STATUS
 *IF ALARM SEEM TO HAVE RANG
 *NO
 *OFF THE BIT
 *OFF ALARM SET BIT IN .STATE
 TURN ON BIT SAYING IT RANG

DISPATCH TO THE PROCESS

001573	400000	7553	16	000	1590	STA	,KPX,P,PST	*SHOW WE ARE EXECUTING
		001574			1591	RD1	EQU	*
		001574			1592	OPEN.	PST	*OPEN
001575	006036	4716	07	000	1593	LDP	P,PDP,SD,PDP,DL	
001576	002041	3212	03	000	1594	LCX	XTMP,ZINTRP,ZIOWEN*1,DU	RESET PDP ENTRY INTR*PD 00000020
001577	100000	3413	16	000	1595	ANSX	XTMP,,KPX,P,PDP	*INDICATOR
001600	001615	2362	00	010	1596	X.RD1A	LDQ	TQTM
					1597			*CHECK B PRIORITY FOR TIME QUANTUM
001601	003533	7012	00	010	1598	TSX	Z,LDT	*CPU TIME ACCOUNT SWITCH
001602	003713	7012	00	010	1599	TSX	CKEVTX,CKEVT	*DETERMINE IF ANY EVENT
001603	001604	7102	10	010	1600	TRA	RDLST,EBX	*TRA TO PROPER ROUTINE
001604	001616	7102	00	010	1601	RD1A	TRA	CONT
001605	001673	7102	00	010	1602	TRA	UCC	*START USERCOURTESY CALL
001606	002051	7102	00	010	1603	TRA	SWP	*SWAP OUT THE PROCESS
001607	002104	7102	00	010	1604	TRA	ABT	*ABORT REQUEST
001610	001610	7102	00	010	1605	TRA	*	*WHAT
001611	001676	7102	00	010	1606	TRA	SCC	*SYSTEM COURTESY CALL
001612	002121	7102	00	010	1607	TRA	GPR	*GEPR PROCESSING
001613	002143	7102	00	010	1608	TRA	SO,GPS	*S/S OVERFLOW FAULT OR GEPR ON SYS I/O
001614	002135	7102	00	010	1609	TRA	DEAD	*PROCESS IS FROZEN
					1610			
001615	014430	7102	00	010	1611	TQTM	TRA	IDISP
					1612			*TIME QUANTUM OF ONE DISPATCH
					1613	.IDISP	EQU	TQTM
								*SET AT INITIALIZE
								*STEP BOARD TO INITIALIZE ROUTINE

F N T E R I N T O T H E P R O C E S S

					1615 *			THIS SECTION BIGINS CONTINUE THE PROCESS OR START A
					1616 *			EVENT PROCFESSING SUB-PROCESS, IF ANY AND POSSIBLE
					1617 *			
					1618 **			
					1619 *			BACK TO JOB AND CONTINUE PROCESSING
			001616		1620 CONT	EQU	*	
	001616	003577	7012 00 010		1621	TSX	CKLMTX,CKLMT	*CHECK IF CONTINUE ALLOWED
	001617	600017	2353 00 000		1622	LDA	.STATE,,P.SSA	
	001620	600031	2213 00 000		1623	LDX	Z,.SDLVL,,P.SSA	
	001621	001625	6012 00 010		1624	TNZ	CONT1	
	001622	000200	3152 07 000		1625	CANA	.TALRM,DL	*IF ALARM IS SET IN MAIN LEVEL
	001623	001625	6002 00 010		1626	TZE	CONT1	*RESET ALARM. BECAUSE PUTPRQ
	001624	003225	7052 00 010		1627	TSX	RETLRX,RETLRM	*ROUTINE DOES NOT RESET IT.
			001625		1628 CONT1	EQU	*	
	001625	600017	2353 00 000		1629	LDA	.STATE,,P.SSA	*IF THIS PROCESS IS WAITING ENABLE
	001626	600000	3152 07 000		1630	CANA	.TRDBK+,.TRELCL,DL	*IF GEROAD OR RELC STATUS,
	001627	001633	6002 00 010		1631	TZE	CONT1A	*NO
	001630	002555	7022 00 010		1632	TSX	DACNX,DACNC	YES. DO NOT DISPATCH NOW
			001631		1633	OPEN.	DSP	
	001632	001173	7102 00 010		1634	TRA	MAIN	*GO NEXT CYCLE
			001633		1635 CONT1A	EQU	*	
	001633	100001	3362 07 000		1636	LCQ	.TWAKE+1,DL	*RESET WAKE STATUS
	001634	600017	3563 00 000		1637	ANSQ	.STATE,,P.SSA	
	001635	002001	3362 07 000		1638	LCQ	PS.ENB+1,DL	*RESET ENABLE FLAG
			001636		1639	SHUT.	PST	
	001637	000020	3152 03 000		1640	CANA	.TSWP,DU	*TEST BIT OF SWAP IN CONTROL
	001640	001642	6012 00 010		1641	TNZ	CONT2	
	001641	400000	3563 16 000		1642	ANSQ	.KPX,P.PST	
			001642		1643 CONT2	EQU	*	
			001642		1644	OPEN.	PST	
			001643		1645	OPEN.	DSP	
			000000		1646 XTMP	SET	0	
			000000		1647 P.DDS	SET	PO	
					1648			*MUST NOT INHYB OFF.
					1649			*THERE MAY CRITICAL STATUS WITH JUST
					1650			*S/S FRAME LEFT
	001644	003536	7012 00 010		1651	TSX	Z,RSCR	/* GET TIME INTERVAL TILL NOW
	001645	700767	0553 17 000		1652	ASA	.CROVH,PN,P.CR	AND ACCOUNT IT FOR PROCESSOR PROCESS
	001646	600012	2353 54 000		1653	LDA	.SSA,DI,P.SSA	/* GET MACRO STACK
	001647	770000	3752 07 000		1654	ANA	STMSK,DL	ENTRY TYPE
	001650	010000	1152 07 000		1655	CMPA	STYP1,DL	
	001651	001665	6012 00 010		1656	TNZ	CONT9	/* NOT TYPE 1 (64 S/S)
					1657			/* NO NEED TO RESET .SELVL
			000003		1658 P.SSR	SET	P3	
	001652	001764	4736 07 000		1659	LDP	P.SSR,,SSR,DL	/* CHECK MODE AND IF MASTER
	001653	001761	4736 07 000		1660	LDP	P.SSR,.CTYP,DL	SET PROCESSOR NO. IN X7
	001654	300004	2353 00 000		1661 VSLC3V	LDA	.WICI,,P.SSR	
	001655	000200	3752 07 000		1662	ANA	=0000200,DL	
	001656	001662	6002 00 010		1663	TZE	CONT8	OFF - SLAVE
	001657	300053	4473 00 000		1664	SXL	PN,.WREGS+3,,P.SSR	ON - MASTER MODE NEEDS PN

F N T E R I N T O T H E P R O C E S S

001660	300053	7463	00	000	1665	STX	KPX, .WREGS+3, .P.SSR	AND KPX	
001661	001663	7102	00	010	1666	TRA	CONT8A		00000020
		001662			1667	CONT8	EQU	*	
001662	006325	7022	00	010	1668	IOVH1	TSX	OVHX, OVHW	SET CUR=TIME (NOP .DL .CROPT BIT 7 OFF)
		001663			1669	CONT8A	EQU	*	00000020
		001663			1670	OCLIMB			
001663	000000713400			000		VFD		1870,09/713,1/1,1/0,1/0,6/0	
001664	000000010000			000		VFD		1/0,9/0,8/0,1/N,1/0,2/0,2/1,12/0	
		001665			1671	CONT9	EQU	*	
001665	003705	7012	00	010	1672	TSX	Z, RDSPRG	/* RESTORE REGISTERS	
001666	000000	1152	07	000	1673	CMPA	STYPO, DL	/* IF TYPE 0 THIS CALL FROM HCM MAYBE	
001667	001672	6012	00	010	1674	TNZ	CONT10		
001670	600012	4707	51	000	1675	LDP	P, MCRO, .SSA, I, P, SSA		
001671	000000	7103	00	000	1676	TRA	, .P, MCRO	/* RETURN TO PROCESSING	
		001672			1677	CONT10	EQU	*	
		001672			1678	ZOP	6	/* OTHER TYPES ARE ERROR MAYBE	
					1679	*			
					1680	*		START COURTESY CALL PROCESSING BOTH FOR USER AND FOR SYSTEM	
					1681	*			
					1682	*		CCFLG 0-17 HAS LEVEL NO.	
					1683	*		18-35 .TINCC/, SYCC	
					1684	*			
		000002			1685	CCY	SET	2	
		000000			1686	XTMP	SET	0	
		000000			1687	XELVL	SET	0	
		001673			1688	UCC	EQU	*	
001673	003577	7012	00	010	1689	TSX	CKLMTX, CKLMT	*CHECK IF WE CAN PAY NEW USER CC	
001674	000004	2202	03	000	1690	LDX	XTMP, .TINCC, DU		
001675	001677	7102	00	010	1691	TRA	CCO		
		001676			1692	SCC	EQU	*	
001676	000400	2202	03	000	1693	LDX	XTMP, .TSYCC, DU		
		001677			1694	CCO	EQU	*	
001677	002100	4402	17	010	1695	SXL	XTMP, CCFLG, PN	*SAVE CC TYPE THROUGH RETLRM	
001700	003705	7012	00	010	1696	TSX	Z, RDSPRG	*LOAD DSAR, ASR, PSR, REGISTER	
001701	003632	7012	00	010	1697	TSX	SVLVLX, SVLVLN	/* SAVE CURRENT PROCESS STATUS	
001702	003225	7052	00	010	1698	TSX	RETLRX, RETLRM	RESET ALARM	
001703	002100	7202	17	010	1699	LXL	XTMP, CCFLG, PN		
001704	600017	2403	00	000	1700	ORSX	XTMP, .STATE, .P, SSA	*TURN ON, PROCESS IN COURTESY CALL	
		001705			1701	OPEN.	DSP		
001706	006133	4726	07	000	1702	LDP	P, KL, SD, KL, DL		
		001707			1703	.SHUT	.KLSCC, .P, KL	*SHUT C.C. QUEUE	
001712	200050	2243	00	000	1704	LDX	XIOE, .KLSCC, .P, KL	*GET C.C. ENTRY POINTER	
001713	001723	6002	00	010	1705	TZE	CCZOP	*NO ENTRY WHY	
001714	006013	4716	07	000	1706	LDP	P, IOQ, SD, IOQ, DL		
001715	001761	4716	07	000	1707	LDP	P, IOQ, .CTYP, DL	*CHENGE TYPE IOQ SEGMENT	
		001716			1708	CCI	EQU	*	
001716	100003	7223	14	000	1709	LXL	CCY, .WEPID, XIOE, P, IOQ		
001717	200044	1023	17	000	1710	CMPX	CCY, .KLPRG, PN, P, KL	*IS THIS ENTRY ONE OF THIS PROCESS	
001720	001724	6002	00	010	1711	TZE	CC2	*YES A CANDIDATE	
		001721			1712	CC1NXT	EQU	*	

F N T E R I N T O T H E P R O C E S S

001721	100000	2243	14	000	1713	LDX	XIOE,,WEST,XIOE,P.IOQ		
001722	001716	6012	00	010	1714	TNZ	CC1	*TRY NEXT	
		001723			1715	CCZOP	ZOPS	*NO C.C. ENTRY BUT .SRQST DEMANDED	
		001724			1716	CC2	EQU	*	
001724	002100	2202	17	010	1717	LDX	XELVL,CCFLG,PN		
001725	100004	2363	14	000	1718	LDQ	.WFSCCT,XIOE,P.IOQ		
001726	000001	1002	03	000	1719	CMPX	XELVL,1,DU	*IF SYSTEM CC TO BE PAYED	
001727	001735	6002	00	010	1720	TZE	CC3	*NO USER CC	
001730	000220	3162	07	000	1721	CANQ	.FSYOT+.FNABT,DL	/* IS THIS SYSTEM C.C.	
001731	001735	6012	00	010	1722	TNZ	CC3	YES	
001732	100001	2353	14	000	1723	LDA	.WFPRV,XIOE,P.IOQ		
001733	100000	3152	07	000	1724	CANA	.FFTYP,DL	/* IS THIS SYSTEM I/O ENTRY	
001734	001721	6002	00	010	1725	TZE	CC1NXT	NO. TRY NEXT	
		001735			1726	CC3	EQU	*	
001735	002100	7562	17	010	1727	STQ	CCFLG,PN	*SAVE CCATTRIBUTE	
001736	100001	2353	14	000	1728	LDA	.WFPRV,XIOE,P.IOQ	CHECK FOR EXT. MEM. C.C.	EXTM4870
		000010			1729	.FFXTM	BOOL	10	***** TEMPORARY *****
		000020			1730	.FFXTC	BOOL	20	***** TEMPORARY *****
001737	000020	3152	07	000	1731	CANA	.FFXTC,DL		00000020
001740	001770	6002	00	010	1732	TZE	CC3A	* NOT AN EXT-MEM C.C., USE OWN WSR	00000020
001741	000010	3152	07	000	1733	CANA	.FEXTM,DL		EXTM4890
001742	001747	6002	00	010	1734	TZE	CC3B	* EXTENDED MEMORY UNWIRE FLAG NOT SET	00000020
001743	000010	6752	07	000	1735	ERA	.FEXTM,DL	RESET EXT. MEM. FLAG SO UNLINK	EXTM4910
001744	100001	7553	14	000	1736	STA	.WFPRV,XIOE,P.IOQ	WILL NOT UNWIRE IT	EXTM4920
001745	000040	2352	07	000	1737	LDA	.TAWSC,DL	TURN ON FLAG FOR C.C. TO AUX. W.S.	00000020
001746	600017	2553	00	000	1738	ORSA	.STATE,,P.SSA		00000020
		001747			1739	CC3B	NULL		00000020
001747	100021	7527	14	000	1740	STWS	.WFDRF+1,XIOE,P.IOQ	SAVE PROCESS WSR'S	EXTM4930
001750	100016	2363	14	000	1741	LDQ	.WFDR1,XIOE,P.IOQ		EXTM4940
001751	000002	3162	07	000	1742	CANQ	2,DL	CHECK FOR TYPE 2 DESCRIPTOR	EXTM4950
001752	001770	6002	00	010	1743	TZE	CC3A	* NOT TYPE 2, USE NORMAL WSR'S	EXTM4960
001753	017760	3762	07	000	1744	ANQ	=017760,DL	GET REAL WS# FROM TYPE 2 DESCRIPTOR	EXTM4970
001754	000027	7362	00	000	1745	QLS	23	THAT WAS USED FOR I/O, AND PUT	EXTM4980
001755	100021	2353	14	000	1746	LDA	.WFDRF+1,XIOE,P.IOQ	THAT VALUE INTO WSR #7	EXTM4990
001756	000011	7712	00	000	1747	ARL	9	ALONG WITH PROESS VALUES	EXTM5000
001757	000011	7372	00	000	1748	LLS	9	FOR WSR 4-6	EXTM5010
001760	100021	7553	14	000	1749	STA	.WFDRF+1,XIOE,P.IOQ		EXTM5020
001761	100021	7727	14	000	1750	LDWS	.WFDRF+1,XIOE,P.IOQ		EXTM5030
001762	000400	2352	03	000	1751	LDA	.TSYCC,DU	IN .STATE, TURN ON THE	00000020
001763	600017	2553	00	000	1752	ORSA	.STATE,,P.SSA	FLAG FOR SYSTEM C.C.	EXTM5050
001764	006024	4706	07	000	1753	LDP	PO,SD,PID,DL	MUST ALSO SAVE WSR 4-7 IN PID	EXTM5060
001765	000000	6352	16	000	1754	EAA	0,6	IN CASE IOS OR WHOMSOEVER	EXTM5070
001766	000002	7352	00	000	1755	ALS	2	RELOADS THEM FORM PID	EXTM5080
001767	000001	7527	01	000	1756	STWS	1,AU,PO	DURING THE COURTESY CALL	EXTM5090
		001770			1757	CC3A	NULL		EXTM5100
001770	100007	7253	14	000	1758	LXL5	.WEOFF,XIOE,P.IOQ	*GET SECOND DCW FIELD	
					1759			*THIS DATA NEEDED FOR FSYS C.C.	
001771	006013	4716	07	000	1760	LDP	P.IOQ,SD,IOQ,DL		
001772	100022	6717	14	000	1761	LDD	P.ENT,.WEIOE,XIOE,P.IOQ		
					1762			*SAVE THE CC ENTRY DESCRIPTER	

F N T E R I N T O T H E P R O C E S S

					1763						
					1764						
		001773			1765	.OPEN	.KLSCC,,P.KL				
	001775	000000	1116 00	000	1766	SDR	P.ENT	*SAVE IN AS			
	001776	600012	4517 56	000	1767	STP	P.ENT,,SSA,ID,P.SSA				
	001777	600012	7453 56	000	1768	STX5	.SSA,ID,P.SSA				
	002000	000001	6352 00	000	1769	EAA	1				
	002001	000000	6362 00	000	1770	EAQ	0				
		002002			1771	.CALL	.MIOS,32	*UNLINK THE C.C. ENTRY			
						INHIB	SAVE,ON				
	002002	000003	6306 04	2005		EPPRO	**3,\$				
	002003	700002	7103 00	000		TRA	.CRCAL,,P.CR				
	002004	000002	000040	000		ZERO	.MIOS,32				
						INHIB	RESTORE				
					1772			*.MIOS,32 DOES NOT LOST X5			
					1773 *						
					1774 *			A ROUTINE WAS REMOVED, WHICH PUSH DOWN REGISTER SAVE			
					1775 *			AREA FOR MAIN LEVEL IN SLAVE PREFIX			
					1776 *						
	002005	700734	0543 00	000	1777	AOS	.CRTCC,,P.CR	*COUNT OF TOTAL COUTESY CALLS			
	002006	600012	2253 54	000	1778	LDX5	.SSA,DI,P.SSA	* RECOVER			
	002007	600012	4717 54	000	1779	LDP	P.ENT,,SSA,DI,P.SSA				
	002010	600214	0517 00	000	1780	STD	P.FNT,,STMPA,,P.SSA				
	002011	007336	7102 00	010	1781	YSCC	TRA	*NOP IF TRACE OFF. START COURTESY CALL			
	002012	003536	7012 00	010	1782	TSX	Z,RSCR	/* GET TIME INTERVAL TILL NOW			
	002013	700767	0553 17	000	1783	ASA	.CROVH,PN,P.CR	AND ACCOUNT AS OVERHEAD			
	002014	600215	2353 00	000	1784	LDA	.STMPQ,,P.SSA	*IS ENTRY DESC SHOW SYSTEM LINKAGE			
	002015	002077	1152 00	010	1785	CMPA	SYSCCE+1				
	002016	002023	6012 00	010	1786	TNZ	CC5.5	*NO. CHECK .SATTR			
	002017	600214	2353 00	000	1787	LDA	.STMPA,,P.SSA				
	002020	000177	3752 07	000	1788	ANA	=0177,DL	*WSR AND TYPE			
	002021	002076	1152 00	010	1789	CMPA	SYSCCE				
	002022	002031	6002 00	010	1790	TZE	CC6				
		002023			1791	CC5.5	EQU	*			
	002023	600005	2363 00	000	1792	LDO	.SATTR,,P.SSA				
	002024	200000	3162 07	000	1793	CANQ	.A.EMS,DL	*IS IT SPECIAL PRIVILEGED PROCESS			
	002025	002042	6002 00	010	1794	TZE	CC7	*NO. PAY IN SLAVE MODE			
	002026	002100	2362 17	010	1795	LDO	CCFLG,PN				
	002027	000004	3162 07	000	1796	CANQ	.FCCMM,DL	/* IS THIS MASTER MODE C.C.			
	002030	002042	6002 00	010	1797	TZE	CC7	NO.PAY IN SLAVE			
		002031			1798	CC6	EQU	*			
	002031	006204	4736 07	000	1799	LDP	P3.SD.PSH,DL	*MASTER C. C.			
	002032	200052	6757 00	000	1800	VSLC4V	LDD	P.SSL,,KLSLV,,P.KL	/* PREPARE ODR'S		
	002033	000644	6746 00	010	1802	LDD	P4,P.NULL				
	002034	000644	6726 00	010	1803	LDD	P2,P.NULL				
	002035	000644	6706 00	010	1804	LDD	P0,P.NULL				
		002036			1805	ICLIMB	.ODR+P.ENT	*ENTER			
	002036	000000713400		000		VFD	18/,09/713,1/1,1/0,1/0,6/M.				
	002037	000000201771		000		VFD	1/0,9/0,8/0,1/,N,1/,0,2/0,2/0,12/,ODR+P.ENT				
		002040			1807	ZOPS					

F N T E R I N T O T H E P R O C E S S

					1808 *	STOP SYSTEM		
002041	002045	7102 00 010			1809	TRA	CC9	*GO ABORT THE PROCESS
		002042			1810	CC7	EQU	*
002042	006325	7022 00 010			1811	IOVH2	TSX	OVHX,OVHW SET CUR=TIME (NOP ,DL ,CROPT BIT 7 OFF) 00000020
		002043			1812		ICLIMB	.ODR+P.ENT,.,SLAVE *PAY SLAVE MODE COURTEST CALL ←
002043	000000713400	000					VFD	18/,09/713,1/1,1/0,1/0,6/M.
002044	000000001771	000					VFD	1/0,9/0,8/0,1/,N,1/,0,2/0,2/0,12/,ODR+P.ENT
		002045			1813	CC9	EQU	*
002045	006262	2362 07 000			1814		LDQ	=3HOSS,DL *ABORT PROCESS IF OCLIMB
		002046			1815		.CALL	.MBRT1,3 DISPOPC2
							INHIB	SAVE,ON
002046	000003	6306 04 2051					EPPRO	*+3,\$
002047	700002	7103 00 000					TRA	.CRCAL,.,P.CR
002050	000036	000003 000					ZERO	.MBRT1,3
							INHIB	RESTORE
					1816 *			
					1817 *	START SWAP OUT PROCESSING		
		002051			1818	SWP	EQU	*
002051	600173	2213 00 000			1819		LDX	Z,.,SFDSC,.,P.SSA *CHECK PROCESS REFERING ANOTHER
002052	001616	6012 00 010			1820		TNZ	CONT *CONTINUE UNTIL NEXT RELEASE
002053	003705	7012 00 010			1821		TSX	Z,RDSPRG *LOAD DSAR ASR PSR REGISTER
002054	003631	7012 00 010			1822		TSX	SVLVLX,SVLVL *SAVE SUB PROCESS IN EXEC
002055	000000	0112 07 000			1823		NOP	0,DL *ALARM OK
002056	000005	2352 07 000			1824		LDA	5,DL /* SET LEVEL TO 5
002057	600043	7553 00 000			1825		STA	.SELVL,.,P.SSA TO AVOID PAY SWAP RECURSIVELY
					1826			AND TO AVOID C.C. ABORT, TOO
					1827			DO'T SET .TSWP IN .STATE TO AVOID LOOP IN .MPOQ3 WHEN
					1828			.MSWAP LOADING ERROR OCCURED
		002060			1829		OPEN.	DSP
		002061			1830		.CALL	.MSWAP,1 *GO SWAP OUT
							INHIB	SAVE,ON
002061	000003	6306 04 2064					EPPRO	*+3,\$
002062	700002	7103 00 000					TRA	.CRCAL,.,P.CR
002063	000555	000001 000					ZERO	.MSWAP,1
							INHIB	RESTORE
002064	002072	6306 00 010			1831		EPPRO	UNDO
002065	600012	4507 56 000			1832		STPO	.SSA,ID,P.SSA
		002066			1833		SHUT.	DSP
002067	400000	2352 03 000			1834		LDA	.RDEAD,DU
002070	600117	2553 00 000			1835		ORSA	.SRQST,.,P.SSA /* FROZEN THIS PROCESS
002071	000312	7102 00 010			1836		TRA	DSCNT1
		002072			1837	UNDO	EQU	*
		002072			1838		.CALL	.MSWAP,4 *IF ENABLED, GO UNSWAP IT
							INHIB	SAVE,ON
002072	000003	6306 04 2075					EPPRO	*+3,\$
002073	700002	7103 00 000					TRA	.CRCAL,.,P.CR
002074	000555	000004 000					ZERO	.MSWAP,4
							INHIB	RESTORE
					1839			/* REQUESTER MUST BE POP3
002075	001042	7102 00 010			1840		TRA	ENDEVT

F N T E R I N T O T H E P R O C E S S

					002076	1841	SYSCEE8DSC	0,0,480,**,**	*SYSTEM DOMAIN ENTRY DESCRIPTER
002076	000000000010	000		VFD				18/**,1/0,10/**,3/0,4/8	
002077	167400000000	000		VFD				10/480/2-1,24/0,2/0	
					002100	1842			*INITIALIZED
					002100	1843	CCFLG BSS	.NRPRC	*DISPATCHER DATA SAVE AREA
						1844	*		
						1845	*		START ABORT REQUEST PROCESSING
						1846	*		
					002104	1847	ABT EQU	*	
002104	003705 7012 00 010			TSX			Z,RDSPRG		*LOAD DSAR, ASR, PSR
002105	003631 7012 00 010			TSX			SVLVLX,SVLVL		*SAVE SUB PROCESS
002106	003225 7052 00 010			TSX			RETLRX,RETLRM		
002107	000100 2352 03 000			LDA			.TBRT,DU		
002110	600017 2553 00 000			ORSA			.STATE,,P.SSA		*TURN ON IN ABORT BIT
002111	600117 6553 00 000			ERSA			.SRQST,,P.SSA		
					002112	1854	OPEN.	DSP	
002113	003536 7012 00 010			TSX			Z,RSCR		/* GET TIME INTERVAL
002114	700767 0553 17 000			ASA			.CROVH,PN,P.CR		AND ACCOUNT IT AS OVERHEAD
					002115	1857	.CALL	.MBRT1,1	
							INHIB	SAVE,ON	
002115	000003 6306 04 2120			EPPRO			**3,\$		
002116	700002 7103 00 000			TRA			.CRCAL,,P.CR		
002117	000036 000001 000			ZERO			.MBRT1,1		
							INHIB	RESTORE	
					002120	1858	ZOPS		
						1859	*		
						1860	*		START GEPR PROCESSING ON REQUEST
						1861	*		
					002121	1862	GPR EQU	*	
002121	002176 7012 00 010			TSX			Z,SSCK		*CHECK S/S SIZE BEFORE PAY
002122	003705 7012 00 010			TSX			Z,RDSPRG		
002123	003631 7012 00 010			TSX			SVLVLX,SVLVL		*SAVE
002124	003225 7052 00 010			TSX			RETLRX,RETLRM		
002125	010000 2352 03 000			LDA			.TGEPR,DU		
002126	600017 2553 00 000			ORSA			.STATE,,P.SSA		*TURN ON GEPR BIT
002127	600117 6553 00 000			ERSA			.SRQST,,P.SSA		
					002130	1870	OPEN.	DSP	
					002131	1871	.CALL	.MGEPR,1	
							INHIB	SAVE,ON	
002131	000003 6306 04 2134			EPPRO			**3,\$		
002132	700002 7103 00 000			TRA			.CRCAL,,P.CR		
002133	000212 000001 000			ZERO			.MGEPR,1		
							INHIB	RESTORE	
002134	001042 7102 00 010			TRA			ENDEVT		
						1873	*		
						1874	*		DEAD REQUEST CAN NOT DISPATCH NOW
						1875	*		
					002135	1876	DEAD EQU	*	
002135	002555 7022 00 010			TSX			DACNX,DACNC		/* TAKE IT OUT OF EXEC
002136	600117 2353 00 000			LDA			.SRQST,,P.SSA		*IF DEAD, MUST BE

F N T E R I N T O T H E P R O C E S S

002137	400000	3152	03	000	1879	CANA	.RDEAD,DU	*ENABLED.
002140	001165	6012	00	010	1880	TNZ	ED9	*SO, PUT IT OUT
002141	003360	5542	17	010	1881	STC1	PPTAIL,PN	*AND PUT IT AT TAIL TILL DEFROZEN
002142	001162	7102	00	010	1882	TRA	ED1	*PUT IN QUEUE
					1883	*		
					1884	*	CRITICAL FAULT OCCURED ON THIS PROCESS AT INTERRUPT	
					1885	*	OR GEPR REQUESTED FOR SYSTEM I/O	
					1886	*		
		002143			1887	SO.GPS EQU	*	
002143	600117	2353	00	000	1888	LDA	.SRQST,,P.SSA	
002144	100000	3152	03	000	1889	CANA	.RCFLT,DU	*IF S/S OVER FLOW GO TO .MFALT
002145	002162	6012	00	010	1890	TNZ	CFLT	
					1891	*		
002146	002176	7012	00	010	1892	TSX	Z,SSCK	*CHECK S/Z SIZE BEFORE PAY
002147	003705	7012	00	010	1893	TSX	Z,RDSPRG	
002150	003631	7012	00	010	1894	TSX	SVLVLX,SVLVL	
002151	000000	0112	07	000	1895	NOP	.DL	
002152	040000	2352	03	000	1896	LDA	.RGPRS,DU	*TURN ON .TGPRS BIT AND
002153	600017	2553	00	000	1897	ORSA	.STATE,,P.SSA	*RESET .RGPRS BIT
002154	600117	6553	00	000	1898	ERSA	.SRQST,,P.SSA	
		002155			1899	OPEN.	DSP	
		002156			1900	.CALL	.MGEPR,1	
						INHIB	SAVE,ON	
002156	000003	6306	04	2161		EPPRO	**3,\$	
002157	700002	7103	00	000		TRA	.CRCAL,,P.CR	
002160	000212	000001		000		ZERO	.MGEPR,1	
						INHIB	RESTORE	
002161	001042	7102	00	010	1901	TRA	ENDEVT	
					1902	*		
		002162			1903	CFLT EQU	*	
002162	003705	7012	00	010	1904	TSX	Z,RDSPRG	
002163	003631	7012	00	010	1905	TSX	SVLVLX,SVLVL	*SAVE CURRENT PROCESS
002164	000000	0112	07	000	1906	NOP	.DL	
002165	100000	2352	03	000	1907	LDA	.RCFLT,DU	*RESET REQUEST AND SET IN PROCESSING
002166	600117	2553	00	000	1908	ORSA	.SRQST,,P.SSA	INSURE IT GETS SET OFF IN .SRQST DISPOP25
002167	600117	6553	00	000	1909	ERSA	.SRQST,,P.SSA	*.TSOVF WILL BE RESET IN .MFALT
002170	600017	2553	00	000	1910	ORSA	.STATE,,P.SSA	
		002171			1911	OPEN.	DSP	
		002172			1912	.CALL	.MFALT,6	*GO CRITICAL FAULT PROCESSING
						INHIB	SAVE,ON	
002172	000003	6306	04	2175		EPPRO	**3,\$	
002173	700002	7103	00	000		TRA	.CRCAL,,P.CR	
002174	000065	000006		000		ZERO	.MFALT,6	
						INHIB	RESTORE	
002175	001042	7102	00	010	1913	TRA	ENDEVT	
					1914	*		
					1915	*	CHECK S/S SIZE LEFT TO USE. IF S/S SIZE IS LESS THAN 256,	
					1916	*	NO CRITICAL SUB-PROCESS CAN'T BE PAIED. SO EXTEND S/S	
					1917	*		
		000001			1918	P.PID SET	P1	

F N T E R I N T O T H E P R O C E S S

				002176	1919	SSCK	EQU	*	
002176	006024	4716	07	000	1920		LDP	P.PID,SD.PID,DL	
002177	100000	2353	17	000	1921		LDA	,PN,P.PID	*ENTRY POINTER
002200	100002	2353	01	000	1922		LDA	2,AU,P.PID	*SSR UPPER
002201	000377	1152	03	000	1923		CMPA	255,DU	*CHECK SIZE
002202	000000	6032	11	000	1924		TRC	,Z	*ENOUGH FOR INTERRUPT/RELINC
002203	000007	2352	03	000	1925		LDA	7,DU	
002204	002100	7552	17	010	1926		STA	CCFLG,PN	*SET WE ARE GOING TO EXPAND S/S
002205	002162	7102	00	010	1927		TRA	CFLT	

SUB-DISPATCH PROCESSING

95				1929 *					SUBD1180
94				1930 *				COMES HERE WHEN KPX OF ENTRY IN DISPATCH	SUBD1190
93				1931 *				QUEUE IS GREATER THAN MAXIMUM VALUE	SUBD1200
92				1932 *					SUBD1210
91				1933 *				ATTEMPT TO SUB-DISPATCH BUT DO NOT EVER	SUBD1220
90				1934 *				REMOVE ENTRY FROM THE DISPATCH QUEUE	SUBD1230
89				1935 *					SUBD1240
88				1936 *					SUBD1250
87				1937 *				DATA IN PROCESS BEING SUB-DISPATCHED	SUBD1260
86				1938 *					SUBD1270
85				1939 *				SUB-DISPATCH QUEUE HEADER	SUBD1280
84			000000	1940	.QGATE	BOOL	0	GATE WORD	SUBD1290
83			000001	1941	.QPROC	BOOL	1	MAX # PROC'RS. KPX	SUBD1300
82			000002	1942	.QTOD	BOOL	2	T-O-D OF LAST DISPATCH	SUBD1310
81			000003	1943	.QOTM	BOOL	3	DISPATCH QUANTUM	SUBD1320
80			000004	1944	.QTDCT	BOOL	4	COUNT OF DISPATCHES	SUBD1330
79			000005	1945	.QAPTM	BOOL	5	ACCUMULATED DISPATCH TIME	SUBD1340
78			000006	1946	.QBSY	BOOL	6	UNSUCCESSFUL SHUT ATTEMPTS	SUBD1350
77			000007	1947	.QRHT	BOOL	7	READY: HEAD, TAIL	SUBD1360
76			000010	1948	.QFHT	BOOL	10	FAULT: HEAD, TAIL	SUBD1370
75			000011	1949	.QAHT	BOOL	11	AVAILABLE: HEAD, (UNUSED)	SUBD1380
74			000012	1950	.QHTEM	BOOL	12		SUBD1390
73			000013	1951	.QRCT	BOOL	13	LENGTH OF READY CHAIN	SUBD1400
72			000014	1952	.QRCL	BOOL	14	READY UPPER LIMIT, THRESHOLD	SUBD1410
71				1953 *					SUBD1420
70				1954 *				SUB-DISPATCH QUEUE ENTRY	SUBD1430
69			000000	1955	.QORG	BOOL	0	ORIGIN	SUBD1440
68			000000	1956	.QOPT	BOOL	0	B-17 = HEX OPTION	DISP006X
67			000000	1957	.QFST	BOOL	0	FAULT STATUS	SUBD1450
66			000001	1958	.QPTR	BOOL	1	PTR TO NEXT ENTRY	SUBD1460
65			000001	1959	.QUST	BOOL	1	USER INDEX	SUBD1470
64			000002	1960	.QREG	BOOL	2	REGISTER STORE	SUBD1480
63			000002	1961	.QWSN	BOOL	2	LOGICAL W.S.#	SUBD1490
62			000003	1962	.QTRA	BOOL	3	2 FREE WORDS	SUBD1500
61			000003	1963	.QSZ	BOOL	3	SIZE	SUBD1510
60			000004	1964	.QEIS	BOOL	4	"LAREG L(EIS STORE)"	SUBD1520
59			000005	1965	.QICT	BOOL	5	"RET L(IC&I STORE)"	SUBD1530
58			000006	1966	.QDTM	BOOL	6	DISPATCH TIME	SUBD1540
57			000007	1967	.QWSR	BOOL	7	TEMPORARY STORAGE	SUBD1550
56				1968 *					SUBD1560
55	002206	777777777775	000	1969	QDCT	DEC	-3	SUB-DISPATCH COUNTER	SUBD1570
54	002207	000000000003	000	1970	QDCR	DEC	3	QDCT REFRESHER	SUBD1580
53				1971 *					SUBD1590
52	002210	010142233514	000	1972	TIMBG	OCT	010142233514	TIME MULTIPLIER	00000020
51				1973 *					SUBD1600
50	002211	000000000065	000	1974	QHEXON	OCT	65	HEX MODE OPTION ON	DISP006X
49	002212	000000000061	000	1975	QHEXOF	OCT	61	HEX MODE OPTION OFF	DISP006X
48				1976 *					DISP006X
47			002213	1977	SBDSP	NULL			SUBD1610
46	002213	002206 2342 00 010	010	1978	SZN	QDCT		CHECK SUB-DISPATCH COUNTER	SUBD1620

SUB-DISPATCH PROCESSING

002214	002221	6042	00	010	1979	TMI	SBDA	STILL NEGATIVE, SO WE CAN SUB=DISP	SUBD1630	
002215	002207	3352	00	010	1980	LCA	QDCR	POSITIVE, GIVE OTHERS A CHANCE	SUBD1640	
002216	002206	7552	00	010	1981	STA	QDCT	AFTER WE REFRESH THE COUNTER	SUBD1650	
002217	300037	2263	16	000	1982	LDX	KPX,D,PRQ,KPX,P,PRQ	CHECK MAIN QUEUE	SUBD1660	
002220	001435	6012	00	010	1983	TNZ	SLCT5	GO TRY OTHER WHEN ONE EXISTS	SUBD1670	
	002221				1984	SBDA	NULL	SUB=DISP'S TURN OR THERE ARE NO OTHERS	SUBD1680	
002221	002206	0542	00	010	1985	AOS	QDCT	ADD TO COUNTER FOR THIS CHANCE	SUBD1690	
002222	300017	7253	00	000	1986	LXL5	D,SQUE,,P,PRQ	X5 = # PROCESSES FOR SUB=DISP	SUBD1700	
002223	300017	2203	00	000	1987	SBDC	LDX0	D,SQUE,,P,PRQ	GET NEXT PROCESS ENTRY	SUBD1710
002224	300025	2213	10	000	1988	LDX1	D,SQPT+1,0,P,PRQ	& UPDATE PTR TO IT	SUBD1720	
002225	300017	7413	00	000	1989	STX1	D,SQUE,,P,PRQ	X1 = PTR TO TABLE ENTRY	SUBD1730	
002226	300024	2353	11	000	1990	LDA	D,SQPT,1,P,PRQ	KPX & L(QUEUE)	SUBD1740	
002227	400000	2203	01	000	1991	LDX0	0,AU,P,PST	GET STATUS OF PROCESS	SUBD1750	
002230	400000	3002	03	000	1992	CANX0	PS,SWP,DU	CHECK TO SEE IF IN CORE	SUBD1760	
002231	002240	6012	00	010	1993	TNZ	SBDD	YES, TRY TO USE IT	SUBD1770	
002232	000001	1252	03	000	1994	SBDB	SBLX5	1,DU	MUST SKIP THIS PROCESS	SUBD1780
002233	002223	6012	00	010	1995	TNZ	SBDC		REPEAT IF MORE PROCESSES IN TABLE	SUBD1790
002234	006145	4766	07	000	1996	LDP	P,SSA,SD,SSA,DL		MUST RESTORE P,SSA IF GOING BACK	SUBD1800
002235	700270	2203	00	000	1997	LDX0	.CRMKP,,P,CR		NOTHING TO SUB=DISP TO	SUBD1810
002236	000001	6262	10	000	1998	EAX	KPX,1,0		SO LOAD KPX W/ MAX+1	SUBD1820
002237	001430	7102	00	010	1999	TRA	X,SLCT		AND RETURN TO MAIN DISPATCH	SUBD1830
002240	777777	3752	03	000	2000	SBDD	ANA	-1,DU	SUB=DISP PROCESS IS IN CORE	SUBD1840
002241	000000	6262	01	000	2001	EAX	KPX,0,AU		LOAD KPX WITH ITS VALUE	SUBD1850
002242	000002	7352	00	000	2002	ALS	2		AND CHECK ITS READY QUEUE	SUBD1860
002243	100001	7727	01	000	2003	LDWS	1,AU,P,PID		LOAD ITS WSR'S	SUBD1870
002244	006145	4766	07	000	2004	SBDC	LDP	P,SSA,SD,SSA,DL	(FOR MP, THIS IS TRA 5,IC)	SUBD1880
002245	000200	2352	07	000	2005	LDA	.RCCAC,DL			SUBD1890
002246	600117	3153	00	000	2006	CANA	.SRQST,,P,SSA		CHECK TO SEE IF CACHE IS TO BE CLEARED	SUBD1900
002247	000003	6002	04	000	2007	TZF	3,IC		*NO, NOT SET BY INTERRUPT	SUBD1910
002250	600117	6553	00	000	2008	ERSA	.SRQST,,P,SSA		YES, RESET FLAG FIRST	SUBD1920
002251	000000	0116	00	000	2009	CCAC			CLEAR CACHE *** ALWAYS IF MP	SUBD1930
002252	006204	4706	07	000	2010	LDP	P0,SD,PSH,DL		P0 = PUSH	SUBD1940
002253	000012	6767	00	000	2011	LDD	P6,PH,USL,,P0		P6 = USER LINKAGE	00000020
002254	600000	6767	00	000	2012	LDD	P6,UL,ISR,,P6		P6 = USER SEGMENT	00000070
002255	300024	7223	11	000	2013	LXL2	D,SQPT,1,P,PRQ		X2 = L(SUB=DISP HEADER)	SUBD1990
002256	600000	2143	12	000	2014	SZNC	.QGATE,2,P6		SHUT GATE ON SUB=DISP QUEUE	SUBD2000
002257	002264	6012	00	010	2015	TNZ	SBDL			00000020
002260	600006	0543	12	000	2016	AOS	.QBSY,2,P6		COUNT TIMES FOUND SHUT	00000020
002261	000000	7742	00	000	2017	GTB			DELAY A LITTLE	00000020
002262	600000	2143	12	000	2018	SZNC	.QGATE,2,P6		TRY ONCE MORE TO SHUT IT	00000020
002263	002232	6002	00	010	2019	TZF	SBDB		* DON'T WAIT LONGER, TRY ANOTHER	00000020
	002264				2020	SBDL	NULL			00000020
002264	600007	2233	12	000	2021	LDX3	.QRHT,2,P6		X3 = HEAD OF READY CHAIN	SUBD2040
002265	002313	6002	00	010	2022	TZE	SBDF		* NOTHING TO DO	SUBD2050
002266	600002	2353	13	000	2023	LDA	.QWSN,3,P6			00000020
002267	777777	3152	07	000	2024	CANA	-1,DL			00000020
002270	002310	6002	00	010	2025	TZE	SBDJ		* EXTENDED MEMORY NOT IN USE HERE	00000020
002271	777000	3752	07	000	2026	ANA	=0777000,DL		CHECK FOR KNOWN R.W.S. IN QUEUE	00000020
002272	002277	6002	00	010	2027	TZE	SBDK		* R.W.S. NOT KNOWN BY PARENT	00000020
002273	000011	7712	00	000	2028	ARL	9		THE R.W.S. IS GIVEN IN QUEUE,	00000020

SUB-DISPATCH PROCESSING

002274	600007	7553	13	000	2029	STA	.QWSR,3,P6	SO LOAD WSR'S DIRECTLY	00000020
002275	600007	7727	13	000	2030	LDWS	.QWSR,3,P6	W/O CALLING .MEXTM	00000020
002276	002310	7102	00	010	2031	TRA	SBDJ		00000020
		002277			2032	SBDK	NULL		00000020
002277	000052	6757	00	000	2033	LDD	P5,PH,RWS,,PO	LOAD WSR'S 4-7 FROM PARENT	SUBD2052
002300	500001	7727	00	000	2034	LDWS	1,,P5	VALUES IN CONTROL AREA	SUBD2054
002301	600002	7203	13	000	2035	LXL0	.QWSN,3,P6	LET'S SEE IF WE CAN GET ADDRESSABILITY	SUBD2060
002302	000000	6352	10	000	2036	EAA	0,0	TO THE TARGET W.S. FOR THE SUB-DISP	SUBD2070
002303	200052	6757	00	000	2037	LDD	P,SSL,,KLSLV,,P,KL		SUBD2080
		002304			2038	EXTMEM	ACCLWS		SUBD2090
002304	500070	6707	00	000		LDD0	DP,EME,,P,SSL		
		002305				ICLIMB	.DRO,,EX,EAXO		
002305	000001713400			000		VFD	18/.EX,09/713,1/1,1/0,1/0,6/M.		
002306	000000601770			000		VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/.DRO		
002307	002313	7102	00	010	2039	TRA	SBDF	* ACCESS DENIED. GO TO NEXT	SUBD2100
		002310			2040	SBDJ	NULL		00000020
002310	300025	7203	11	000	2041	LXL0	D.SQPT+1,1,P,PRQ	* PROCESSORS HERE	SUBD2110
002311	600001	1003	12	000	2042	CMPX0	.QPROC,2,P6	VS MAX PROC'RS ALLOWED HERE	SUBD2120
002312	002315	6022	00	010	2043	TNC	SBDE	* CAN SUB-DISP	SUBD2130
002313	600000	7503	12	000	2044	SBDF	STC2	MAX PROC'RS HERE. SO GO	SUBD2140
002314	002232	7102	00	010	2045	TRA	SBDB	ON TO THE NEXT PROCESS	SUBD2150
002315	300025	0543	11	000	2046	SBDE	AOS	D.SQPT+1,1,P,PRQ	ADD TO COUNT OF PROC'RS HERE
002316	300020	7413	17	000	2047	STX1	D.SQUE+1,7,P,PRQ	AND REMEMBER WHERE PROC'R IS	SUBD2170
002317	600001	2213	13	000	2048	LDX1	.QPTR,3,P6		SUBD2180
002320	002322	6012	00	010	2049	TNZ	SBDG	* MORE IN READY CHAIN	SUBD2190
002321	600007	4413	12	000	2050	SXL1	.QRHT,2,P6	LAST ENTRY, ZERO THE TAIL	SUBD2200
002322	600007	7413	12	000	2051	SBDG	STX1	NEW HEAD OF READY CHAIN	SUBD2210
002323	600013	2213	12	000	2052	LDX1	.QRCT,2,P6		SUBD2220
002324	000001	1212	03	000	2053	SBLX1	1,DU		SUBD2230
002325	600013	7413	12	000	2054	STX1	.QRCT,2,P6	NEW READY CHAIN COUNT	SUBD2240
002326	600000	7503	12	000	2055	STC2	.QGATE,2,P6	OPEN GATE ON USER QUEUE	SUBD2250
002327	002331	6002	00	010	2056	TZF	*+2	IF QUEUE NOT EMPTY AND IF MULTI-PROC,	SUBD2260
002330	000001	0112	07	000	2057	T.CLF8	NOP	MPFNB-MPBASE,DL	TRY TO START ANOTHER PROC'R
		002331			2058	OPEN.	PST		SUBD2280
		002332			2059	OPEN.	DSP		SUBD2290
002333	000000	2202	03	000	2060	LDX0	0,DU		SUBD2300
002334	600001	7403	13	000	2061	STX0	.QPTR,3,P6	RESET PTR WITHIN QUEUE	SUBD2310
002335	006070	4736	07	000	2062	LDP	P3,SD,SDP,DL	P3 = SUB-DISP LKG, TYPE = 1	SUBD2320
002336	006070	4746	07	000	2063	LDP	P4,SD,SDP,DL		SUBD2330
002337	001761	4746	07	000	2064	LDP	P4,,CTYP,DL	P4 = SUB-DISP LKG, TYPE = 0	SUBD2340
002340	000000	6362	17	000	2065	SBDH	EAQ	(ADDRESS USED TO LOAD DSAR)	SUBD2350
002341	000002	7362	00	000	2066	QLS	2		SUBD2360
002342	600003	2203	13	000	2067	LDX0	.QTRA,3,P6	INIT. ENRTY DESC W/ TRA ADDRESS	SUBD2370
002343	400004	7403	02	000	2068	STX0	S,ENT,QU,P4		SUBD2380
002344	600003	7203	13	000	2069	LXL0	.QSZ,3,P6		SUBD2390
002345	000001	1202	03	000	2070	SBLX0	1,DU		SUBD2400
002346	400006	7403	02	000	2071	STX0	S,ISR,QU,P4	INIT. SUB-DISP ISR	SUBD2410
002347	600000	2353	13	000	2072	LDA	.QORG,3,P6		SUBD2420
002350	002212	6742	04	010	2073	LCPR	QHFXOF,04	GUESS HEX NOT WANTED & SET OFF	DISP006X
002351	000001	3152	03	000	2074	CANA	1,DU	NOW CHECK FOR HEX	DISP006X

SUB-DISPATCH PROCESSING

002352	000002	6002	04	000	2075	TZF	2,IC		DISP006X
002353	002211	6742	04	010	2076	LCPR	QHFXON,04	HEX REQUESTED, TURN IT ON	DISP006X
002354	777770	3752	03	000	2077	ANA	=0777770,DU	MASK OFFOPTION FROM ORIGIN	DISP006X
002355	000020	7712	00	000	2078	ARL	16		SUBD2440
002356	006204	4706	07	000	2079	LDP	PO,SD,PSH,DL		SUBD2450
002357	000012	6707	00	000	2080	LDD	PO,PH,USL,,PO		SUBD2460
002360	001761	4706	07	000	2081	LDP	PO,..CTYP,DL		SUBD2470
002361	000001	0353	00	000	2082	ADLA	UL,ISR+1,,PO		00000070
002362	400007	7553	02	000	2083	STA	S,ISR+1,QU,P4		SUBD2490
002363	300006	6717	02	000	2084	LDD	P1,S,ISR,QU,P3	P1 = SUB-DISPATCH ISR	SUBD2500
002364	400000	7707	00	000	2085	LDAS	S,APR,,P4	LOAD SPECIAL REGISTERS	SUBD2510
002365	400000	7717	00	000	2086	LDPs	S,APR,,P4		SUBD2520
002366	400002	5717	00	000	2087	LDDSD	S,DSR,,P4		SUBD2530
002367	002340	1706	00	010	2088	LDDSA	SBDH		SUBD2540
002370	200064	7737	37	000	2089	LDSS	.KLSDS,PN*,P.KL	LOAD SSR FOR SUB-DISP BY PROC'R #	SUBD2550
002371	200044	7463	17	000	2090	STX6	.KLPRG,7,P,KL	SET PROC'R FLAGS FOR SUB-DISP	SUBD2560
002372	200044	4433	17	000	2091	SXL3	.KI PRG,7,P,KL		SUBD2570
002373	300004	6727	02	000	2092	LDD	P2,S,ENT,QU,P3	P2 = ENTRY DESC TO CLIMB WITH	SUBD2580
002374	204020	3362	07	000	2093	LCQ	=0204020,DL		SUBD2590
002375	600000	3563	13	000	2094	ANSQ	.QFST,3,P6	CLEAR FAULT STATUS BITS	SUBD2600
002376	003536	7012	00	010	2095	TSX	Z,RSCR		SUBD2610
002377	700767	0553	17	000	2096	ASA	.CROVH,PN,P,CR	DO ACCT'NG TIL NOW	SUBD2620
002400	600004	0543	12	000	2097	AOS	.QTDCT,2,P6	COUNT NUMBER OF SUBDISPATCHES	00000020
002401	700106	2363	00	000	2098	LDQ	.CRDAT+2,,P,CR		00000020
002402	700105	0363	00	000	2099	ADLQ	.CRDAT+1,,P,CR		00000020
002403	002210	4022	00	010	2100	MPY	TIMBG		00000020
002404	000036	7732	00	000	2101	LRL	30		00000020
002405	600002	7563	12	000	2102	STQ	.QTOD,2,P6	UPDATE T-O-D	SUBD2640
002406	600003	2363	12	000	2103	LDQ	.QQTM,2,P6		SUBD2650
002407	000014	7362	00	000	2104	QLS	12		SUBD2660
002410	003533	7012	00	010	2105	TSX	Z,LDT	LOAD TIMER	SUBD2670
002411	600000	0733	13	000	2106	LREG	0,3,P6	PICK UP DISPATCH DATA FROM QUEUE,	SUBD2680
002412	100000	7573	16	000	2107	STAQ	0,6,P1	STORE "LAREG=RET" IN SPACE GIVEN,	SUBD2690
002413	100010	4677	01	000	2108	LPL	8,AU,P1	RELOAD P&L IN CASE OF MID-INSTR=INTP,	SUBD2700
002414	100000	0733	14	000	2109	LREG	0,4,P1	RELOAD REGISTERS, AND	SUBD2710
		002415			2110	ICLIMB	.ODR+P2,,SLAVE	CLIMB TO "LAREG=RET" IN SLAVE	SUBD2720
002415	000000713400			000		VFD	18/,09/713,1/1,1/0,1/0,6/M.		
002416	000000001772			000		VFD	170,970,870,17.N,17.0,270,270,127.ODR+P2		
		002417			2111	.CALL	.MBRT1,3	(IN CASE PROCESS CLIMBS BACK)	SUBD2730
						INHIB	SAVE,ON		
002417	000003	6306	04	2422		EPPRO	*+3,\$		
002420	700002	7103	00	000		TRA	.CRCAL,,P,CR		
002421	000036	000003		000		ZERO	.MBRT1,3		
						INHIB	RESTORE		

DISCONNECT SLAVE PROCESS AND THE ACCONT

002450	600152	0553	00	000	2163	ASA	.SPRT,,P.SSA	*NO THEN HIS ACCOUNT
002451	000000	5312	00	000	2164	NEG		
002452	600003	0553	00	000	2165	ASA	.SALT,,P.SSA	*DECREMENT TIME LIMIT
002453	002455	7102	00	010	2166	TRA	DCN2	
		002454			2167	DCN1	EQU	*
002454	700767	0553	17	000	2168	ASA	.CROVH,PN,P.CR	
		002455			2169	DCN2	EQU	*
002455	040000	3762	07	000	2170	ANQ	.TLBAR,DL	*IS GELBAR EFFECT
002456	002526	6002	00	010	2171	TZE	DCN3	*NO
002457	600017	6563	00	000	2172	ERSQ	.STATE,,P.SSA	*TURN OFF GELBAR BIT
002460	600117	2363	00	000	2173	LDO	.SRQST,,P.SSA	*IF GELBAR EFFECT, NO NEED TO
002461	100000	3762	03	000	2174	ANQ	.RCFLT,DU	*EXTEND S/S AT OVER FLOW
002462	600117	6563	00	000	2175	ERSQ	.SRQST,,P.SSA	
002463	001764	4716	07	000	2176	LDP	P.SSR,,SSR,DL	*LOAD SSR TO ACCESS DATA
002464	001761	4716	07	000	2177	LDP	P.SSR,,CTYP,DL	*CHENGE TYPE
002465	600174	7737	00	000	2178	LDSS	.SSSR,,P.SSA	*CHANGE SSR AT MME GELBAR
002466	006204	4706	07	000	2179	LDP	P.SPX,SD,PSH,DL	*ACCESS TO SLAVE PREFIX
002467	000006	6707	00	000	2180	LDD	P.SPX,PH,SPX,,P.SPX	
002470	000022	3353	00	000	2181	LCA	18,,P.SPX	*TIMER SET BY FAULT GELBAR
002471	100057	0353	00	000	2182	ADLA	.WREGS+7,,P.SSR	*CURRENT TIMER
002472	000014	7312	00	000	2183	ARS	12	
002473	000021	0553	00	000	2184	ASA	17,,P.SPX	*ACCUMULATE TIME WITHIN GELBAR
002474	100004	2353	00	000	2185	LDA	.WICI,,P.SSR	*GET IC&I
002475	000022	7553	00	000	2186	STA	18,,P.SPX	*STORE IN SLAVE PREFIX
002476	000023	6352	00	000	2187	EAA	.XGBFV	
002477	100004	7553	00	000	2188	STA	.WICI,,P.SSR	/* RESET RETURN IC
002500	600242	2373	00	000	2189	LDAQ	.SISR,,P.SSA	/* MOVE SAVED EXEC REGISTER
002501	100014	7573	00	000	2190	STAQ	.WLSR,,P.SSR	
002502	600240	2373	00	000	2191	LDAQ	.SASR,,P.SSA	
002503	100012	7573	00	000	2192	STAQ	.WASR,,P.SSR	
002504	600236	2373	00	000	2193	LDAQ	.SISR,,P.SSA	
002505	100010	7573	00	000	2194	STAQ	.WISR,,P.SSR	
002506	000000	6212	00	000	2195	EAX	XPTR,0	
002507	020200	5202	02	000	2196	RPT	8,2	
002510	100030	7573	11	000	2197	STAQ	.WDRO,XPTR,P.SSR	/* COPY ISR TO ALL ODRS
002511	600174	2373	00	000	2198	LDAQ	.SSSR,,P.SSA	/* CHECK IF CLIMB WAS DONE
002512	600174	0517	00	000	2199	STD	P.SSR,,SSSR,,P.SSA	IN GELBAR
002513	000001	6752	07	000	2200	ERA	1,DL	
002514	600174	1173	00	000	2201	CMPAQ	.SSSR,,P.SSA	
002515	002526	6002	00	010	2202	TZE	DCN3	NO.
002516	600174	7537	00	000	2203	STSS	.SSSR,,P.SSA	SAVE OLD SSR 00000020
002517	001764	4706	07	000	2204	LDP	T.SSR,,SSR,DL	
002520	001761	4706	07	000	2205	LDP	T.SSR,,CTYP,DL	
002521	000016	2373	00	000	2206	LDAQ	.WPSR,,T.SSR	YES. CLIMB WAS DONE
002522	100016	7573	00	000	2207	STAQ	.WPSR,,P.SSR	
002523	000100	1007	00	000	2208	MLR	(1),(1)	/* MOVE S/S UPTO S/S FRAME OF EXEC
002524	100000	0004	00	000	2209	ADSC9	.,64*4,P.SSR	LAST IN GELBAR FRAME
002525	000000	0004	00	000	2210	ADSC9	.,64*4,T.SSR	FRAME OF MME GELBAR
		002526			2211	DCN3	EQU	*
002526	000035	0112	07	000	2212	T.DCN0	NOP	MP = TRA MPCCRT 00000020

DISCONNECT SLAVE PROCESS AND THE ACCONT

002527	006036	4706	07	000	2213	LDP	P,PDP,SD,PDP,DL		
002530	000000	2353	16	000	2214	LDA	,KPX,P,PDP		
002531	002000	3152	03	000	2215	CANA	ZINTRP,DU	/* IF INTERRUPTED IN SYSTEM,	
002532	002545	6012	00	010	2216	TNZ	X,DCN3	SKIP COUNT DOWN	
002533	001400	3152	03	000	2217	CANA	ZEXCOD,DU	/* CHECK CURRENT EXEC PRIORITY	
002534	002540	6002	00	010	2218	TZF	DCN3A	ZERO = RESET	
002535	000400	1352	03	000	2219	SBLA	ZEXCOD/3,DU	NON-ZERO = COUNT DOWN TALLY	
002536	000000	7553	16	000	2220	STA	,KPX,P,PDP		
002537	002543	7102	00	010	2221	TRA	DCN3B		
		002540			2222	DCN3A	EQU	*	
002540	000022	7352	00	000	2223	ALS	18	/* ORIGIN CODE IS IN LOWER	
002541	001400	3752	03	000	2224	ANA	ZEXCOD,DU	MOVE AND RESET EXEC PRIORITY	
002542	000000	2553	16	000	2225	ORSA	,KPX,P,PDP	TALLY COUNT	
		002543			2226	DCN3B	EQU	*	
002543	000000	0112	07	000	2227	X,DCN1	NOP	,DL	*IF PRIORITY OPTION
002544	000000	0112	07	000	2228	X,DCN2	NOP	,DL	*GO CHECK PRIORITY
		002545			2229	X,DCN3	EQU	*	
002545	001764	4716	07	000	2230	LDP	P,SSR,,SSR,DL	SAVE WSR 4-7 IN WORD 1 OF S/S	EXTM5200
002546	001761	4716	07	000	2231	LDP	P,SSR,,CTYP,DL	FRAME IN CASE OF EXTENDED	EXTM5210
002547	100001	7527	00	000	2232	STWS	1,,P,SSR	MEMORY PROGRAM	EXTM5220
002550	006024	4716	07	000	2233	LDP	P,PID,SD,PID,DL		
002551	100000	2353	17	000	2234	LDA	,PN,P,PID	*CLEAR POINTER	
002552	100002	7537	01	000	2235	STSS	2,AU,P,PID	*SAVE SSR IN PID	
002553	200016	7737	37	000	2236	LDSS	,KPKPS,PN*,P,KL	*NOW PROCESSOR PROCESS RUN	
002554	000000	7102	12	000	2237	TRA	,DACNX	*RETURN	
					2238			*PID, AU IS EXPECTED BY CALLER EP 9.	
					2239	*			
					2240	*	STOP REDISPATCHING, AND RESTORE PROCESSOR STATUS		
					2241	*	THE PROCESS IS UNDISPATCHABLE NOW		
					2242	*			
		002555			2243	DACNC	EQU	*	
002555	006133	4726	07	000	2244	LDP	P,KL,SD,KL,DL	RELOAD KL, NOT LOADED ON SOME PATHS	00000070
002556	200044	4503	17	000	2245	STZ	,KLPRG,PN,P,KL	/* SET TO SHOW PROCESSOR PROCESS RUNNI	
002557	204000	1726	07	000	2246	LDD	SYSOR,DL		
002560	004200	6342	07	000	2247	LDT	SYSIR,DL		
		002561			2248	SHUT.	PST		
002562	100000	2362	03	000	2249	LDQ	PS,EXC,DU	/* RESET EXC FLAG	
002563	400000	6563	16	000	2250	ERSQ	,KPX,P,PST		
		002564			2251	OPEN.	PST		
002565	200016	7737	37	000	2252	LDSS	,KPKPS,PN*,P,KL	/* RELOAD SSR	
002566	000000	7102	12	000	2253	TRA	,DACNX		
					2254	*			SUBD3800
					2255	*	DO ACCOUNTING FOR SUB-DISPATCHING		SUBD3810
					2256	*	PUT DATA BACK FOR TERMINATING PIECE		SUBD3820
					2257	*			SUBD3830
		002567			2258	DACQ	NULL	X0 = SUB-DISP ENTRY POINTER	SUBD3840
002567	001764	4706	07	000	2259	LDP	PO,,SSR,DL		SUBD3850
002570	000010	6717	00	000	2260	LDD	PI,,WISR,,PO	PI = SUB-DISPATCH SEGMENT	SUBD3860
002571	001761	4706	07	000	2261	LDP	PO,,CTYP,DL	PO = S/S FRAME AS TYPE 0	SUBD3870
002572	200016	7737	37	000	2262	LDSS	,KPKPS,PN*,P,KL	PROC/PROC S/S -- PROCESS SWITCH	SUBD3880

DISCONNECT SLAVE PROCESS AND THE ACCONT

002573	300020	2213	17	000	2263	LDX1	D,SQUE+1,PN,P,PRQ		SUBD3890
002574	300024	7213	11	000	2264	LXL1	D,SQPT,1,P,PRQ	X1 = OFFSET TO HEADER	SUBD3900
002575	006204	4736	07	000	2265	LDP	P3,SD,PSH,DL		SUBD3910
002576	300012	6737	00	000	2266	LDD	P3,PH,USL,,P3		SUBD3920
002577	300000	6737	00	000	2267	LDD	P3,UL,ISR,,P3	P3 = USER SEGMENT	00000070
002600	000070	7533	00	000	2268	SREG	.WTEMP,,P0	SAVE ALL XR'S	SUBD3940
002601	300006	0553	10	000	2269	ASA	.QDTM,0,P3	COMES W/ DELTA IN AR, ACCUMULATE	SUBD3950
002602	300005	0553	11	000	2270	ASA	.QAPT,1,P3	PROC'R TIME & FOR QUEUE	SUBD3960
002603	300005	2223	10	000	2271	LDX2	.QICI,0,P3	LOC OF IC&I	SUBD3970
002604	000004	2363	00	000	2272	LDQ	.WICI,,P0		SUBD3980
002605	100000	7563	12	000	2273	STQ	0,2,P1	MOVE IC&I FROM S/S TO PIECE	SUBD3990
002606	300004	2223	10	000	2274	LDX2	.QEIS,0,P3		SUBD4000
002607	100000	6367	12	000	2275	EPPR	P6,0,2,P1		SUBD4010
002610	000100	1007	00	000	2276	MLR	(1),(1)	MOVE ADDR REGS FROM S/S	SUBD4020
002611	000020	0000	40	000	2277	ADSC9	.WPTR0,0,32,P0		SUBD4030
002612	600000	0000	40	000	2278	ADSC9	0,0,32,P6		SUBD4040
002613	000100	1007	00	000	2279	MLR	(1),(1)	MOVE P&L ALSO IN CASE NEEDED	SUBD4050
002614	000060	0000	40	000	2280	ADSC9	.WFPL,0,32,P0		SUBD4060
002615	600010	0000	40	000	2281	ADSC9	8,0,32,P6		SUBD4070
002616	300002	2223	10	000	2282	LDX2	.QREG,0,P3		SUBD4080
002617	100000	6367	12	000	2283	EPPR	P6,0,2,P1		SUBD4090
002620	000100	1007	00	000	2284	MLR	(1),(1)	MOVE REGISTERS FROM S/S	SUBD4100
002621	000050	0000	40	000	2285	ADSC9	.WREGS,0,32,P0		SUBD4110
002622	600000	0000	40	000	2286	ADSC9	0,0,32,P6		SUBD4120
002623	700106	2363	00	000	2287	LDQ	.CRDAT+2,,P,CR		00000020
002624	700105	0363	00	000	2288	ADLQ	.CRDAT+1,,P,CR	SAVE CURRENT TIME	00000020
002625	002210	4022	00	010	2289	MPY	TIMBG		00000020
002626	000036	7732	00	000	2290	LRL	30		00000020
002627	300002	7563	11	000	2291	STQ	.QTOD,1,P3		SUBD4140
002630	000005	2223	00	000	2292	LDX2	.WFTYP,,P0	GET FAULT OR INTERRUPT TYPE FROM S/S	SUBD4150
002631	000100	3022	03	000	2293	CANX2	=0100,DU		SUBD4160
002632	002634	6012	00	010	2294	TNZ	DACQA	* INTERRUPT	SUBD4170
002633	200000	2622	03	000	2295	ORX2	=0200000,DU		SUBD4180
002634	300000	4423	10	000	2296	SXL2	.QFST,0,P3		SUBD4190
002635	300000	2143	11	000	2297	SZNC	.QGATE,1,P3	SHUT QUEUE GATE	SUBD4200
002636	002641	6012	00	010	2298	TNZ	*+3		SUBD4210
002637	300006	0543	11	000	2299	AOS	.QBSY,1,P3		SUBD4220
002640	002635	7102	00	010	2300	TRA	*-3		SUBD4230
002641	200000	3022	03	000	2301	CANX2	=0200000,DU	FAULT OR INTERRUPT	SUBD4240
002642	002661	6012	00	010	2302	TNZ	DACQB	* FAULT	SUBD4250
002643	300006	2353	10	000	2303	LDA	.QDTM,0,P3	CHECK TIME QUANTUM	SUBD4260
002644	300003	1153	11	000	2304	CMPA	.QDTM,1,P3		SUBD4270
002645	002661	6032	00	010	2305	TRC	DACQB	GOT FULL TIME, TREAT AS FAULT	SUBD4280
002646	000001	2352	03	000	2306	LDA	1,DU	INCREMENT READY COUNT	SUBD4290
002647	300013	0553	11	000	2307	ASA	.QRCT,1,P3		SUBD4300
002650	300007	2343	11	000	2308	SZN	.QRHT,1,P3	PUT BACK INTO QUEUE	SUBD4310
002651	002655	6012	00	010	2309	TNZ	DACQC	* QUEUE NOT EMPTY	SUBD4320
002652	300007	7403	11	000	2310	STX0	.QRHT,1,P3	NEW ENTRY, SAVE HEAD & TAIL	SUBD4330
002653	300007	4403	11	000	2311	SXLO	.QRHT,1,P3		SUBD4340
002654	002671	7102	00	010	2312	TRA	DACQE		SUBD4350

DISCONNECT SLAVE PROCESS AND THE ACCONT

002655	300007	7223	11	000	2313	DACQC	LXL2	.QRHT,1,P3	ADD TO TAIL OF QUEUE	SUBD4360
002656	300001	7403	12	000	2314		STX0	.QPTR,2,P3	LINK TO NEW TAIL	SUBD4370
002657	300007	4403	11	000	2315		SXLO	.QRHT,1,P3	TAIL PTR	SUBD4380
002660	002671	7102	00	010	2316		TRA	DACQE	GO DECREMENT PROC'R COUNT	SUBD4390
002661	300010	2343	11	000	2317	DACQB	SZN	.QFHT,1,P3	FAULT QUEUE	SUBD4400
002662	002666	6012	00	010	2318		TNZ	DACQD	* QUEUE NOT EMPTY	SUBD4410
002663	300010	7403	11	000	2319		STX0	.QFHT,1,P3	EMPTY, SAVE HEAD & TAIL	SUBD4420
002664	300010	4403	11	000	2320		SXLO	.QFHT,1,P3		SUBD4430
002665	002671	7102	00	010	2321		TRA	DACQE	GO ENABLE MAIN PROCESS	SUBD4440
002666	300010	7223	11	000	2322	DACQD	LXL2	.QFHT,1,P3	GET TAIL PTR	SUBD4450
002667	300001	7403	12	000	2323		STX0	.QPTR,2,P3		SUBD4460
002670	300010	4403	11	000	2324		SXLO	.QFHT,1,P3		SUBD4470
002671	000000	6317	00	000	2325	DACQF	EPPR	P1,,,P0	MOVE P0 TO P1 CUZ EXTM CALL USES P0	SUBD4480
002672	500000	6367	00	000	2326		EPPR	P6,,,P5	AND P5 TO P6 CUZ WE SAVE P5 FOR IOS	SUBD4490
002673	200052	6757	00	000	2327		LDD	P.SSL, .KLSLV, .P.KL	LOAD P.SSL FOR CALL TO EXTM	SUBD4500
002674	300002	7223	10	000	2328		LXL2	.QWSN,0,P3	GET THE LOGICAL W.S.#	SUBD4520
002675	000000	6352	12	000	2329		EAA	0,2	IN AU FOR UNWIRE CALL	SUBD4530
002676	300000	7223	10	000	2330		LXL2	.QFST,0,P3	GET F/I FLAG WHILE WE STILL HAVE X0	SUBD4540
002677	300000	7503	11	000	2331		STC2	.QGATE,1,P3	OPEN QUEUE GATE	00000020
002700	777000	3152	03	000	2332		CANA	=0777000,DU	IF R.W.S. IS GIVEN IN QUEUE	00000020
002701	002706	6012	00	010	2333		TNZ	DACQG	SKIP CALL TO UNWIRE	00000020
		002702			2334		EXTMEM	UWSDWS	GO UNWIRE THE REAL W.S.#	SUBD4550
002702	500070	6707	00	000			LDD0	DP.EME, .P.SSL		
		002703					ICLIMB	.DRO, .EX, EAX0		
002703	000006713400			000			VFD	18/.EX,09/713,1/1,1/0,1/0,6/M.		
002704	000000601770			000			VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/.DRO		
002705	000000	0112	00	000	2335		NOP		DENIAL RETURN	SUBD4560
		002706			2336	DACQG	NULL			00000020
002706	006042	4736	07	000	2337		LDP	P.PRQ,SD.PRQ,DL	RESTORE REGISTERS WE USED	SUBD4570
002707	600000	6357	00	000	2338		EPPR	P5,,,P6	PUT P5 BACK FOR IOS	SUBD4580
002710	006145	4766	07	000	2339		LDP	P.SSA,SD.SSA,DL		SUBD4590
		002711			2340		.SHUT	D.GATE-1, .P.PRQ		SUBD4600
002714	100000	6307	00	000	2341		EPPR	P0,,,P1	MOVE P1 BACK TO P0 'CUZ P1 GETS USED	SUBD4610
002715	300020	2213	17	000	2342		LDX1	D.SQUE+1,PN,P.PRQ		SUBD4620
002716	000001	3352	07	000	2343		LCA	1,DL		SUBD4630
002717	300025	0553	11	000	2344		ASA	D.SQPT+1,1,P.PRQ	DECR # /PROC'RS IN QUEUE	SUBD4640
		002720			2345		.OPEN	D.GATE-1, .P.PRQ		SUBD4650
		002722			2346		SHUT.	PST		00000020
002723	200000	3022	03	000	2347		CANX2	=0200000,DU		SUBD4660
002724	002730	6002	00	010	2348		TZE	DACQF	* INTERRUPT	SUBD4670
002725	003255	7012	00	010	2349		TSX	PUTPRX,PUTPRQ	PUT MAIN PROCESS IN QUEUE	SUBD4690
		002726			2350		OPEN.	PST		SUBD4700
002727	001165	7102	00	010	2351		TRA	ED9	GO REDISPATCH	00000020
002730	003255	7012	00	010	2352	DACQF	TSX	PUTPRX,PUTPRQ	PUT MAIN PROCESS IN QUEUE AND	00000020
		002731			2353		OPEN.	PST	RETURN TO IOTFRM W.O MAKING	00000020
002732	000277	7102	00	010	2354		TRA	IOTMX	TYPE 1 ENTRY IN .SSA STACK	SUBD4750

F N A B L F A P R O C E S S

2356 *									
2357 *									THIS ROUTINE ENABLES REQUESTED PROCESS. CHANGE HIS URGENCY
2358 *									IF INCORE AND DISCONNECTED. IT IS PUT INTO DISPATCHER QUEUE
2359 *									IF RELC ROADBLOC AND NO EVT REQUESTED THEN NOT PUT IN
2360 *									
2361 *									PRFCALL Q UPPER KPX OF ENABLED PROCESS
2362 *									18-23 URGE CNY
2363 *									33-35 CODE 0= PERMANENT URGENCY ENABLE
2364 *									1= ALRM CLOCK ENABLE
2365 *									2= NEW PROCESS ENABLE
2366 *									4= TEMPORARY URGENCY ENABLE
2367 *									PN,P,KL, P.CR
2368 *									SHUT - NON
2369 *									CALLING TSX ENBLX,ENABL
2370 *									ERROR RETURN
2371 *									NORMAL RETURN
2372 *									
2373 *									POST RELOADED P.LRM, P.PST, P.PRG, P.PID, P.PDP
2374 *									KPX
2375 *									LOST AQ,EBX, PPY, PPX, XO, PO
2376 *									
000002									2377 EBX SET 2
000001									2378 P.PID SET P1
000001									2379 P.PDP SET P1
002733									2380 ENABL EQU *
002733	007313	7102	00	010	2381	IYENRL	TRA	Y.FNBL	*NOP IF TACE OFF ENABLE A PROCESS
002734	000000	6262	02	000	2382		EAX	KPX,,QU	*
002735	000000	6222	06	000	2383		EAX	EBX,,QL	*SAVE CODE
002736	770000	3162	07	000	2384		CANQ	=0770000,DL	*URGENCY ZERO
002737	002753	6002	00	010	2385		TZF	EB2	*SKIP IF ZERO URGENCY
002740	000007	3162	07	000	2386		CANQ	7,DL	*PERMANENT URGENCY ENABLE
002741	002753	6012	00	010	2387		TNZ	EB2	*NO SKIP ALARM UPDATE
	002742				2388		SHUT.	LRM	*SHUT GATE AND GAET P.LRM
002743	200004	2353	16	000	2389		LDA	L.LRM,KPX,P.LRM	*GET ENTRY OF ALRM
002744	000077	3752	07	000	2390		ANA	URMASK,DL	*ANY URGENCY
002745	002752	6002	00	010	2391		TZF	EB1	*NO ALRM SET SKIP
002746	200004	6553	16	000	2392		ERSA	L.LRM,KPX,P.LRM	*CLEAR URGENCY IN ENTRY
002747	000000	6352	06	000	2393		EAA	,QL	
002750	000036	7712	00	000	2394		ARL	30	
002751	200004	2553	16	000	2395		ORSA	L.LRM,KPX,P.LRM	PUT ENABLE URGENCY
	002752				2396	FB1	EQU	*	
	002752				2397		OPEN.	LRM	*OPEN LRM GATE
	002753				2398	FB2	EQU	*	
	002753				2399		SHUT.	DSP	*SHUT .CRDSP
	002754				2400		SHUT.	PST	*SHUT PST GET P.PST
002755	003073	4502	00	010	2401		STZ	EBMARK	*CLEAR MARK
002756	400000	2353	16	000	2402		LDA	,KPX,P.PST	*GET PST ENTRY
002757	003067	6002	00	010	2403		TZF	EBER	*NO SUCH ENTRY. ERROR
002760	000002	3162	07	000	2404		CANQ	2,DL	*IF NEW PROCESS ENABLE
002761	003023	6012	00	010	2405		TNZ	EB8A	*DON'T MARK PS.ENB

F N A B L E A P R O C E S S

002762	002000	3152	07	000	2406	CANA	PS. ENB, DL	*ENABLE REQUEST ALREADY SET	
002763	002772	6002	00	010	2407	TZF	EB3	**NOT REQUESTED	
002764	200044	1063	17	000	2408	CMPX	KPX, .KLPRG, PN, P. KL	*ENABLE ITSELF	
002765	003063	6002	00	010	2409	TZF	EB11	*YES	
002766	770000	3162	07	000	2410	CANQ	=0770000, DL	*ZERO URGENCY	
002767	002775	6012	00	010	2411	TNZ	EB4	*NO	
002770	002000	6752	07	000	2412	ERA	PS. ENB, DL	*RESET ENABLE IF ZERO URGENCY ENABLE	
002771	002775	7102	00	010	2413	TRA	EB4		
		002772			2414	FB3 EQU	*		
002772	770000	3162	07	000	2415	CANQ	=0770000, DL	*ZERO	
002773	002775	6002	00	010	2416	TZF	EB4	*ZERO URGENCY DON'T SET PS. ENB	
002774	002000	2752	07	000	2417	ORA	PS. ENB, DL		
		002775			2418	FB4 EQU	*		
002775	400000	7553	16	000	2419	STA	, KPX, P, PST	*SET PST ENTRY	
002776	000004	3162	07	000	2420	CANQ	4, DL	*TEMPORARY URGENCY	
002777	003004	6002	00	010	2421	TZF	EB5	*NO	
003000	003074	7552	00	010	2422	STA	EBTMP	*SET TEMPORARY URGENCY	
003001	003074	7522	04	010	2423	STCQ	EBTMP, 04		
003002	003074	2352	00	010	2424	LDA	EBTMP		
003003	003016	7102	00	010	2425	TRA	EB7		
		003004			2426	FB5 EQU	*		
003004	000014	7722	00	000	2427	QRL	12	*SHIFT PRM URGENCY POSITION	
003005	003074	7562	00	010	2428	STQ	EBTMP	*SAVE REQUEST	
003006	002000	2762	07	000	2429	ORQ	PS. ENB, DL		
003007	400000	6763	16	000	2430	ERQ	, KPX, P, PST		
003010	002077	3762	07	000	2431	ANQ	63+PS. ENB, DL	*IF SAME REQUEST AS CURRENT PST	
003011	003014	6012	00	010	2432	TNZ	EB6	*NO	
003012	003073	5542	00	010	2433	STC1	EBMARK	*MARK DON'T ENABLE POP	
003013	003016	7102	00	010	2434	TRA	EB7		
		003014			2435	FB6 EQU	*		
003014	003074	7512	76	010	2436	STCA	EBTMP, 76		
003015	003074	2352	00	010	2437	LDA	EBTMP	*NEW ENTRY GOTTEN	
		003016			2438	FB7 EQU	*		
003016	400000	7553	16	000	2439	STA	, KPX, P, PST	*STORE NEW ENTRY	
		003017			2440	FB8 EQU	*		
003017	770077	3152	07	000	2441	CANA	=0770077, DL	/* IF URGENCY IS ZERO, REQUEST IS	
003020	003063	6002	00	010	2442	TZF	EB11	DISABLE. SO, SKIP PUT IN Q	
003021	200044	1063	17	000	2443	CMPX	KPX, .KLPRG, PN, P. KL		
003022	003063	6002	00	010	2444	TZF	EB11	*ENABLE ITSELF	
		003023			2445	FB8A EQU	*		
003023	000000	0112	07	000	2446	X. FB8 NOP	, DL	*IF OPTION, CHECK PRIORITY	
003024	400000	3152	03	000	2447	CANA	PS. SWP, DU	*INCORE	
003025	003041	6012	00	010	2448	TNZ	EB9	*YES PUT IN DISP QUEUE HIM SELF	
003026	000002	2212	03	000	2449	EB8E LDX	Z, 2, DU	SET FLAG FOR POPM TO SWAP IN SOMEBODY	DISPOOW8
003027	200154	4413	00	000	2450	SXL	Z, .KLCSW, .P. KL		DISPOOW8
003030	200154	7213	00	000	2451	LXL	Z, .KLCSW, .P. KL	NOT GATED, SO SEE IF IT GOT THERE	DISPOOW8
003031	003026	6002	00	010	2452	TZF	EB8E	* REPEAT 'CUZ IT DIDN'T TAKE	DISPOOW8
003032	003073	2342	00	010	2453	SZN	EBMARK	*SHOULD ENABLE POP	
003033	003063	6012	00	010	2454	TNZ	EB11	*NO NEED TO ENABLE	
003034	003073	7462	00	010	2455	STX	KPX, EBMARK		

F N A B L E A P R O C E S S

003035	000001	6262	00	000	2456	EAX	KPX,,PNPOP	*ENABLE OP
003036	002000	2362	07	000	2457	LDQ	PS.ENB,DL	SET ENABLE BIT TO POP
003037	400000	2563	16	000	2458	ORSQ	,KPX,P,PST	
003040	003062	7102	00	010	2459	X.EB8A TRA	EB10	
	003041				2460	EB9 EQU	*	
003041	003075	7526	00	010	2461	STWS	EBWSV	*SAVE WSR'S
003042	000000	6352	16	000	2462	EAA	,KPX	
003043	000002	7352	00	000	2463	ALS	2	
003044	006024	4716	07	000	2464	LDP	P,PID,SD,PID,DL	
003045	100001	7727	01	000	2465	LDWS	1,AU,P,PID	*CHANGE WSR TO ACCESS SSA
	000000				2466	T.SSA SET	PO	
003046	006145	4706	07	000	2467	LDP	T.SSA,SD.SSA,DL	
003047	000001	3022	03	000	2468	CANX	EBX,1,DU	*ALRM REQUEST
003050	000003	6002	04	000	2469	TZF	3,IC	*NO
003051	000201	3362	07	000	2470	LCQ	.TALRM+1,DL	*OFF ALRM SET BIT
003052	000017	3563	00	000	2471	ANSQ	.STATE,,T.SSA	
003053	000017	2353	00	000	2472	LDA	.STATE,,T.SSA	
003054	000117	2363	00	000	2473	LDQ	.SRQST,,T.SSA	
003055	003075	7726	00	010	2474	LDWS	EBWSV	*RESTORE WSR
003056	600000	3152	07	000	2475	CANA	.TRELCL+.TRDBK,DL	*IF IT ROADBLOCK OR RELINC
003057	003062	6002	00	010	2476	TZF	EB10	*NO. SO PUT IT INTO DISPATCH QUEUE
003060	000120	3162	03	000	2477	CANQ	.RSWP+.,RBRT,DU	*IF NO EVENT REQUESTED
003061	003063	6002	00	010	2478	TZF	EB11	*DON'T PUT
	003062				2479	FB10 EQU	*	
003062	003255	7012	00	010	2480	TSX	PUTPRX,PUTPRQ	*GO PUT INTO DISPATCHER QUEUE
	003063				2481	FB11 EQU	*	
003063	200044	2263	17	000	2482	LDX	KPX,,KLPRG,PN,P.KL	*RESET KPX
	003064				2483	OPEN.	PST	*OPEN PST GATE
	003065				2484	OPEN.	DSP	*OPEN DSP GATE
003066	000001	7102	13	000	2485	TRA	1,FNBLX	
	003067				2486	FBER EQU	*	
003067	200044	2263	17	000	2487	LDX	KPX,,KLPRG,PN,P.KL	/* RESET KPX
	003070				2488	OPEN.	PST	
	003071				2489	OPEN.	DSP	
003072	000000	7102	13	000	2490	TRA	0,FNBLX	
	003073				2491	FBMARK BSS	1	
	003074				2492	FBTMP BSS	1	
	003075				2493	FBWSV OBSS	1	

F N A B L E P R O C E S S B Y E V E N T

```

2495 *
2496 * THIS ROUTINE ENABLES PROCESSES WHEN THERE IS SOME SYSTEM
2497 * EVENT REQUEST. (SSA PAGE GATE MODULE)
2498 * PROCESSOR PROCESS RUN HERE. IF REQUEST STANDS ON DSPEVT
2499 *
000004 2500 XEVTP SET 4
000001 2501 P.PID SET P1
003076 2502 DEVT EQU *
003076 010000 3152 03 000 2503 CANA PS.GAT,DU *GATE OPEN EVENT
003077 003102 6002 00 010 2504 TZE DEVT1 *NO
003100 777745 6242 00 000 2505 EAX XEVTP,D.GMOD+1-D.PRQ
003101 003115 7032 00 010 2506 TSX CEBLX,CEBL *ENABLE THOSE WAIT
003102 020000 3152 03 000 2507 DEVT1 EQU *
003102 020000 3152 03 000 2508 CANA PS.SSA,DU *SSA PAGE FREE EVENT
003103 003106 6002 00 010 2509 TZE DEVT2 *NO
003104 777743 6242 00 000 2510 EAX XEVTP,D.SSAP+1-D.PRQ
003105 003115 7032 00 010 2511 TSX CEBLX,CEBL *ENABLE THOSE WAITING
003106 004000 3152 03 000 2512 DEVT2 EQU *
003106 004000 3152 03 000 2513 CANA PS.SIO,DU /* SHARE SSA LOADING COMPLETE
003107 003112 6002 00 010 2514 TZE DEVT3
003110 777747 6242 00 000 2515 EAX XEVTP,D.SIO+1-D.PRQ
003111 003115 7032 00 010 2516 TSX CEBLX,CEBL
003112 000000 6262 00 000 2517 DEVT3 EQU *
003112 000000 6262 00 000 2518 EAX KPX,0 *RESET REG. FOR SLCT1
003113 006024 4716 07 000 2519 LDP P.PID,SD.PID,DL
003114 001430 7102 00 010 2520 TRA SLCT1
003115 003125 7552 00 010 2521 CEBL EQU *
003115 003125 7552 00 010 2522 STA CEBLSA *SAVE A REG.
003116 300037 1043 14 000 2523 CEBL1 EQU *
003116 300037 1043 14 000 2524 CMPX XEVTP,D.PRQ,XEVTP,P.PRQ
003117 003123 6002 00 010 2525 TZE CEBL2 *NO ENTRY IN THIS QUEUE
003120 300037 2263 14 000 2526 LDX KPX,D.PRQ,XEVTP,P.PRQ
003121 003255 7012 00 010 2527 TSX PUTPRX,PUTPRQ *PUT IT IN DISPATCH QUEUE
003122 003116 7102 00 010 2528 TRA CEBL1 *PROCESS NEXT ENTRY
003123 003125 2352 00 010 2529 CEBL2 EQU *
003123 003125 2352 00 010 2530 LDA CEBLSA *RESTORE
003124 000000 7102 13 000 2531 TRA ,CEBLX
003125 2532 CEBLSA BSS 1 *SAVE AREA

```

SFTLRM ROUTINE SET ALRM CLOCK TO RING OR RESET IT

```

2534 *
2535 * THIS ROUTINE SET RO RESET ALRM CLOCK
2536 *
2537 * PREPARE P.CR, P.SSA, KPX, PN
2538 * SHUT = NONE
2539 * Q-REG. BIT 0 - 29 TIME INTERVAL (16*64 MICO SEC)
2540 * 30 - 35 URGENCY TO WAKE UP OS
2541 * ZERO = RESET ALRM TIMER
2542 * KPX = -1 TO SET SWAP TIMER
2543 * KPX = 0 TO SET INTERCOM TIMER
2544 * CALLING TSX SETLRX,SETLRM
2545 *
2546 * POST LOST Z, XO, AQ X5
2547 * .STATE BIT .TALRM
003126 2548 SETLRM EQU *
003126 2549 SHUT. DSP *SHUT DSP GATE
003127 2550 SHUT. LRM *GET P.LRM AND SHUT GATE
003130 000077 3162 07 000 2551 CANQ URMASK,DL *SET
003131 003147 6012 00 010 2552 TNZ STL5 *SET ALRM
003132 200004 2353 16 000 2553 LDA L.LRM,KPX,P.LRM *RESET ALARM GET ENTRY
003133 000077 3152 07 000 2554 CANA URMASK,DL *ENTRY SET
003134 003141 6002 00 010 2555 TZE STL3 *NOT SET THEN WHAT YO SET
2556 *RESET ALARM
003135 002100 7452 17 010 2557 STX SETLRX,CCFLG,PN
003136 003226 7052 00 010 2558 TSX RETLRX,RETLRN *RESET ALARM WITH LRM SHUT
003137 002100 2252 17 010 2559 LDX SETLRX,CCFLG,PN
003140 003223 7102 00 010 2560 TRA STI 11 *RETURN
003141 000000 6262 16 000 2561 STL3 EQU *
003142 003222 6046 00 010 2562 EAX KPX,,KPX *IF IT IS SWAP OR INTERCOM,
003143 600017 2363 00 000 2563 TMOZ STL10 SKIP .STATE CHECK
003144 000200 3762 07 000 2564 LDQ .STATE,,P.SSA *CHECK AND RESET BIT
003145 600017 6563 00 000 2565 ANQ .TALRM,DL *ALARM SET BIT
003146 003222 7102 00 010 2566 ERSQ .STATE,,P.SSA
2567 TRA STL10 *GO RETURN
003147 600215 7563 00 000 2568 STL5 EQU *
003150 006063 4706 07 000 2569 STQ .STMPQ,,P.SSA *SAVE REQUEST. AQ LOST AT RSCR
003151 000040 4133 00 000 2570 LDP P.RMS,SD,RMS,DL
003152 000004 7722 00 000 2571 RSCR SCUCLK,,P.RMS *READ CLOCK
003153 003453 3762 00 010 2572 QRL 4 *16 MICRO SEC UNIT. 32 BITS WIDE
003154 600215 0363 00 000 2573 ANQ SLMASK *OFF 30-35. UNIT 16*64 MICRO SEC
003155 003454 3762 00 010 2574 ADLQ .STMPQ,,P.SSA *ADD INTERVAL AND URGENCY
003156 200004 2353 16 000 2575 ANQ SLMAX
003157 000077 3152 07 000 2576 LDA L.LRM,KPX,P.LRM *PULL THE ENTRY
003160 003175 6012 00 010 2577 CANA URMASK,DL *ALARM ALREADY SET
003161 200002 0543 00 000 2578 TNZ STL6 *YES ALREADY
003162 000000 6262 16 000 2579 AOS L.PTR,,P.LRM *NO. COUNT UP ENTRY NUMBER
003163 003175 6046 00 010 2580 EAX KPX,,KPX
003164 600017 7213 00 000 2581 TMOZ STL6 *THIS IS INTERCOM OR SWAP
003165 000200 2612 03 000 2582 LXL Z,.STATE,,P.SSA *SET ALARM BIT
2583 ORX Z,.TALRM,DU
    
```

SFTLRM ROUTINE SET ALRM CLOCK TO RING OR RESET IT

003166	777757	3612	03	000	2584	ANX	Z,-1-.TRANG,DU	TURN OFF BIT SAYING ALARM RANG	00000020
003167	600017	4413	00	000	2585	SXL	Z,.STATE,,P.SSA	*STORE .TALRM BIT	
		003170			2586	SHUT.	PST		
003171	400000	2353	16	000	2587	LDA	,KPX,P.PST		
003172	001000	3752	07	000	2588	ANA	PS.LRM,DL	*RESET ALARM RANG BIT	
003173	400000	6553	16	000	2589	ERSA	,KPX,P.PST	*WE HAVE RESET IT	
		003174			2590	OPEN.	PST		
		003175			2591	EQU	*		
003175	200004	7563	16	000	2592	STQ	L.LRM,KPX,P.LRM	*STORE NEW ALRM ENTRY	
003176	003453	3762	00	010	2593	ANQ	SLMASK	*CLEAR URGENCY FIELD	
003177	200002	7213	00	000	2594	LXL	Z,L.PTR,,P.LRM	*HOW MANY ENTRY	
003200	000001	1012	03	000	2595	CMPX	Z,1,DU	*IF ONE, ONLY MY ENTRY IS IN TABLE	
003201	003220	6002	00	010	2596	TZE	STL9	*I AM THE FIRST TO WAKE SO FAR.	
003202	001312	1162	00	010	2597	CMPQ	ALMCRT	*LAST CHECKED TIME BY ALMCK ROUTINE	
003203	003220	6002	00	010	2598	TZE	STL9	*THIS IS ONE OF EARLIEST ONES	
003204	200001	2353	00	000	2599	LDA	L.FRST,,P.LRM	*GET THE FIRSTEST TIME TILL NOW	
003205	200001	1163	00	000	2600	CMPQ	L.FRST,,P.LRM	*IS IT THE SAME TIME	
003206	003222	6002	00	010	2601	TZE	STL10	*YES OK NOTHIG TO DO NOW	
003207	003216	6022	00	010	2602	TNC	STL8		
003210	001312	1112	00	010	2603	CWL	ALMCRT		
003211	003220	6002	00	010	2604	TZE	STL9		
		003212			2605	EQU	*		
003212	200002	1063	00	000	2606	CMPX	KPX,L.PTR,,P.LRM		
003213	003222	6012	00	010	2607	TNZ	STL10		
003214	003376	7012	00	010	2608	TSX	SRTLTX,SRTLRM	*RESORT ALRM TABLE	
003215	003222	7102	00	010	2609	TRA	STI 10	*OK FIMISH	
		003216			2610	EQU	*		
003216	001312	1112	00	010	2611	CWL	ALMCRT		
003217	003212	6002	00	010	2612	TZE	STL7	*EARLIER ENTRY	
		003220			2613	EQU	*		
003220	200001	7563	00	000	2614	STQ	L.FRST,,P.LRM	*THIS IS FIRSTEST ENTRY TO RING	
003221	200002	7463	00	000	2615	STX	KPX,L.PTR,,P.LRM		
		003222			2616	EQU	*		
		003222			2617	OPEN.	LRM	*OPEN ALRM GATE	
		003223			2618	EQU	*		
		003223			2619	OPEN.	DSP		
003224	000000	7102	15	000	2620	TRA	,SFTLRX		
					2621	*			
					2622	*	RFSET ALARM ENTRY		
					2623	*			
		003225			2624	RETLRM	EQU	*	
		003225			2625	SHUT.	LRM		
		003226			2626	RETLRN	EQU	*	
003226	200004	2353	16	000	2627	LDA	L.LRM,KPX,P.LRM	*GET ENTRY	
003227	000077	3752	07	000	2628	ANA	=077,DL	*IF NOT SET	
003230	003246	6002	00	010	2629	TZE	RTI	*SKIP RESET	
003231	000001	3362	07	000	2630	LCQ	1,DL	*COUNT DOWN NO. OF ENTRY	
003232	200002	0563	00	000	2631	ASQ	L.PTR,,P.LRM		
003233	000100	3362	07	000	2632	LCQ	=0100,DL	*RECOVER SAVED URGENCY	
003234	000000	6262	16	000	2633	EAX	KPX,,KPX	*IF THIS IS SWAP OR INTERCOM	

SFTLRM ROUTINE SET ALRM CLOCK TO RING OR RESET IT

003235	003242	6046	00	010	2634	TMOZ	RT3	*SKIP URGENCY AND .STATE PROCESS
				003236	2635	SHUT.	PST	
003237	400000	3563	16	000	2636	ANSQ	,KPX,P,PST	*INTO PST PARMANENT URGENCY
003240	400000	2553	16	000	2637	ORSA	,KPX,P,PST	
				003241	2638	OPEN.	PST	
				003242	2639	EQU	*	
003242	200004	7563	16	000	2640	STQ	L.LRM,KPX,P.LRM	
003243	200002	1063	00	000	2641	CMPX	KPX,L.PTR.,P.LRM	*IF THIS IS HEAD ENTRY
003244	003246	6012	00	010	2642	TNZ	RT1	*NO
003245	003376	7012	00	010	2643	TSX	SRTLX,SRTLRM	*RESET ALARM TABLE
				003246	2644	EQU	*	
				003246	2645	OPEN.	LRM	
003247	000000	6262	16	000	2646	EAX	KPX,,KPX	/* IF SWAP OR INTERCOM
003250	003254	6046	00	010	2647	TMOZ	RT5	SKIP .STATE UPDATE
003251	600017	2363	00	000	2648	LDQ	.STATE,,P.SSA	
003252	000200	3762	07	000	2649	ANQ	.TALRM,DL	*OFF THE ALARM SET BIT
003253	600017	6563	00	000	2650	ERSQ	.STATE,,P.SSA	
				003254	2651	EQU	*	
003254	000000	7102	15	000	2652	TRA	,RETLRX	

PUT A PROCESS INTO DISPATCHER QUEUE

					2654 *						
					2655 *						
					2656 *	THIS ROUTINE PUT REQUESTED PROCESS INTO DISPATCHER QUEUE.					
					2657 *	IF THE PROCESS IS WAITING SOME EVENT IN SD.PRQ, IT WILL TAKE					
					2658 *	OUT OF WAIT QUEUE (I.E. SSA PAGE, LOADING SSSA, OR GATE MODULE)					
					2659 *						
					2660 *	PREPARE P.PST					
					2661 *	SHUT - DSP, PST					
					2662 *	CALLING TSX	PUTPRX, PUTPRQ				
					2663 *						
					2664 *	LOADED	P.PRQ, P.PDP				
					2665 *	LOST	PPX, PPY, A				
					2666 *	PST WILL BE UPDATED TO SHOW DISPATCH WAITING					
		000000			2667	PPX	SET	0			
		000002			2668	PPY	SET	2			
		000001			2669	P.PDP	SET	P1			
		003255			2670	PUTPRQ	EQU	*			
	003255	006042	4736	07	000	2671	LDP	P.PRQ, SD.PRQ, DL			
	003256	006036	4716	07	000	2672	LDP	P.PDP, SD.PDP, DL			*PDP SEGMENT
	003257	400000	2353	16	000	2673	LDA	,KPX, P.PST			*PROCESS STATUS
	003260	000002	6012	04	000	2674	TNZ	2, IC			*TEST
			003261			2675	PPZOP	ZOP	1	*NO SUCH PROCESS IN SYSTEM	
	003262	400000	3152	03	000	2676	CANA	PS.SWP, DU			*CHECK CONSISTENCY
	003263	003261	6002	00	010	2677	TZE	PPZOP			*PROCESS NOT IN CORE
	003264	100000	3152	03	000	2678	CANA	PS.EXC, DU			
	003265	003271	6002	00	010	2679	TZE	PPNQ	← NOT IN EXECUTION		00000070
	003266	002000	2752	07	000	2680	ORA	PS.ENB, DL	JOB IN EXECUTION, BUT MAY BE ON WAY		00000070
	003267	400000	7553	16	000	2681	STA	,KPX, P.PST			00000070
	003270	000000	7102	11	000	2682	TRA	,PUTPRX			00000070
			003271			2683	PPNQ	NULL			00000070
	003271	003075	7526	00	010	2684	STWS	EBWSV	*SAVE WSR		
	003272	006024	4716	07	000	2685	LDP	P.PID, SD.PID, DL			
	003273	000000	6352	16	000	2686	EAA	,KPX			*PID ENTRY ADDRESS
	003274	000002	7352	00	000	2687	ALS	2			
	003275	100001	7727	01	000	2688	LDWS	1, AU, P.PID			*CHANGE WSR TO ACCESS SSA
	003276	600017	2353	00	000	2689	LDA	,STATE, ,P.SSA			* / GET STATUS AND REQUEST TO GET
	003277	003375	3752	00	010	2690	ANA	PPEMSK			EXECUTION PRIORITY, BUT
	003300	600117	2753	00	000	2691	ORA	,SRQST, ,P.SSA			SET OFF SOME BITS.
	003301	003075	7726	00	010	2692	LDWS	EBWSV			*RESTORE WSR
			000002			2693	XPTR	SET	PPY		
	003302	006036	4716	07	000	2694	LDP	P.PDP, SD.PDP, DL			*RELOAD PDP
	003303	003364	6222	00	010	2695	EAX	XPTR, ZEXLST			*SET POINTER
	003304	010240	5202	02	000	2696	RPT	ZEXLSZ, 2, TNZ			
	003305	000000	3152	12	000	2697	CANA	,XPTR			*CHECK IF ANY BIT STANDS
	003306	100000	7203	16	000	2698	LXL	PPX, ,KPX, P.PDP			
	003307	001400	3602	03	000	2699	ANX	PPX, ZEXCOD, DU			/* COMPARE WITH PRIVIOUS
	003310	777777	1002	12	000	2700	CMPX	PPX, -1, XPTR			PRIORITY CODE
	003311	003316	6002	00	010	2701	TZE	PPO			/* SAME - NO NEED TO RESET
	003312	100000	2353	16	000	2702	LDA	,KPX, P.PDP			
	003313	003374	3752	00	010	2703	ANA	EXCMSK			*RESET ZEXCOD FIELD

PUT A PROCSS INTO DISPATCHER QUEUE

003314	777777	2752	12	000	2704	ORA	-1.XPTR	*THEN SET NEW EXECUTION PRIORITY
003315	100000	7553	16	000	2705	STA	,KPX,P.PDP	
		003316			2706	PP0	EQU	*
003316	000000	0112	07	000	2707	TAPR1	NOP	,DL
003317	400000	2353	16	000	2708	LDA	,KPX,P.PST	*WAITING SOME EVENT
003320	074000	3752	03	000	2709	ANA	PS.DWT+PS.SSA+PS.GAT+PS.SIO,DU	
003321	003327	6002	00	010	2710	TZF	PP1	*NO EVENT WAITING SKIP
003322	400000	6553	16	000	2711	ERSA	,KPX,P.PST	*YES, CLEAR IT AND UNLINK
003323	300037	2203	16	000	2712	LDX	PPX,D.PRQ,KPX,P.PRQ	
003324	300037	7223	16	000	2713	LXL	PPY,D.PRQ,KPX,P.PRQ	
003325	300037	7403	12	000	2714	STX	PPX,D.PRQ,PPY,P.PRQ	
003326	300037	4423	10	000	2715	SXL	PPY,D.PRQ,PPX,P.PRQ	
		003327			2716	PP1	EQU	*
003327	300037	1063	00	000	2717	CMPX	KPX,D.PRQ,,P.PRQ	
003330	000000	6002	11	000	2718	TZF	,PUTPRX	*IT IS IN QUEUE HEAD ALREADY
003331	003360	2142	17	010	2719	SZNC	PPTAIL,PN	*IF IT IS REUFSTED TO PUT AT TAIL
003332	003355	6012	00	010	2720	TNZ	PPTL	*PUT IT AT TAIL OF DISPATCH QUEUE
003333	100000	2203	16	000	2721	LDX	PPX,,KPX,P.PDP	*DISPATCHER PRIORITY
003334	000000	0112	07	000	2722	X.PP1	NOP	,DL
					2723			*TRA TO OPTION
003335	040000	3152	03	000	2724	CANA	PS.DWT,DU	*IF ALREADY IN QUEUE
003336	003341	6012	00	010	2725	TNZ	PP2	*START FROM CURRENT POSITION
		003337			2726	PP1A	EQU	*
003337	300037	7223	00	000	2727	LXL	PPY,D.PRQ,,P.PRQ	*NO. START FROM TAIL
003340	003345	6002	00	010	2728	TZE	PP3	*NO ENTRY IN QURUE PUT THIS AT HEAD
		003341			2729	PP2	EQU	*
003341	100000	1003	12	000	2730	CMPX	PPX,,PPY,P.PDP	*WHICH PRIORITY IS HIGH
003342	003345	6046	00	010	2731	TMOZ	PP3	*PUT HERE. FOUND POSITION
003343	300037	7223	12	000	2732	LXL	PPY,D.PRQ,PPY,P.PRQ	
003344	003341	6012	00	010	2733	TNZ	PP2	*GO TO NEXT ENTRY
					2734			*END OF QUEUE
		003345			2735	PP3	EQU	*
003345	300037	2203	12	000	2736	LDX	PPX,D.PRQ,PPY,P.PRQ	
003346	300037	4463	10	000	2737	SXL	KPX,D.PRQ,PPX,P.PRQ	
003347	300037	7463	12	000	2738	STX	KPX,D.PRQ,PPY,P.PRQ	
003350	300037	4423	16	000	2739	SXL	PPY,D.PRQ,KPX,P.PRQ	
003351	300037	7403	16	000	2740	STX	PPX,D.PRQ,KPX,P.PRQ	
					2741			
					2742			CHFNGE PROCESS STATUS INDICATER
003352	040000	2352	03	000	2743	LDA	PS.DWT,DU	
003353	400000	2553	16	000	2744	ORSA	,KPX,P.PST	*MARK IN PST ALSO
003354	000000	7102	11	000	2745	X.PP3	TRA	,PUTPRX
					2746	*	TRA	MPENB
					2747	*		*ENAVLE IDLE PROCESSORS
		003355			2748	PPTL	EQU	*
003355	000000	0112	07	000	2749	X.PPTL	NOP	,DL
					2750			*IF A PRIORITY OPTION SET PDP
								*TO SHOW INACTIVE AND SOMETHING WAIT
003356	300037	7223	00	000	2751	PPTL1	LXL	PPY,D.PRQ,,P.PRQ
003357	003345	7102	00	010	2752	TRA	PP3	*PUT AT TAIL OF QUEUE
					2753			

PUT A PROCESS INTO DISPATCHER QUEUE

003360 2754 PPTAIL BSS .NRPRC *REQUEST CELL TO PUT AT TAIL

2755
 2756 * TABLE OF EXECUTION PRIORITY CODE
 2757 *

003364 2758 ZEXLST EQU *

003364	160000000000	000	2759	OCT	160000000000
003365	001400 001400	000	2760	ZERO	ZEXCOD,ZEXCOD
003366	017600000000	000	2761	OCT	017600000000
003367	001000 001000	000	2762	ZERO	ZEXCOD=ZEXCOD/3,ZEXCOD=ZEXCOD/3
003370	000174000000	000	2763	OCT	000174000000
003371	000400 000400	000	2764	ZERO	ZEXCOD/3,ZEXCOD/3
003372	000000000000	000	2765	OCT	0
003373	000000 000000	000	2766	ZERO	0

003374 2767 ZEXLSE EQU *
 000010 2768 ZEXLS2 EQU ZEXLSE-ZEXLST
 000004 2769 ZEXLSZ EQU ZEXLS2/2

003374	776377 776377	000	2770	EXCMSK	ZERO	-ZFXCOD-1,-ZEXCOD-1 *MASK OF ZEXCOD FIELD OF PDP
003375	777573 000000	000	2771	PPEMSK	ZERO	-1-.TSYOT-.TINCC */ SYSOUT=WRITING AND IN=C.C. HAS NOT PRIORITY. USER MAY BE RUNNING BUT CC=WAITING HAS PRIORITY
			2772			
			2773			

ALRM TABLE SORT AND RESET ROUTINE

```

2775 *
2776 * THIS ROUTINE SEARCHES SD.LRM TABLE AND THE NEAREST TIME ENTRY
2777 * WILL BE PULL OUT AND POINTED.
2778 *
2779 * PREPARE P.LRM
2780 * L.PTR(18-35)- # OF ENTRIES, L.FRST- LAST RANG TIME, L.GAT
2781 * L.GATE- SHUT
2782 * CALLING TSX SRTLTX,SRTLRM
2783 *
2784 * LOST XO, SLX, SLY, A, Q, SLZ(FUTURE)
2785 *
2786 * ALRM TIMER IS MAX 377777777 MSEC. MORE THAN THAT IS NULL ENTRY
2787 * ENTRY SET MUST TRANCATED BY MAX TIMER
2788 *
2789 * MAX PROCESS NUMBER IS LIMITED TO 256-1
000002 2790 SLX SET 2
000003 2791 SLY SET 3
000004 2792 SLZ SET 4
003376 2793 SRTLRM EQU *
003376 200002 7223 00 000 2794 LXL SLX,L.PTR,,P.LRM *ANY ENTRY
003377 003447 6002 00 010 2795 TZE SL6 *NO
003400 040000 2362 03 000 2796 LDQ =0040000,DU *MAXIMUM TIMER + 1
003401 003452 2202 00 010 2797 LDX0 SLRPTX *RPT INDEX
003402 003452 7242 00 010 2798 LXL SLZ,SLRPTX LOAD # TIMES TO REPEAT RPT DISPOPGS
003403 000003 6222 00 000 2799 EAX SLX,L.LRM+L.SWAP *START FROM SWAP ENTRY
003404 200001 2353 00 000 2800 LDA L.FRST,,P.LRM *LAST RANG TIME
003405 2801 SL1 EQU *
003405 000000 5202 01 000 2802 RPTX ,1 *SEARCH BIGGER TIME THAN LAST
003406 200000 1113 12 000 2803 CWL ,SLX,P.LRM
003407 003414 6012 00 010 2804 TNZ SL2 *END OF TABLE
003410 277777 2363 12 000 2805 LDQ -1,SLX,P.LRM *FOUND A CANDIDATE
003411 777777 6232 12 000 2806 EAX SLY,-1,SLX *SAVE POINTER
003412 776000 3002 03 000 2807 CANXO =0776000,DU
003413 003405 6012 00 010 2808 TNZ SL1 *NO RETRY
003414 000001 1242 03 000 2809 SL2 EQU *
003414 000001 1242 03 000 2810 SBLX SL7,1,DU IF MORE REPEATS NEEDED, DISPOPGS
003415 003405 6052 00 010 2811 TPL SL1 DO IT DISPOPGS
003416 040000 1162 03 000 2812 CMPQ =0040000,DU *DID WE FOUND A CANDYDATE
003417 003442 6012 00 010 2813 TNZ SL5 *YES. IT IS NEAREST ONE
003420 000001 3352 07 000 2814 LCA 1,DL *NO. FIND SMALLEST TIME THEN
003421 003452 2202 00 010 2815 LDX0 SLRPTX
003422 003452 7242 00 010 2816 LXL SLZ,SLRPTX DISPOPGS
003423 000003 6222 00 000 2817 EAX SLX,L.LRM+L.SWAP
003424 200001 2363 00 000 2818 LDQ L.FRST,,P.LRM *SMALLER THAN LAST
003425 000000 5202 01 000 2819 SL3 EQU *
003425 000000 5202 01 000 2820 RPTX ,1
003426 200000 1113 12 000 2821 CWL ,SLX,P.LRM
003427 003434 6012 00 010 2822 TNZ SL4
003430 277777 2363 12 000 2823 LDQ -1,SLX,P.LRM
003431 777777 6232 12 000 2824 EAX SLY,-1,SLX

```

ALRM TABLE SORT AND RESET ROUTINE

003432	776000	3002	03	000	2825	CANXO	=0776000,DU	
003433	003425	6012	00	010	2826	TNZ	SL3	
		003434			2827	SL4	EQU	*
003434	000001	1242	03	000	2828	SBLX	SLZ,1,DU	
003435	003425	6052	00	010	2829	TPL	SL3	
003436	200001	1163	00	000	2830	CMPQ	L.FRST,,P.LRM	*ANY FOUND
003437	003442	6012	00	010	2832	TNZ	SL5	
		003440			2833	ZOPS		
003441	003447	6002	00	010	2834	TZE	SL6	*NO. TABLE IS EMPTY
		003442			2835	SL5	EQU	*
003442	777774	6232	13	000	2836	EAX	SLY,-L.LRM,SLY	*POINTER TO KPX
003443	200002	7433	00	000	2837	STX	SLY,L.PTR,,P.LRM	*SAVE KPX
003444	003453	3762	00	010	2838	ANQ	SLMASK	*CLEAR URGENCY FIELD
003445	200001	7563	00	000	2839	STQ	L.FRST,,P.LRM	*SAVE TIME OF ARLM
003446	000000	7102	11	000	2840	TRA	,SRTLTX	*RETRN
		003447			2841	SL6	EQU	*
003447	000100	3362	07	000	2842	LCQ	=0100,DL	
003450	200001	7563	00	000	2843	STQ	L.FRST,,P.LRM	*SHOW NO ENTRY IS
003451	000000	7102	11	000	2844	TRA	,SRTLTX	*RETURN
		003452			2845	SLRPTX	BSS	1
003453	037777777700			000	2846	SLMASK	OCT	37777777700
003454	037777777777			000	2847	SLMAX	OCT	037777777777

DISPOPGS
DISPOPGS

*NO. TABLE IS EMPTY

*POINTER TO KPX

*SAVE KPX

*CLEAR URGENCY FIELD

*SAVE TIME OF ARLM

*RETRN

*SHOW NO ENTRY IS

*RETURN

*INDEX FOR RPTX CODE

BASIC ROUTINES

				2849 *			
				2850 *	DISPATCHER GATE SHUT/OPEN ROUTINE		
				2851 *	TSX Z,DSPPOP/DSPST		
				2852 *			
		003455		2853 DSPST	EQU *		
		003455		2854	.SHUT .CRDSP,,P.CR	SHUT DISPATCHER GATE	
	003460	000000	7102 11 000	2855	TRA ,Z		
		003461		2856 DSPOP	EQU *		
		003461		2857	.OPEN .CRDSP,,P.CR	SHUT DISPATCHER GATE	
	003463	000000	7102 11 000	2858	TRA ,Z		
				2859 *			
				2860 *	ALARM TABLE GATE SHUT/OPEN ROUTINE		
				2861 *			
		003464		2862 LRMST	EQU *		
	003464	006031	4726 07 000	2863	LDP P,LRM,SD,LRM,DL		
		003465		2864	.SHUT L,GATE-1,,P,LRM		
	003470	000000	7102 11 000	2865	TRA ,Z		
		003471		2866 LRMOP	EQU *		
		003471		2867	.OPEN L,GATE-1,,P,LRM		
		003473		2868 LRMOP2	EQU *		
	003473	006133	4726 07 000	2869	LDP P,KL,SD,KL,DL	*RESTORE P,KL	
	003474	000000	7102 11 000	2870	TRA ,Z		
				2871 *			
				2872 *	PROCESS STATUS TABLE GATE SHUT/OPEN ROUTINE		
				2873 *			
				2874 *			
		003475		2875 PSTST	EQU *		
	003475	006136	4746 07 000	2876	LDP P,PST,SD,PST,DL		
		003476		2877	.SHUT -1,,P,PST		
	003501	000000	7102 11 000	2878	TRA ,Z		
		003502		2879 PSTOP	EQU *		
		003502		2880	.OPEN -1,,P,PST		
	003504	000000	7102 11 000	2881	TRA ,Z		
				2882 *			
				2883 *	I/O QUEUE GATE SHUT/OPEN ROUTINE		
				2884 *			
		003505		2885 QGTST	EQU *		
		003505		2886	.SHUT .CRQGT,,P.CR		
	003510	000000	7102 11 000	2887	TRA ,Z		
		003511		2888 QGTOP	EQU *		
		003511		2889	.OPEN .CRQGT,,P.CR		
	003513	000000	7102 11 000	2890	TRA ,Z		
				2891 *			
				2892 *	MODULE GATE MANAGE TABLE GATE SHUT/OPEN ROUTINE		
				2893 *			
		003514		2894 GTMST	EQU *		
	003514	006027	4726 07 000	2895	LDP P,GTM,SD,GTM,DL		
		003515		2896	.SHUT -1,,P,GTM		
	003520	000000	7102 11 000	2897	TRA ,Z		
		003521		2898 GTMOP	EQU *		

BASIC ROUTINES

		003521	2899		.OPEN	-1,,P.GTM
003523	000000	7102 11	000	2900	TRA	,Z
				2901 *		
				2902 *	EXIT	MACROS
				2903 *		
		003524		2904	EXITO	EQU *
		003524		2905	.EXIT	
					INHIB	SAVE,ON
003524	000002	6306 04	3526		EPPRO	**2,\$
003525	700006	7103 00	000		TRA	.CREXT,,P.CR
003526	000000	000000	000		ZFRO	.RG,
					INHIB	RESTORE
		003527		2906	EXITI	.EXIT 1
					INHIB	SAVE,ON
003527	000002	6306 04	3531		EPPRO	**2,\$
003530	700006	7103 00	000		TRA	.CREXT,,P.CR
003531	000000	000001	000		ZERO	.RG,1
					INHIB	RESTORE

BASIC ROUTINES

				2908 *			
				2909 *	TIMER REGISTER SET ROUTINE		
				2910 *			
				2911 *	INTERFACE LDTMX		
				2912 *	FUNCTION - SETING TIMER TO MAXIMUM VALUE		
				2913 *	CALLING - TSX Z,LDTMX		
				2914 *	REGISTER - P.CR,PN MUST BE SET		
				2915 *	Q REG DESTROYED		
				2916 *			
				2917 *	INTERFACE LDT		
				2918 *	FUNCTION - SETTING TIMER TO Q-REG		
				2919 *	CALLING - TSX Z,LDT		
				2920 *	REGISTER - P.CR,PN MUST BE SET		
				2921 *	Q BIT 0-27 TIME IN MICRO SEC		
				2922 *			
		003532		2923	LDTMX EQU *	*SET TO MAX VALUE	
003532	300000	2362 03 000		2924	LDQ =0300000,DU	*MAXIMUM TIMER	
				2925			
		003533		2926	LDT EQU *		
003533	700072	7563 17 000		2927	STQ .CRCCK,PN,P.CR	*USE SCRATCH PAD	
003534	700072	6373 17 000		2928	LDT .CRCCK,PN,P.CR		
003535	000000	7102 11 000		2929	TRA ,Z		
				2930 *			
				2931 *	TIME INTERVAL RETRIEVE ROUTINE		
				2932 *	INTERVAL SINCE LAST CALL TO RSCR		
				2933 *	INTERFACE RSCR		
				2934 *	FUNCTION - READ CLOCK AND GET INTERVAL SINCE LAST CALL		
				2935 *	CALLING - TSX Z,RSCR		
				2936 *	REGISTER - P.CR,PN MUST BE SET		
				2937 *	A REGISTER CONTAINS INTERVAL IN 16 MICRO SEC		
				2938 *	Q REGISTER DESTROYED		
				2939 *			
		003536		2940	RSCR EQU *		
003536	006063	4706 07 000		2941	LDP P.RMS,SD,RMS,DL	*GET REAL ADDRESS	
003537	000040	4133 00 000		2942	RSCR SCUCLK, P.RMS		
003540	700072	7563 17 000		2943	STQ .CRCCK,PN,P.CR	*SAVE NOW TIME	
		003541		2944	RSCR EQU *	/* FOR INTERRUPTED ACCOUNT	
003541	700264	1363 17 000		2945	SBLQ .CRLCK,PN,P.CR	*NOW-THEN = INTERVAL	
003542	003544	6052 00 010		2946	TPL **2	NO CARRY OUT	
003543	000000	5332 00 000		2947	NEGL		
003544	700072	2353 17 000		2948	LDA .CRCCK,PN,P.CR		
003545	700264	7553 17 000		2949	STA .CRLCK,PN,P.CR	*RESET THEN TO CURRENT TIME	
003546	000000	6352 00 000		2950	EAA 0		
003547	000040	7372 00 000		2951	LLS 32	*INTERVAL IN 16 MICRO SEC A REG.	
003550	000000	7102 11 000		2952	TRA ,Z	*RETURN	

BASIC ROUTINES

				2954 *				
				2955 *	THIS ROUTINE PUT MESSAGE INTO POPQ			
				2956 *	INTERFACE			
				2957 *	FUNCTION - PUT MESSAGE ON INDEX(=W,KPX) A Q INTO POPQ			
				2958 *	PRECAL P.CR			
				2959 *	MESSAGE X3, KPX, A, Q			
				2960 *	CALLING TSX Z,POPQ			
				2961 *	QUEUE FULL RETURN			
				2962 *	NORMAL RETURN			
				2963 *	POST LOST P0, P1, X0, X2			
				2964 *				
		000001		2965	P.PQQ SET P1			
		000002		2966	XPTR SET 2			
		000002		2967	XCNT SET 2			
		007777		2968	POQMSK BOOL 7777	*POP Q POINTER MASK SYMBOL		
		000003		2969	XPOPQ SET 3			
		003551		2970	POPQ EQU *			
	003551	006041	4716 07 000	2971	LDP P.PQQ,SD.PQQ,DL	*GET SEGMENT		
			003552	2972	.SHUT -1,,P.PQQ			
	003555	100001	7223 00 000	2973	LXL XCNT,1,,P.PQQ	*ANY QUEUE SPACE		
	003556	003572	6002 00 010	2974	TZE POPQ9	*NO		
	003557	100001	0113 56 000	2975	NOP 1,ID,P.PQQ	*COUNT UP AND DOWN		
	003560	100003	2223 00 000	2976	LDX XPTR,3,,P.PQQ	*GET NEXT AVAIL POINTER		
	003561	007777	3622 03 000	2977	ANX XPTR,POQMSK,DU			
	003562	100000	7433 12 000	2978	STX XPOPQ,,XPTR,P.PQQ	*MOVE MESSAGE		
	003563	100000	4463 12 000	2979	SXL KPX,,XPTR,P.PQQ			
	003564	100001	7553 12 000	2980	STA 1,XPTR,P.PQQ			
	003565	100002	7563 12 000	2981	STQ 2,XPTR,P.PQQ			
	003566	100003	0113 53 000	2982	NOP 3,AD,P.PQQ	*TALLY TO NEXT		
	003567	003572	6072 00 010	2983	TTF POPQ9	*IF END OF QUEUE BODY		
	003570	100002	2353 00 000	2984	LDA 2,,P.PQQ	*REFRESH TALLY		
	003571	100003	7553 00 000	2985	STA 3,,P.PQQ			
			003572	2986	POPQ9 EQU *			
			003572	2987	.OPEN -1,,P.PQQ			
	003574	000000	6222 12 000	2988	EAX XCNT,,XCNT	*COULD WE PUT IT IN		
				2989		*XCNT=XPTR XPTR SHOULD NOT BE		
				2990		*ZERO WHERE GATE WORD PLACED		
	003575	000000	6002 11 000	2991	TZE 0,Z	*NO. FULL RETURN		
	003576	000001	7102 11 000	2992	TRA 1,Z	*OK GOT IT		

R A S I C R O U T I N E S

```

2994 *
2995 *      CKLMT ROUTINE CHECKS USER'S PROCESSOR TIME LIMITS
2996 *
2997 *      PRECAL P.SSA, P.CR  SHUT= DSP
2998 *      CALLING TSX CKLMTX,CKLMT
2999 *      POST  AQ,XO
3000 *      IF OVER TIME LIMT, GOES TO .MBRT.3
003577
3001 CKLMT  EQU      *
003577 600005 2353 00 000 3002      LDA      .SATTR,,P.SSA      *IS THIS PRIVILEGED SLAVE
003600 400000 3152 07 000 3003      CANA     .A.EMM,DL
003601 003630 6012 00 010 3004      TNZ      CKLMT3      *OK DON'T CHECK TIME LIMIT
003602 600003 2343 00 000 3005      SZN      .SALT,,P.SSA      *PROCESSOR TIME
003603 003606 6046 00 010 3006      TMOZ     CKLMT1      *NO TIME LEFT
003604 600000 2343 00 000 3007      SZN      .SACHT,,P.SSA      *ACTIVITY CHANEL TIME
003605 003630 6052 00 010 3008      TPL      CKLMT3      *LEFT OK.
003606
3009 CKLMT1 EQU      *
003606 600017 2363 00 000 3010      LDQ      .STATE,,P.SSA      *IN CLITICAL
003607 176320 3162 03 000 3011      CANQ     T.SYS+.TLOAD+.TDMM+.TBRT+.TSYOT,DU
003610 003630 6012 00 010 3012      TNZ      CKLMT3      *WAIT ALITTLE BIT
003611 600261 2363 00 000 3013      LDQ      .ST2CS,,P.SSA      IF THE TYPE 2 CRITICAL SECTION COUNT      00000020
003612 777777 3162 03 000 3014      CANQ     -1,DU      ISNT ZERO, THEN WE MUST NOT ABORT NOW      00000020
003613 003630 6012 00 010 3015      TNZ      CKLMT3      *NON-ZERO T2CS COUNT      00000020
003614 600003 3363 00 000 3016      LCO      .SALT,,P.SSA
003615 567000 1162 07 000 3017      CMPQ     64*3000,DL      * 3 SEC. PAST
003616 003622 6052 00 010 3018      TPL      CKLMT2      *TOO LONG SOME ERROR IN SYSTEM
003617 600043 2363 00 000 3019      LDQ      .SFLVL,,P.SSA
003620 000002 1162 07 000 3020      CMPQ     2,DL      *IN SYSTEM
003621 003630 6032 00 010 3021      TRC      CKLMT3      *WAIT ALITTLE MORE
003622
3022 CKLMT2 EQU      *
003622
3023      OPEN.   DSP
003623 000005 2362 07 000 3024      LDQ      .AC005,DL      I8, RUN TIME EXHAUSTED      00000020
003624 003705 7012 00 010 3025      TSX      Z,RDSPRG      *LOAD ASR,DSAR PSR TO .GOTO
003625
3026 BRT1.3 EQU      *
003625
3027      .GOTO   .MBRT1,3
      INHIB  SAVE,ON
003625 000002 6306 04 3627      EPPRO   **2,$
003626 700010 7103 00 000      TRA     .CRGT0,,P.CR
003627 000036 000003 000      ZERO    .MBRT1,3
      INHIB  RESTORE
003630
3028 CKLMT3 EQU      *
003630 000000 7102 11 000 3029      TRA     ,CKLMTX

```

BASIC ROUTINES

					3031 *			
					3032 *	SAVE CURRENT PROCESS STATUS INTO DDS STACK FOR SOFTWARE		
					3033 *	INTERRUPT PROCESSING		
					3034 *	PRECAL SHUT - DSP , P.SSA		
					3035 *	CALLING TSX Z,SVLVL		
					3036 *	POST LOST XO, A, PO, X1		
		000002			3037 XPTR	SET 2		
		000000			3038 XTMP	SET 0		
		000000			3039 EBX	SET 0		
		000000			3040 P.PSH	SET P0		
		000000			3041 P.DDS	SET P0		
		003631			3042 SVLVL	EQU *		
	003631	007273	7102 00 010		3043 IYSEVT	TRA Y,SEVT	*NOP IF TRACE OFF. START OF EVENT	
					3044		*PROCESSING	
		003632			3045 SVLVIN	EQU *		
	003632	006204	4706 07 000		3046	LDP P.PSH,SD,PSH,DL		
	003633	000026	6707 00 000		3047	LDD P.DDS,PH,DDS,,P.PSH		
	003634	001761	4706 07 000		3048	LDP P.DDS,,CTYP,DL	*CHENGE TYPE	
	003635	600031	7203 00 000		3049	LXL XTMP,,SDLVL,,P.SSA	/* SET POINTER TO NEXT AVAIL IN DDS	
	003636	000000	6307 10 000		3050	EPPR P.DDS,,XTMP,P.DDS		
	003637	000100	1007 00 000		3051	MLR (1),(1)	SAVE 10 WORDS OF .STEMP	IMPR6095
	003640	600204	0000 50 000		3052	ADSC9 .STEMP,,40,P.SSA		IMPR6100
	003641	000002	0000 50 000		3053	ADSC9 D.TEMP,,40,P.DDS		IMPR6110
	003642	600214	7537 00 000		3054	STSS .STMPA,,P.SSA		
	003643	600214	2373 00 000		3055	LDAQ .STMPA,,P.SSA	/* MOVE SSR	
	003644	000000	7553 00 000		3056	STA D.SSR,,P.DDS		
	003645	000001	7563 00 000		3057	STQ D.SSR+1,,P.DDS		
	003646	600043	2353 00 000		3058	LDA .SELVL,,P.SSA	/* SAVE .SELVI	
	003647	000015	7553 00 000		3059	STA D.FLVL,,P.DDS		
	003650	600216	2353 00 000		3060	LDA .STKSP,,P.SSA		
	003651	000016	7553 00 000		3061	STA D.STKP,,P.DDS		
	003652	600221	2353 00 000		3062	LDA .SVFLT,,P.SSA	SAVE .SVFLT FOR IOS	IMPR6170
	003653	000017	7553 00 000		3063	STA D.SVFT,,P.DDS		IMPR6180
	003654	600012	2353 00 000		3064	LDA .SSA,,P.SSA	/* SAVE STACK CONTROL WORD	
	003655	000020	7553 00 000		3065	STA D.SSA,,P.DDS		
	003656	777440	6352 01 000		3066	EAA -.SSAWK,AU	/* THEN MOVE STACK BODY	
	003657	000002	7352 00 000		3067	ALS 2		
	003660	000140	1007 40 000		3068	MLR (1,1),(1,1)		
	003661	600340	0000 01 000		3069	ADSC9 .SSAWK,,AU,P.SSA		
	003662	000021	0000 01 000		3070	ADSC9 D.SSA+1,,AU,P.DDS		
	003663	000002	7712 00 000		3071	ARL 2	/* GET STACK SIZE	
	003664	000022	6352 01 000		3072	EAA D.SSA+1+1,AU		
	003665	600031	2363 00 000		3073	LDO .SDLVL,,P.SSA	/* UPDATE DDS STACK POINTER	
	003666	077777	7563 01 000		3074	STQ D.DLVL,AU,P.DDS		
	003667	000022	7712 00 000		3075	ARL 18	/* ADD NEW FRAME SIZE	
	003670	600031	0553 00 000		3076	ASA .SDLVL,,P.SSA	TO FORWARD THE DDS TO NEXT AVAIL	
	003671	002100	2202 17 010		3077	LDX EBX,CCFLG,PN	*EVENT LEVEL	
	003672	600031	7403 00 000		3078	STX EBX,.SDLVL,,P.SSA		
	003673	000340	6352 00 000		3079	EAA .SSAWK	/* RESET .SSA STACK TO INITIAL POINT	
	003674	600012	7553 00 000		3080	STA .SSA,,P.SSA		

BASIC ROUTINES

003675	600017	2353	00	000	3081	LDA	.STATE,,P.SSA	/* SAVE .STATE
003676	000014	7553	00	000	3082	STA	D.STAT,,P.DDS	
003677	003704	3752	00	010	3083	ANA	S.STAT	*CLEAR BITS THOSE ARE SAVED
003700	600017	7553	00	000	3084	STA	.STATE,,P.SSA	*FOR SUB PROCESS
003701	000200	3152	07	000	3085	CANA	.TALRM,DL	*IF ALARM SET
003702	000001	6002	11	000	3086	TZE	1,SVLVLX	*NO ALARM RETURN
003703	000000	7102	11	000	3087	TRA	,SVLVLX	*ALARM SET RETURN
003704	777777	077777		000	3088	S.STAT ZERO	-1,-1-.TRELK-.TRDBK-.TWAKE	
					3089	*		
					3090	*	ROUTINE TO LOAS REGISTERS - ASR, PSR, DSAR	
					3091	*	CALLING TSX Z,RDSPRG	
					3092	*	POST LOST PO, Z	
	003705				3093	RDSPRG	EQU *	
003705	001764	4706	07	000	3094	LDP	PO,,SSR,DL	*S/S FRAME ACCESS
003706	001761	4706	07	000	3095	LDP	PO,,CTYP,DL	*CHENGE TYP
003707	000006	1707	00	000	3096	LDDSA	.WDSAR,,PO	*DSAR
003710	000012	7707	00	000	3097	LDAS	.WASR,,PO	*ASR
003711	000016	7717	00	000	3098	LDPS	.WPSR,,PO	*PSR
003712	000000	7102	11	000	3099	TRA	,Z	*OK

BASIC ROUTINES

						3101 *						
						3102 *	CHECK	EVENT				
						3103 *						
						3104 *	PRECAL	SHUT = DSP				
						3105 *		P.SSA				
						3106 *	CALLING	TSX CKEVTX,CKEVT				
						3107 *		EVENT PAY RETURN =	EBX HAS LEVEL NO.			
						3108 *		NO EBENT PAYABLE	RETURN			
						3109 *	POSTCAL	IF CONTINUE RETURN	*NO DATA MAY BE	RETURNED		
						3110 *		IF DEAD RETURN	*EBX = 8	CCFLG,PN	MAY NOT SET	
						3111 *		IF PAYABLE RETURN	*EBX =	LEVEL NO.		
						3112 *			*CCFLG 0 =	17 HAS LEVEL NO.	18-35 LOST	
						3113 *		LOST A, XO				
						3114 *						
		000000				3115	XSTT	SET	0		*.STATE LOAD	INDEX
		000001				3116	XPTR	SET	1		*REPEAT INDEX	
		000000				3117	FBX	SET	0		*RETURN INDEX	= LEVEL M
		000377				3118	LCKBYT	BOOL	377		*LOCK BYTE	FIELD IN .SPASS
		003713				3119	CKEVT	EQU	*			
	003713	600017	2203	00	000	3120	LDX	XSTT, .STATE, .P.SSA		*IF CURRENT	STATUS IS	HIGHER
	003714	600117	1003	00	000	3121	CMPX	XSTT, .SRQST, .P.SSA		*THAN	REQUEST,	REQUEST IS
	003715	000001	6032	11	000	3122	TRC	1,CKEVTX		*ACCEPTABLE		
	003716	002100	7412	17	010	3123	STX	CKFVTX,CCFLG,PN		*SAVE	RETURN	
	003717	000000	6212	00	000	3124	EAX	XPTR,0				
	003720	600117	2353	00	000	3125	LDA	.SRQST, .P.SSA				
	003721	020240	5202	02	000	3126	RPT	CKLSZ,2,TNZ				
	003722	003773	3152	11	010	3127	CANA	CKLST,XPTR				
	003723	003766	6002	00	010	3128	TZE	CKCONT		*NO	REQUEST	FOUND
	003724	777776	2352	11	000	3129	LDA	-2,XPTR				
	003725	600017	3153	00	000	3130	CANA	.STATE, .P.SSA		*IF	ALREADY	IN CONTROL
	003726	003766	6012	00	010	3131	TNZ	CKCONT		*CONTINUE	THE	PROCESSING
	003727	777777	2352	11	000	3132	LDA	-1,XPTR		*GET	LEVEL	NO
	003730	000000	7102	05	000	3133	TRA	,AL		*GO TO	PROPER	ROUTINE
						3134	CKSW	EQU	*			
	003731	600224	2343	00	000	3135	SZN	.SRMWK, .P.SSA				
	003732	003766	6012	00	010	3136	TNZ	CKNSWP				
	003733	600172	2343	00	000	3137	SZN	.SSPRQ, .P.SSA				
	003734	003766	6012	00	010	3138	TNZ	CKNSWP				
	003735	600017	7203	00	000	3139	LXL	XSTT, .STATE, .P.SSA				
	003736	001101	3002	03	000	3140	CANX	XSTT, .TNTSW+.TDLSW+.TLNKS,DU				
	003737	003766	6012	00	010	3141	TNZ	CKNSWP		*DON'T	SWAP	
	003740	600010	7203	00	000	3142	LXL	XSTT, .SPASS, .P.SSA				
	003741	000377	3002	03	000	3143	CANX	XSTT,LCKBYT,DU		*IF	LOCK	BYTE IS
	003742	003766	6012	00	010	3144	TNZ	CKNSWP				
	003743	600047	2343	00	000	3145	SZN	.SFSYS, .P.SSA	IF ANY	HASH-LOCKS		00000020
	003744	003766	6012	00	010	3146	TNZ	CKNSWP	LOCKED,	DON'T	SWAP	00000020
	003745	003756	7102	00	010	3147	TRA	CKCAN				
	003746	600117	7203	00	000	3148	CKBRT	LXL	XSTT, .SRQST, .P.SSA	WE GOT	ABORT	REQUEST, AND WE WILL
	003747	000001	3002	03	000	3149	CANX	XSTT, .R2CSO,DU	HONOR	IT IF	THE	TYPE 2
	003750	003756	6012	00	010	3150	TNZ	CKCAN	SECTION	OVERRIDE	BIT IS	ON ALSO

BASIC ROUTINES

003751	600261	2203	00	000	3151	CKCNT	LDX	XSTT,,ST2CS,,P.SSA	
003752	003756	6002	00	010	3152		TZE	CKCAN	* NO TYPE 2 CRITICAL SECTION COUNT
003753	002104	6042	00	010	3153		TMI	ABT	* COUNT SHOULD NOT BE NEGATIVE, ABORT
003754	002100	2212	17	010	3154		LDX	CKEVTX,CCFLG,PN	COUNT IS POSITIVE, SO JUST CONTINUE
003755	000001	7102	11	000	3155		TRA	1,CKEVTX	
		003756			3156	CKCAN	EQU	*	
003756	000000	6202	01	000	3157		EAX	EBX,,AU	*SET LEVEL NO.
003757	002100	2212	17	010	3158		LDX	CKEVTX,CCFLG,PN	*RESTORE
003760	002100	7552	17	010	3159		STA	CCFLG,PN	
003761	000022	7712	00	000	3160		ARL	18	
003762	600043	1153	00	000	3161		CMPA	.SELVL,,P.SSA	
003763	000001	6002	11	000	3162		TZE	1,CKEVTX	*EXECUTION LEVEL IS HIGHER
003764	000001	6022	11	000	3163		TNC	1,CKEVTX	
003765	000000	7102	11	000	3164		TRA	,CKEVTX	
		003766			3165	CKCONT	EQU	*	
		003766			3166	CKNSWP	EQU	*	
003766	002100	2212	17	010	3167		LDX	CKEVTX,CCFLG,PN	
003767	000001	7102	11	000	3168		TRA	1,CKEVTX	
		003770			3169	CKDED	EQU	*	
003770	000000	6202	01	000	3170		EAX	EBX,,AU	
003771	002100	2212	17	010	3171		LDX	CKEVTX,CCFLG,PN	
003772	000000	7102	11	000	3172		TRA	,CKEVTX	
		003773			3173	CKLST	EQU	*	
003773	600000	000000	000	000	3174		ZERO	.RDEAD+.RFDSC	
003774	000010	003770	001	001	3175		ZERO	8,CKDED	
003775	140000	000000	000	000	3176		ZERO	.RCFLT+.RGPRS	
003776	000007	003756	001	001	3177		ZERO	7,CKCAN	
003777	010000	000000	000	000	3178		ZERO	.RGEPR	
004000	000006	003756	001	001	3179		ZERO	6,CKCAN	
004001	004000	000000	000	000	3180		ZERO	.RDMM	
004002	000002	003731	001	001	3181		ZERO	2,CKSW	PTCH5350
004003	000400	000000	000	000	3182		ZERO	.RSYCC	
004004	000005	003756	001	001	3183		ZERO	5,CKCAN	
004005	000100	000000	000	000	3184		ZERO	.RBRT	
004006	000003	003746	001	001	3185		ZERO	3,CKBRT	00000020
004007	000020	000000	000	000	3186		ZERO	.RSWP	
004010	000002	003731	001	001	3187		ZERO	2,CKSW	
004011	000004	000000	000	000	3188		ZERO	.RCC	
004012	000001	003751	001	001	3189		ZERO	1,CKCNT	
		004013			3190	CKLSTE	EQU	*	
		000020			3191	CKLSZ2	EQU	CKLSTE-CKLST	
		000010			3192	CKLSZ	EQU	CKLSZ2/2	*NO. OF ENTRIES TO RPT

SYMBOLS AND DATA CONVERSION IN MACRO PROCEDURE

		3194 *				
		3195 *	INDEX REGISTER SYMBOLS			
		3196 *				
	000006	3197 KPX	SET	6	PROCESS INDEX	
	000007	3198 PN	SET	7	PROCESSOR INDEX	
	000000	3199 X0	SET	0	REGISTER SPECIFIED BY HARDWARE	
	000001	3200 X1	SET	1		
	000002	3201 X2	SET	2		
		3202 *				
		3203 *	POINTER REGISTER SYMBOLS			
		3204 *				
	000000	3205 P.MDD	SET	P.MCRO		
	000000	3206 P.SSR	SET	P.MCRO		
	000000	3207 P.PSH	SET	P.MCRO		
	000000	3208 P.DDS	SET	P.MCRO		
		3209 *				
		3210 *	MACRO CONTROLL STACK ENTRY TYPE SYMBOLS			
		3211 *				
	770000	3212 STMSK	BOOL	770000	BIT 18-23 IS TYPE FIELD	
	000000	3213 STYP0	BOOL	000000	CALL VIA XED HCM	
	010000	3214 STYP1	BOOL	010000	CALL VIA ENT.DSC TYP 11	
	020000	3215 STYP2	BOOL	020000	CALL VIA ENT.DSC TYP 8	
	040000	3216 STYP4	BOOL	040000	SSA MODULE LOADED (ASSIGNED)	
	100000	3217 STYP8	BOOL	100000	GATED HCM WAS CALLED	
	200000	3218 STYP16	BOOL	200000	.SSA STACK SAVE OCCURED	
	000007	3219 SEMSK	BOOL	000007	EXECUTION LEVFL CODE FIELD	
	000377	3220 DDSMSK	BOOL	000377	DDS STACK SIZE FIELD - MAX 256 WORD	
		3221 *				
		3222 *				
		3223 *	DATA CONVERSION IN MACRO PROCEDURE (MORE CONVERSIONS ARE			
		3224 *	ESTABLISHED IN OVERLAY/GATE MANAGER)			
		3225 *				
		3226 *	.STMPA/Q AQ-REG. SAVE WHILE RUNNING IN MACRO PROCEDURE			
		3227 *	BUT NOT IN OVERLAY/GATE MANAGER			
		3228 *	.STMPX XOREG SAVE WHILE CLIMB OPERATION CONCERNED			
		3229 *	AFTER X0 IS DECODED TO MOD#/EP#. X0 IS RESTORED			
		3230 *	AND DATA SAVE WHILE RUNNING UNDER INHIBIT FOR			
		3231 *	GATE MANAGER INTERFACE			
		3232 *				
		3233 *	.STMPW MACRO PARAMETER DATA SAVE WHILE IN OVERLAY			
		3234 *	MANAGER (GATED BY .TLOAD BIT IN .STATE)			
		3235 *	.SRMWK2,3 VEC WORD TO SHRINK SSA'S ISR. SET BY OVERLAY			
		3236 *	MANAGER			
		3237 *	OR TO DO I/O IN DMIO			
		3238 *				
		3239 *	INDICATOR BIT			
	400000	3240 SEGID	BOOL	400000		
		3241 *				

. CALL . CALLA . CALLX . CALLY

					3243 *				
					3244 *	MACRO PROCEDURE FOR .CALL/.CALLA/.CALLX/.CALLY			
					3245 *				
					3246 *	THIS PROCEDURE MAKES STACK ENTRY IN .SSA STACK ACCORDING TO			
					3247 *	THE MACRO TYPE, AND CHECK THE CALLEE, IF THE CALLEE IS NOT			
					3248 *	RE-ENTRANT HCM, THE MACRO CALLS OVERLAY/GATE MANAGER.			
					3249 *	THEN ENTERS INTO CALLEE			
					3250 *	TRACE IS LEFT ALSO, IF OPTION SPECIFIED			
					3251 *				
					3252 *				
					3253 *	.CALLY MACRO ENTRY			
					3254 *				
			004013		3255	CALLY	EQU	*	
	004013	001764	4706 07	000	3256	LDP	P.SSR,,SSR,DL		
	004014	000032	6717 00	000	3257	LDD	P1,,WDR1,,P.SSR	/* RECOVER CALLER'S ODR 1-4	
	004015	000034	6727 00	000	3258	LDD	P2,,WDR2,,P.SSR		
	004016	000036	6737 00	000	3259	LDD	P3,,WDR3,,P.SSR		
	004017	000040	6747 00	000	3260	LDD	P4,,WDR4,,P.SSR		
	004020	001761	4706 07	000	3261	LDP	P.SSR,,CTYP,DL		IMPR5955
	004021	000021	7617 00	000	3262	LAR1	.WPTR1,,P.SSR	RECOVER HIS ADR'S ALSO	IMPR5960
	004022	000022	7627 00	000	3263	LAR2	.WPTR2,,P.SSR		IMPR5970
	004023	000023	7637 00	000	3264	LAR3	.WPTR3,,P.SSR		IMPR5980
	004024	000024	7647 00	000	3265	LAR4	.WPTR4,,P.SSR		IMPR5990
					3266				
					3267	ENTER INTO CALLX, THE OTHER INTERFACES ARE SAME			
					3268				
					3269 *				
					3270 *	.CALLX MACRO ENTRY			
					3271 *	XO = MOD# AND EP#			
					3272 *				
					3273 *	ODR'S = ISR			
					3274	CALLX	EQU	*	
			004025		3275	LDP	P.SSA,SD,SSA,DL	/* RECOVER ODR 7,6	
	004025	006145	4766 07	000	3276	LDP	P.CR,SD,CR,DL		
	004026	006130	4776 07	000	3277	IYCALX	STAQ	.STMPA,,P.SSA	
	004027	600214	7573 00	000	3278 *	TRA	Y,CALX	/* MAKE .YCALX TRACE , IF OPTION	
	004030	010000	2352 07	000	3279	LDA	STYP1,DL	/* MAKE TYPE 1 STACK ENTRY	
	004031	004034	7102 00	010	3280	TRA	CALL1	/* MERGE IN TO .CALL	
					3281 *				
					3282 *	.CALL/.CALLA MACRO IN SSA OR IN SLV-PRG			
					3283 *	XO = MOD# AND EP #			
					3284 *				
					3285	CALLS	EQU	*	
			004032		3286	IYCALL	STAQ	.STMPA,,P.SSA	
	004032	600214	7573 00	000	3287 *	TRA	Y,CALL	/* MAKE TRACE ENTRY IF OPTION	
	004033	020000	2352 07	000	3288	LDA	STYP2,DL	/* MAKE UP .SSA STACK ENTRY OF TYPE 2	
	004034	600043	2753 00	000	3289	CALL1	ORA	.SFLVL,,P.SSA	WITH .SELVL IN BIT 33-35
	004035	600012	7553 56	000	3290	STA	.SSA,ID,P.SSA		
					3291	CALLP	NULL	ENTER HERE FOR CALLP VIA PMME 39	00000020
	004036	000000	6352 10	000	3292	EAA	,XO	/* DECODE MOD# AND EP#	

. CALL . CALLA . CALLX . CALLY

004037	000030	7732	00	000	3293	LRL	18+6		
004040	600220	2203	00	000	3294	LDX0	.STMPX,,P.SSA	/* RECOVER XO	
004041	000014	7352	00	000	3295	ALS	18-6		
004042	000006	7372	00	000	3296	LLS	6		
004043	004052	7102	00	010	3297	TRA	CALL2	/* MERGE INTO MAIN	
					3298	*			
					3299	*	.CALL/.CALLA MACRO IN HCM ENTRY		
					3300	*	P.MCRO = IC AND SEGID		
					3301	*			
		004044			3302	CALAH	EQU	*	/* .CALLA(HCM) ENTRY
004044	600214	7573	00	000	3303	STAQ	.STMPA,,P.SSA		
004045	004050	7102	00	010	3304	TRA	CALL		
		004046			3305	CALLH	EQU	*	/* .CALL(HCM) ENTRY
004046	600214	7573	00	000	3306	STAQ	.STMPA,,P.SSA		
004047	077777	2353	00	000	3307	LDA	-1,,P.MCRO	/* PULL OUT MOD# AND EP#	
		004050			3308	CALL	EQU	*	
004050	600012	4507	56	000	3309	STP	P.MCRO,,SSA, ID,P.SSA	/* SAVE RETURN POINTER	
004051	006130	4776	07	000	3310	IYCAIH	LDP	P.CR,SD.CR,DL	
					3311	*	TRA	Y.CALH	/* IF DETAIL TRACE OPTION, GO TRACE
		004052			3312	CALL2	EQU	*	
					3313				
					3314				EVFRY CALL MACRO COMES HERE TO CHECK CALLEE
					3315				
004052	006134	4706	07	000	3316	X.ENT	LDP	P.MDD,SD.MDD,DL	
					3317	*	TRA	MCAL	/* IF MODULE COUNT OPTION GO COUNT IT
004053	000000	2363	01	000	3318		LDO	,AU,P.MDD	/* IF THE CALLEE IS NOT RE-ENTRANT
004054	004070	6042	00	010	3319		TMT	CALOG	HCM, GO OVERLAY/GATE MANAGER
		004055			3320	CALL3	EQU	*	
004055	000002	3162	03	000	3321		CANQ	2,DU	/* IF TYPE IS GHCM
004056	004063	6012	00	010	3322		TNZ	CALLG	GO LOAD SD.HCM
004057	000000	4707	01	000	3323		LDP	P.MCRO,,AU,P.MDD	/* GET ISR OF CALLE
004060	000000	5076	05	000	3324		AWDX	,AL,P.MCRO	AND SET ENTRY OFFSET(EP#)
004061	600214	2373	00	000	3325		LDAQ	.STMPA,,P.SSA	
004062	000000	7103	00	000	3326		TRA	,,P.MCRO	
		004063			3327	CALLG	EQU	*	
004063	006021	4706	07	000	3328		LDP	P.MCRO,SD.HCM,DL	
004064	000000	5076	06	000	3329		AWDX	,QI,P.MCRO	/* ADD MODULE BASE OFFSET
004065	000000	5077	05	000	3330		AWD	,AL,P.MCRO	AND EP# OFFSET
004066	600214	2373	00	000	3331		LDAQ	.STMPA,,P.SSA	
004067	000000	7103	00	000	3332		TRA	,,P.MCRO	
					3333	*			
					3334	*			INTERFACE WITH OVERLAY/GATE MANAGER TO CALL
					3335	*			A-REG = MOD# AND EP#
					3336	*			Q-REG = MDD ENTRY WORD
					3337	*			
		004070			3338	CALOG	EQU	*	
004070	000001	3162	03	000	3339		CANQ	1,DU	/* CHECK HCM OR SSA
004071	004106	6012	00	010	3340		TNZ	CALG	HCM = SO GATED MODULE
004072	600217	7553	00	000	3341		STA	.STMPW,,P.SSA	/* SAVE PARAMETER IN .STMPW
004073	600104	7563	00	000	3342		STQ	.SLOAD+2,,P.SSA	AND MDD WORD IN .SLOAD+2

. CALL . CALLA . CALLX . CALLY

004074	600214	2373	00	000	3343	VCAL1V	LDAQ	.STMPA,,P.SSA	/* SAVE AQ IN S/S FRAME
				004075	3344		ICLIMB	SD.TDS,,CLSSA,EAXO	/* GO ASSIGN MODULE ON OVERLAY SEGMENT
004075	004371713400			010			VFD	18/CLSSA,09/713,1/1,1/0,1/0,6/M.	
004076	000000606023			000			VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/SD.TDS	
004077	600214	2273	00	000	3345		LDX	PN,,STMPA,,P.SSA	
004100	600226	6707	00	000	3346		LDD	P.MCRO,,SRMWK+2,,P.SSA	/* GENERATE ISR FOR SSA MODULE
004101	600214	7573	00	000	3347	VCAL2V	STAQ	.STMPA,,P.SSA	
004102	600217	2353	00	000	3348		LDA	.STMPW,,P.SSA	
004103	000000	5076	05	000	3349		AWDX	.AL,P.MCRO	/* ADJUST ENTRY OFFSET(EP#)
004104	600214	2353	00	000	3350		LDA	.STMPA,,P.SSA	
004105	000000	7103	00	000	3351		TRA	.,P.MCRO	
				004106	3352	CALG	EQU	*	
004106	600220	7553	00	000	3353		STA	.STMPX,,P.SSA	/* PASS TO GTST ROUTINE
004107	000022	7712	00	000	3354		ARL	18	/* MAKE .SSA STACK ENTRY
004110	100000	2752	07	000	3355		ORA	STYP8,DL	OF TYPE 8
004111	600012	7553	56	000	3356		STA	.SSA,ID,P.SSA	
004112	600214	2373	00	000	3357		LDAQ	.STMPA,,P.SSA	
				004113	3358		ICLIMB	SD.TDS,,GTST,EAXO	/* SHUT MODULE GATE
004113	005444713400			010			VFD	18/GTST,09/713,1/1,1/0,1/0,6/M.	
004114	000000606023			000			VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/SD.TDS	
004115	600214	2273	00	000	3359		LDX	PN,,STMPA,,P.SSA	
004116	600214	7573	00	000	3360		STAQ	.STMPA,,P.SSA	
004117	600220	2353	00	000	3361		LDA	.STMPX,,P.SSA	/* RESET MACRO PARAMETER
004120	006134	4706	07	000	3362		LDP	P.MDD,SD.MDD,DL	
004121	000000	2363	01	000	3363		LDQ	.AU,P.MDD	/* RESET
004122	004055	7102	00	010	3364		TRA	CALL3	

. E X I T

```

3366 *
3367 *      MACRO PROCEDURE FOR .EXIT
3368 *
3369 *      THIS PROCEDURE POP UP .SSA STACK ENTRY, AND THEN ACCORDING TO
3370 *      THE ENTRY TYPE, RETURN TO CALLER THROUGH PROPER FASHION
3371 *
3372 *      TYPE 0 LOAD POINTER THROUGH .SSA STACK
3373 *      TYPE 1 OCLIMB RETURN WITH S/S UPDATE AND CHECK (64)
3374 *      TYPE 2 OCLIMB RETURN (16)
3375 *      TYPE 4 RELEASE SSA MODULE THEN POP UP STACK AGAIN
3376 *      TYPE 8 OPEN MODULE GATE THEN POP UP STACK AGAIN
3377 *      TYPE 16 .SSA STACK HAS SAVED IN DDS STACK
004123 3378 EXT EQU *
004123 600214 7573 00 000 3379 STAQ .STMPA,,P.SSA
004124 006130 4776 07 000 3380 LDP P.CR,SD.CR,DL
004125 000000 2353 00 000 3381 LDA ,,P.MCRO /* GET EXT# AND REGISTER BIT
3382
3383 HERE REENTS AFTER SSA RELEASE OR OPEN GATE
3384
004126 3385 FXTYP EQU *
004126 600012 2363 54 000 3386 LDQ .SSA,DI,P.SSA
004127 770000 3162 07 000 3387 CANQ STMSK,DL /* CHECK STACK ENTRY TYPE
004130 004135 6012 00 010 3388 TNZ EXT1 /* NOT HCM
004131 600012 4707 51 000 3389 IYEXTH LDP P.MCRO,,SSA,I,P.SSA
3390 * TRA Y.EXTH /* TRACE OF EXIT TO HCM
004132 000000 5077 05 000 3391 AWD ,AL,P.MCRO /* ADJUST EXIT#
004133 600214 2373 00 000 3392 LDAQ .STMPA,,P.SSA
004134 000000 7103 00 000 3393 TRA ,,P.MCRO
004135 3394 FXT1 EQU *
004135 020000 3162 07 000 3395 CANQ STYP2,DL /* IS THIS TYPE 2 ( 16 S/S )
004136 004150 6002 00 010 3396 TZE EXT2 NO
004137 001764 4706 07 000 3397 IYEXIT LDP P.SSR,,SSR,DL
3398 * TRA Y.EXIT /* EXIT TO SSA/SLV. IF OPTION
004140 000022 7352 00 000 3399 ALS 18
004141 000007 3762 07 000 3400 ANQ SEMSK,DL /* RESET EXECUTION LEVEL
004142 001761 4706 07 000 3401 LDP P.SSR,,CTYP,DL
004143 600043 7563 00 000 3402 STQ .SELVL,,P.SSA
004144 000004 0553 00 000 3403 ASA .WICI,,P.SSR
004145 600214 2373 00 000 3404 LDAQ .STMPA,,P.SSA
004146 3405 OCLIMB
004146 000000713400 000 VFD 18/0,09/713,1/1,1/0,1/0,6/0
004147 000000010000 000 VFD 1/0,9/0,8/0,1/N,1/0,2/0,2/1,12/0
004150 3406 FXT2 EQU *
004150 010000 3162 07 000 3407 CANQ STYP1,DL /* IS THIS TYPE 1 ( 64 S/S )
004151 004221 6002 00 010 3408 TZE EXT0G NO
004152 001764 4706 07 000 3409 IYEXTX LDP P.SSR,,SSR,DL
3410 * TRA Y.EXTX /* EXIT WITH 64 S/S TRACE, IF OPTION
004153 000007 3762 07 000 3411 ANQ SEMSK,DL /* RESET EXECUTION LEVEL
004154 001761 4706 07 000 3412 LDP P.SSR,,CTYP,DL
004155 600043 7563 00 000 3413 STQ .SELVL,,P.SSA

```

. E X I T

004156	000000	6362	05	000	3414	EAO	.AL	/* EXIT# TO Q	
004157	000004	0563	00	000	3415	ASQ	.WICI,,P.SSR		
004160	377777	3752	03	000	3416	ANA	=0377777,DU	/* IS THIS EXIT PASS BACK REGISTER	
004161	004200	6002	00	010	3417	TZE	EXT23	NO. SKIP S/S UPDATE	
004162	600220	7553	00	000	3418	STA	.STMPX,,P.SSA		
		004163			3419	FXT21	EQU	*	
004163	777777	4112	03	000	3420	LDE	-1,DU		
004164	004200	6342	07	000	3421	LDI	SYSIR,DL		
004165	000000	5732	00	000	3422	FNO		/* GET BIT NUMBER	
004166	400000	2352	03	000	3423	LDA	=0400000,DU		
004167	004340	4562	17	010	3424	STE	EXTWK,PN		
004170	004340	3362	17	010	3425	LCQ	EXTWK,PN		
004171	000012	7722	00	000	3426	QRL	10		
004172	000000	7712	02	000	3427	ARL	0,QU	RESET THE REGISTER DESIGNATION BIT	MPRC5470
004173	600220	6553	00	000	3428	ERSA	.STMPX,,P.SSA		
004174	000001	7362	00	000	3429	QLS	1		
004175	004272	7172	02	010	3430	XED	RETRG=2,QU	PASS BACK REGISTER INTO S/S	MPRC5490
		004176			3431	FXT22	EQU	*	
004176	600220	2353	00	000	3432	LDA	.STMPX,,P.SSA	/* ANY MORE REGISTER	
004177	004163	6012	00	010	3433	TNZ	EXT21	YES	
		004200			3434	EXT23	EQU	*	
004200	000004	2353	00	000	3435	LDA	.WICI,,P.SSR		
004201	000200	3752	07	000	3436	ANA	=0000200,DL	/* IF MASTER MODE, RESET X7, X6	
004202	004207	6002	00	010	3437	TZE	EXT24		
004203	000053	4473	00	000	3438	SXL	PN,,WREGS+3,,P.SSR		
004204	000053	7463	00	000	3439	STX	KPX,,WREGS+3,,P.SSR		
		004205			3440	OCLIMB			
004205	000000	713400		000		VFD	18/0,09/713,1/1,1/0,1/0,6/0		
004206	000000	010000		000		VFD	1/0,9/0,8/0,1/N,1/0,2/0,2/1,12/0		
		004207			3441	FXT24	EQU	*	
004207	000001	7527	00	000	3442	STWS	1,,P.SSR	INSURE S/S WSR ARE CORRECT IF C.C. NOW	EXTM5240
		004210			3443	SHUT.	DSP		
004211	003713	7012	00	010	3444	TSX	CKEVTX,CKEVT	/* CHECK IF ANY INTERRUPT REQUEST	
004212	004217	7102	00	010	3445	TRA	EXT25	YES. STANDING	
		004213			3446	OPEN.	DSP		
004214	006325	7022	00	010	3447	IOVH3	TSX	OVHX,OVHW	SET CUR-TIME (NOP ,DL .CROPT BIT 7 OFF) 00000020
		004215			3448	OCLIMB			
004215	000000	713400		000		VFD	18/0,09/713,1/1,1/0,1/0,6/0		
004216	000000	010000		000		VFD	1/0,9/0,8/0,1/N,1/0,2/0,2/1,12/0		
		004217			3449	FXT25	EQU	*	
004217	600012	0113	56	000	3450	NOP	.SSA,ID,P.SSA		
		000000			3451	XEVT	SET	0	
004220	001604	7102	10	010	3452	VSLC5V	TRA	RDI,ST,XEVT	/* PAY SOFTWARE INTERRUPT
		3453		*					
		3454		*				INTERFACE WITH OVERLAY/GATE MANAGER TO EXIT	
		3455		*				A-REG. = EXIT# AND REGISTER BIT	
		3456		*				Q-REG = STACK ENTRY	
		3457		*					
		004221			3458	FXT0G	EQU	*	
004221	600012	0113	56	000	3459	NOP	.SSA,ID,P.SSA	/* SAVE ENTRY	

. E X I T

				004222	3460	GTOOG	EQU	*	
004222	040000	3162	07	000	3461		CANQ	STYP4,DL	/* IS THIS SSA LOADED ENTRY
004223	004236	6002	00	010	3462		TZE	EXTG	NO. MUST BE GATE SHUT ENTRY
004224	600217	7553	00	000	3463		STA	.STMPW,,P.SSA	/* PASS PARAMETER
004225	600214	2373	00	000	3464		LDAQ	.STMPA,,P.SSA	/* SAVE AQ IN S/S
				004226	3465		ICLIMB	SD.TDS,,EXSSA,EAXO	/* RELEASE SSA MODULE
004226	004602713400			010			VFD	18/EXSSA,09/713,1/1,1/0,1/0,6/M.	
004227	000000606023			000			VFD	1/0,9/0,8/0,1/,N,1/0,2/0,2/0,12/SD.TDS	
004230	600214	2273	00	000	3466		LDX	PN,,STMPA,,P.SSA	
004231	600214	7573	00	000	3467		STAQ	.STMPA,,P.SSA	
004232	600217	2353	00	000	3468		LDA	.STMPW,,P.SSA	
004233	004126	6052	00	010	3469		TPL	EXTYP	.EXIT GO TO RE=EXIT
004234	400000	6752	03	000	3470		ERA	SEGID,DU	
004235	004052	7102	00	010	3471		TRA	CALL2	.GOTO, GO CALL PROCEDURE
				004236	3472	EXTG	EQU	*	
004236	100000	3162	07	000	3473		CANQ	STYP8,DL	/* CHECK .SSA STACK POP UP
004237	004252	6002	00	010	3474		TZE	EXTPP	GO POP UP .SSA STACK
004240	600220	7553	00	000	3475		STA	.STMPX,,P.SSA	/* PASS ARGUMENT
004241	600214	2373	00	000	3476		LDAQ	.STMPA,,P.SSA	
				004242	3477		ICLIMB	SD.TDS,,GTOP,EAXO	/* OPEN MODULE GATE
004242	005524713400			010			VFD	18/GTOP,09/713,1/1,1/0,1/0,6/M.	
004243	000000606023			000			VFD	1/0,9/0,8/0,1/,N,1/0,2/0,2/0,12/SD.TDS	
004244	600214	2273	00	000	3478		LDX	PN,,STMPA,,P.SSA	
004245	600214	7573	00	000	3479		STAQ	.STMPA,,P.SSA	
004246	600220	2353	00	000	3480		LDA	.STMPX,,P.SSA	/* WHICH MACRO
004247	004126	6052	00	010	3481		TPL	EXTYP	.EXIT MACRO
004250	400000	6752	03	000	3482		ERA	SEGID,DU	.GOTO - RESET INDICATOR
004251	004052	7102	00	010	3483		TRA	CALL2	
					3484	*			
					3485	*		RESTORE .SSA STACK SAVED IN DDS STACK	
					3486	*			
				000007	3487	P.PSH	SET	P7	
				000007	3488	P.DDS	SET	P7	
					3489	*			
				004252	3490	EXTPP	EQU	*	
004252	600031	2363	00	000	3491		LDQ	.SDLVL,,P.SSA	
004253	006204	4776	07	000	3492		LDP	P.PSH,SD.PSH,DL	
004254	700026	6777	00	000	3493		LDD	P.PSH,PH.DDS,,P.PSH	
004255	001761	4776	07	000	3494		LDP	P.DDS,,CTYP,DL	/* GET DDS STACK SEGMENT
004256	777777	2363	06	000	3495		LDQ	D.DLVL,QL,P.DDS	/* POP UP SAVED .SDLVL
004257	400000	6762	07	000	3496		ERQ	SEGID,DL	AND RESET INDICATOR
004260	600031	7563	00	000	3497		STQ	.SDLVL,,P.SSA	
004261	700000	6377	06	000	3498		EPPR	P.DDS,,QL,P.DDS	/* POINT TO STACK FRAME
004262	700000	2363	00	000	3499		LDQ	.,P.DDS	/* POP .SSA STACK TALLY WORD
004263	600012	7563	00	000	3500		STQ	.SSA,,P.SSA	
004264	777440	6362	02	000	3501		EAQ	-.SSAWK,QU	/* GET STACK BODY SIZE
004265	000002	7362	00	000	3502		QLS	2	
004266	000140	1007	40	000	3503		MLR	(1,1),(1,1)	
004267	700001	0000	02	000	3504		ADSC9	1,,QU,P.DDS	
004270	600340	0000	02	000	3505		ADSC9	.SSAWK,,QU,P.SSA	

. E X I T

004271	006130	4776	07	000	3506	LDP	P.CR,SD.CR,DL	/* RECOVER P7 FOR P.CR
004272	004126	7102	00	010	3507	TRA	EXTYP	/* GO EXIT
					3508 *			
	000000				3509	P.PSH	SET	P0
					3510 *			
					3511 *		REGISTER PASS BACK INSTRUCTION LIST	
					3512 *			
004273	000000011207			000				
	004274				3513	RETRG	FEQU	*
004274	000050	7403	00	000	3514	STX0	.WREGS,,P.SSR	
004275	000000	0112	07	000	3515	NOP	.DL	
004276	000050	4413	00	000	3516	SXL1	.WREGS,,P.SSR	
004277	000000	0112	07	000	3517	NOP	.DL	
004300	000051	7423	00	000	3518	STX2	.WREGS+1,,P.SSR	
004301	000000	0112	07	000	3519	NOP	.DL	
004302	000051	4433	00	000	3520	SXL3	.WREGS+1,,P.SSR	
004303	000000	0112	07	000	3521	NOP	.DL	
004304	000052	7443	00	000	3522	STX4	.WREGS+2,,P.SSR	
004305	000000	0112	07	000	3523	NOP	.DL	
004306	000052	4453	00	000	3524	SXL5	.WREGS+2,,P.SSR	
004307	000000	0112	07	000	3525	NOP	.DL	
004310	000053	7463	00	000	3526	STX6	.WREGS+3,,P.SSR	
004311	000000	0112	07	000	3527	NOP	.DL	
004312	600214	2353	00	000	3528	LDA	.STMPA,,P.SSA	
004313	000054	7553	00	000	3529	STA	.WREGS+4,,P.SSR	
004314	600215	2353	00	000	3530	LDA	.STMPQ,,P.SSA	
004315	000055	7553	00	000	3531	STA	.WREGS+5,,P.SSR	
004316	000032	0517	00	000	3532	STD1	.WDR1,,P.SSR	
004317	000021	4517	00	000	3533	STP1	.WPTR1,,P.SSR	
004320	000034	0527	00	000	3534	STD2	.WDR2,,P.SSR	
004321	000022	4527	00	000	3535	STP2	.WPTR2,,P.SSR	
004322	000036	0537	00	000	3536	STD3	.WDR3,,P.SSR	
004323	000023	4537	00	000	3537	STP3	.WPTR3,,P.SSR	
004324	000040	0547	00	000	3538	STD4	.WDR4,,P.SSR	
004325	000024	4547	00	000	3539	STP4	.WPTR4,,P.SSR	
004326	000042	0557	00	000	3540	STD5	.WDR5,,P.SSR	
004327	000025	4557	00	000	3541	STP5	.WPTR5,,P.SSR	
004330	000044	0567	00	000	3542	STD6	.WDR6,,P.SSR	
004331	000026	4567	00	000	3543	STP6	.WPTR6,,P.SSR	
004332	000046	0577	00	000	3544	STD7	.WDR7,,P.SSR	
004333	000027	4577	00	000	3545	STP7	.WPTR7,,P.SSR	
004334	000000	0112	07	000	3546	NOP	.DL	
004335	000000	0112	07	000	3547	NOP	.DL	
004336	000000	0112	07	000	3548	NOP	.DL	
004337	000000	0112	07	000	3549	NOP	.DL	
	004340				3550	FXTWK	BSS	.NRPRC /* WORK AREA FOR EXIT

. G O T O

3552 *

3553 * MACRO PROCEDURE FOR .GOTO

3554 *

3555 * THIS PROCEDURE IS A PART OF .GOTO PROCEDURE.

3556 * .EXIT AND .CALL PROCEDURE IS USED

3557 * WHEN THE .SSA STACK ENTRY IS TYPE 4, 8, GO TO .EXIT ROUTINE TO RE

3558 * RELEASE SSA OR OPEN GATE

3559 * TO ENTER CALLEE, .GOTO MERGES INTO .CALL PROCEDURE

004344

3560 GTO EQU *

004344 600214 7573 00 000 3561 STAQ .STMPA,,P.SSA

004345 006130 4776 07 000 3562 LDP P.CR,SD,CR,DL

004346 000000 2353 00 000 3563 LDA .,P.MCRO /* GET MOD# AND EP#

004347 600012 2363 54 000 3564 IYGOTO LDQ .SSA,DI,P.SSA

3565 * TRA Y.GOTO /* MAKE TRACE IF OPTION

004350 600012 0113 56 000 3566 NOP .SSA,ID,P.SSA /* PUT BACK STACK

004351 740000 3162 07 000 3567 CANQ STMSK=STYP1-STYP2,DL /* CHECK ENTRY TYPE

004352 004354 6012 00 010 3568 TNZ GT01 /* GO RELEASE OR OPEN

004353 004052 7102 00 010 3569 TRA CALL2 /* GO MERGE INTO CALL PROCEDURE

004354

3570 GT01 EQU *

004354 400000 2752 03 000 3571 ORA SEGID,DU /* SET .GOTO INDICATOR

004355 004222 7102 00 010 3572 TRA GTOOG

004356 600214 7573 00 000 3573 GTA STAQ .STMPA,,P.SSA ENTER HERE FOR .GOTOA 00000020

004357 006130 4776 07 000 3574 LDP P.CR,SD,CR,DL 00000020

004360 004347 7102 00 010 3575 TRA IYGOTO * REJOIN NORMAL .GOTO 00000020

DATA, REGISTER, INTERFACE SPECIFICATION

	3577 *				
	3578 *	THIS DIVISION MANAGES SSA MODULE OVERLAY AND MODULE GATE			
	3579 *	ALL REGISTERS ARE SAVED IN S/S FRAME. SO THIS DIVISION USES			
	3580 *	EVERY REGISTERS.			
	3581 *	S/S IS USED HERE.			
	3582 *	ONE FRAME IS FOR REGISTER SAVE AND ONE MORE FRAME IS			
	3583 *	FOR INTERRUPTION			
	3584 *	NO MORE FRAME MUST BE USED			
	3585 *	THERE MAY BE S/S OVERFLOW ON EVERY S/S FRAME BUILDING			
	3586 *	AT FIRST S/S--- OK RETRIABLE			
	3587 *	AT SECOND S/S --- PAY ATTENTION, IF INHIB OFF			
	3588 *	THE PROCESS MAY BE ABORTED AT S/S OVERFLOW			
	3589 *	SO, IT MUST BE IN ABORTABLE STATE			
	3590 *				
	3591 *	CALLING IS THROUGH SD.TDS ENTRY DESCRIPTOR, ENTRY			
	3592 *	ADDRESS IS SPECIFIED ON X0 WHICH ARE			
	3593 *	CLSSA - ASSIGN SSA MODULE TO SSM PAGE INDEXED BY KPX			
	3594 *	EXSSA - RELEASE SSA MODULE FROM SSM PAGE			
	3595 *	GTSTH - SHUT MODULE GATE OF HCM MODULE			
	3596 *	GTOPH - OPEN MODULE GATE OF HCM MODULE			
	3597 *				
	3598 *				
	3599 *	POINTER REGISTER ASSIGNED GLOBAL WHILE CALLER'S REGISTERS ARE			
	3600 *	SAVED			
	3601 *	THIS ASSIGNMENT IS SAME AS DISPATCHER TO USE BASIC RTN			
	3602 *				
	000003	3603	P.PROQ	SFT	P3
	000004	3604	P.PST	SFT	P4
	000002	3605	P.KL	SFT	P2
	000002	3606	P.GTM	SET	P2
	000005	3607	P.SRM	SET	P5
	000002	3608	XPAGE	SET	2
	000004	3609	XMOD	SET	4
					/* PAGE ADDRESS MOD 1K OR +.SCTRL
					/* MODULE NUMBER
		3610			X0 X1 ARE FOR TEMPORARY WORK
		3611 *			
		3612 *	INDEX REGISTER ASSIGNED FOR SUB ROUTINE LINKAGE		
		3613 *			
	000001	3614	DMIOX	SET	1
	000001	3615	Z	SFT	1
					*DO I/O
	000001	3616	PUSHX	SET	1
					*BASIC ROUTINE IN DISPATCHER
	000001	3617	LOADX	SET	1
					*PUSH DOWN INTO FILE
	000003	3618	CPYSAX	SET	3
					*LOAD FROM SYSTEM FILE
	000001	3619	GETPGX	SET	1
					*COPY SSA TO SSM ROUTINE
	000003	3620	CKSMX	SET	3
					*GET PAGE SEGMENT
	000001	3621	LDSHX	SET	1
					*CHECK SUM ROUTINE
	000001	3622	RLSHX	SET	1
					*LOAD SSSA MODULE
	000003	3623	LINKX	SET	3
					*RELEASE SSSA MODULE
	000003	3624	SETLDX	SET	3
					*LINK PAGE INTO .SSPRQ
	000001	3625	SWAITX	SET	1
					*SET PROCESS STATUS - LOADING SSA
					/* SPECIAL WAIT ROUTINE
		3626			/* X3 - UNSAVED RETURN

DATA, REGISTER, INTERFACE SPECIFICATION

3627		X1 - SAVED RETURN	
3628 *			
3629 *		SSA MODULE MANAGEMENT DATA CELL IN SSA SEGMENT	
3630 *			
3631 *		.SLOAD UPPER - CURRENT PAGE QUEUE LENGTH OF .SSPRQ	
3632 *		ADD AT LINK ROUTINE	
3633 *		LOWER - NO. OF SHUT GATES (MODULE GATE)	
3634 *		.SLOAD1 UPPER - RETRY COUNTER FOR I/O	
3635 *		LOWER - MODULE # TO CALL AND THEN TO LOAD	
3636 *		.SLOAD2 IN CLSSA - MDD WORD TO CALL	
3637 *		IN EXSSA - .SNTRY WORD OF THE EXITED MODULE	
3638 *		.SLOAD3 .SNTRY WORD CURRENTLY MAPPED ONTO SSM SEGMENT	
3639 *		SET IN CPYSSA. RESET AT START OF EXSSA	
3640 *			
3641 *		.SRMWK UPPER - TRANSIENT PAGE POINTER (+.SCTRL)	
3642 *		IF NON-ZERO, THE PAGE IS NOT IN .SSPRQ	
3643 *		OR IN .SRMWK LOWER	
3644 *		LOWER - SSSA PAGE POINTER (+.SCTRL)	
3645 *		IF NON-ZERO, THE PAGE IS IN USE AND	
3646 *		COUNTED IN .SCTRL+1	
3647 *			
3648 *		.SRMWK1 UPPER - XPAGE SAVE FOR INTERRUPTION	
3649 *		LOWER - RETURN ADDRESS FROM DMIO ROUTINE	
3650 *		.SRMWK2-3 VEC WORDS TO SHRINK SSA ISR OR I/O AREA	
3651 *			
3652 *		.STMPW MACRO PARAMETER SAVE FOR SSA CALL/EXIT	
3653 *			
3654 *		.STKSP SSA MODULE WORK AREA	
3655 *			
3656 *			
3657 *		SSA MODULE PAGE STRUCTURE (FSSA,HSSA)	
3658 *			
3659 *		.SDCW +0 - +4 DCW LIST TO DO I/O ON THE PAGE	
3660 *		.SSAST UPPER - IF NON-ZERO, I/O ERROR CODE	
3661 *		.SCTRL UPPER - POINTER CHAIN FROM .KLSRM/.SSPRQ	
3662 *		LOWER - MODULE NO.	
3663 *		.SCTRL1 UPPER - BACKWARD POINTER	
3664 *		LOWER - KPX	
3665 *		.SEEK IN LOADING - MODULE DIRECTORY WORD	
3666 *		IN PUSH/POP - SEEK ADDRESS OF PRVIOUSLY PUSHED MODULE	
3667 *		.SENTR .SNTRY SAVE IN CONTROL AREA	
3668 *		.SMDD MODULE DIRECTORY SAVE WORD	
3669 *		.SLDCK SSA LOAD CLOCK (MP ONLY)	00000020
3670 *		.SCKSM CHECK SUM WORD	
3671 *		.SCKSM1 CHECKSUM EXTENSION FOR PUSH/POP	
3672 *		.SBASE SSA MODULE ISR BASE ADDRESS	
3673 *		.SHLF HALF SSA MODULE LIMIT OFFSET FROM PAGE ROUND	
3674 *		.SEND PAGE END	
3675 *			
3676 *			

DATA, REGISTER, INTERFACE SPECIFICATION

3677 * SSA MODULE PAGE STRUCTURE (SSSA)
 3678 *
 3679 * .SDCW +0 - +4 DCW LIST
 3680 * .SSAST BIT 0 = 0 NOT IN SSA LOADING
 3681 * = 1 IN SSA LOADING - WAIT AT D.SIO ECB
 3682 * BIT 1-17 ERROR CODE OF DMIO
 3683 * LOWER - NON-ZERO, SOME ONE WAITING THE LOADING
 3684 * .SCTRL POINTER AND MODULE NO.
 3685 * .SCTRL1 UPPER - BACKWARD POINTER
 3686 * LOWER - COUNT OF PROCESSES CURRENTLY USING
 3687 *

000000	3688	.SDCW	EQU	0
000005	3689	.SSAST	EQU	5
000006	3690	.SCTRL	EQU	6
000010	3691	.SEEK	EQU	8
000016	3692	.SCKSM	EQU	14
000011	3693	.SENTR	EQU	9
000012	3694	.SMDD	EQU	10
000014	3695	.SLDCK	EQU	12
000020	3696	.SBASE	EQU	16
001020	3697	.SHLF	EQU	.SBASE+512
002000	3698	.SEND	EQU	1024

00000020

ENTRY POINT PROCEDURE

					3700 *				
					3701 *			THIS ENTRY POINT IS CALLED VIA SD.TDS FOR MODULE	
					3702 *			OVERLAY AND/OR GATING PROCESSING	
					3703 *				
			004361		3704 TDS	EQU	*		
	004361	006130	4776 07 000		3705	LDP	P.CR,SD.CR,DL	/* PREPARE COMMON REGISTERSS	
	004362	006145	4766 07 000		3706	LDP	P.SSA,SD.SSA,DL		
	004363	006047	4756 07 000		3707	LDP	P.SRM,SD.SRM,DL		
	004364	006133	4726 07 000		3708	LDP	P.KL,SD.KL,DL		
	004365	000000	7102 10 000		3709	TRA	,X0	/* ENTER REQUESTED ROUTINE	
					3710 *				
					3711 *			AT RETURN PUT X7 IN S/S	
					3712 *				
			000000		3713 P.SSR	SET	P0		
			004366		3714 TDSE	EQU	*		
	004366	600214	7473 00 000		3715	STX	PN.,STMPA.,P.SSA		
			004367		3716	OCLIMB		/* GO BACK TO MACRO DIVISION	
	004367	000000	713400 000			VFD	18/0,09/713,1/1,1/0,1/0,6/0		
	004370	000000	010000 000			VFD	1/0,9/0,8/0,1/N,1/0,2/0,2/1,12/0		

C A L L A S S A M O D U L E

```

3718 *
3719 * THIS SECTION CALLS A SSA MODULE READY IN SSM SEGMENT
3720 * .CALL AND .GOTO MACRO ENTER THIS SECTION IF THE CALLEE
3721 * IS SSA MODULE
3722 * IF SSA MODULE IS IN SSM PUSH IT DOWN
3723 * LOAD THE MODULE
3724 * IF IT IS GATED , SHUT GTM
000002 3725 XPAGFF SET 2 *PAGE ADDRESS + .SCTRL
000000 3726 XTMP SET 0
004371 3727 CLSSA EQU *
004371 006275 7032 00 010 3728 TSX SETLDX,SETLD /* MARK SSA LOADING STATUS
3729 TO PREVENT INTERRUPTION
3730 /* ALSO CHECK LINKS I/O
004372 006140 7102 00 010 3731 TRA SSAVIT FIRST TIME ONLY, THEN AS FOLLOWS:
3732 * LDA .SSA,,P.SSA CHECK THRESHOLD OF .SSA STACK
004373 000360 1152 03 000 3733 CMPA 256/2-,.SSAWK/2+,.SSAWK,DU
004374 004553 6032 00 010 3734 TRC SVSTK /* SAVE .SSA STACK
004375 3735 CLSS1 EQU *
3736 INHIB SAVE,OFF /* 1 */
004375 600216 2351 00 000 3737 LDA .STKSP,,P.SSA /* SAVE .STKSP WORD
004376 600012 7551 56 000 3738 STA .SSA,ID,P.SSA
004377 600217 2241 00 000 3739 LDX XMOD,,STMPW,,P.SSA /* LOAD MODULE NO. TO CALL
004400 600105 2361 00 000 3740 LDO .SLOAD+3,,P.SSA *.SNTRY OF CURRENT MODULE IN SSM SEGME
004401 600103 4441 00 000 3741 SXL XMOD,,SLOAD+1,,P.SSA
004402 001777 3760 03 000 3742 VTPSHV ANQ MDMSK,DU
004403 000022 7720 00 000 3743 QRL 18 /* PUT SSA LOADING ENTRY
004404 040000 2760 07 000 3744 ORQ STYP4,DL IN .SSA STACK
004405 600012 7561 56 000 3745 STQ .SSA,ID,P.SSA
004406 600224 7221 00 000 3746 LXL XPAGE,.SRMWK,,P.SSA *CHECK IF SSSA IS INUSE
004407 004413 6000 00 010 3747 TZE CLDO *NO. SSA
3748 INHIB SAVE,ON /* 2 */
004410 3749 SHUT. DSP *
004411 005577 7012 00 010 3750 TSX RLSHX,RLSH *GO RELEASE SSSA
004412 3751 OPEN. DSP
3752 INHIB RESTORE /* 2 */
3753 * * * * *
3754 * CHECK PRIVATE SSA IN CORE QUEUE LENGTH . IF TOO LONG PUSH
3755 * DOWN A PAGE INTO DISK FILE
004413 3756 CLDO EQU *
004413 600104 2361 00 000 3757 VTLDV LDO .SLOAD+2,,P.SSA *IF CALLEE IS SHARABLE
004414 000017 3760 03 000 3758 ANQ =017,DU *GO LOAD SSSA MODULE
004415 000006 1160 03 000 3759 CMPQ 6,DU
004416 004551 6000 00 010 3760 TZE CLSHLD *YES
004417 600102 2201 00 000 3761 LDX XTMP,.SLOAD,,P.SSA *CURRENT USING SSA REAL PAGE
004420 000000 1000 03 000 3762 X.SRML CMPX XTMP,**,DU *MAXIMUM NO. OF SSA MODULE IN CORE
3763 *FOR A PROCESS. INITIALIZED **
004421 004425 6020 00 010 3764 TNC CLD1 *NOT YES
004422 005135 7010 00 010 3765 TSX PUSHX,PUSH *GO PUSH DOWN A PAGE TO LOAD THE MODUL
004423 004425 7100 00 010 3766 TRA CLD1 *ALL WE HAVE ARE SSSA
004424 004440 7100 00 010 3767 TRA CLOAD *GOT A PAGE TO LOAD THE MODULE

```

C A L L A S S A M O D U L E

```

3768 * * * * *
3769 * GET A PAGE TO LOAD THE SSA MODULE . IF SSSA OPTION, SEARCH SSSA
3770 * QUEUE. WHEN THE MODULE IS SSSA.
004425 3771 CLD1 EQU *
3772 INHIB SAVE,ON /* 2 */
004425 3773 SHUT. DSP
004426 006013 7012 00 010 3774 TSX GETPGX,GETPG1 *GET PAGE IN COUNT
004427 004440 7102 00 010 3775 TRA CLOAD *GOTTEN A PAGE IN SRM
3776 *DSP IS OPEN
004430 200055 2223 00 000 3777 LDX XPAGEF,,KLSRM+1,,P.KL *SERACH FOR AVAIL
004431 004437 6002 00 010 3778 TZE CLD3 *NO AVAIL QUEUE SO GO TO EMPTY QUEUE
004432 600103 2353 00 000 3779 LDA .SLOAD+1,,P.SSA
004433 777777 2362 03 000 3780 LDQ -1,DU *MASK
004434 000300 5002 00 000 3781 RPL 0,TZE
004435 500000 2113 12 000 3782 CMK ,XPAGEF,P.SRM *SEARCH IN AVAIL QUEUE FOR SAME
004436 004516 6002 00 010 3783 TZE CLDED *FOUND THE MODULE
004437 3784 CLD3 EQU *
004437 006173 7012 00 010 3785 TSX GETPGX,GETPG2 *GET A PAGE IN SRM SEGMENT
3786 *SEARCH EMPTY. OR AVAIL QUEUE
004440 3787 CLOAD EQU *
004440 600217 2203 00 000 3788 LDX XTMP,,STMPW,,P.SSA
004441 500000 4403 12 000 3789 SXL XTMP,,XPAGE,P.SRM *SAVE MOD NO.
004442 006253 7032 00 010 3790 TSX LINKX,LINK *LINK THE PAGE INTO .SSPRQ
3791 INHIB RESTORE /* 2 */
004443 600104 2361 00 000 3792 LDQ .SLOAD+2,,P.SSA /* MDD WORD
004444 005012 7010 00 010 3793 TSX LOADX,LOAD *GO LOAD THE MODULE
004445 3794 CLD7 EQU *
3795 * * * * *
3796 * IF THE MODULE IS HALF MODULE HE WANT TO SEE LOWER HALF OF
3797 * PUSHED MODULE. SO, MOVE 512 WORDS.
004445 500011 2351 12 000 3798 LDA .SENTR,XPAGE,P.SRM
004446 000020 3150 07 000 3799 CANA =020,DL *IS IT HALF MODULE
004447 004461 6010 00 010 3800 TNZ CLD8 *NOT HSSA
004450 600154 2341 00 000 3801 SZN .SPUSH,,P.SSA 00000020
004451 004461 6010 00 010 3802 TNZ CLD8 00000020
004452 500006 2201 12 000 3803 LDX XTMP,,SCTRL,XPAGE,P.SRM *NEXT PAGE
004453 004461 6000 00 010 3804 TZE CLD8 *NO PAGE PUSHED TO MOVE
004454 501020 6315 12 000 3805 EPPR P1,,SHLF,XPAGE,P.SRM
004455 501012 6305 10 000 3806 EPPR P0,,SHLF-.SCTRL,XTMP,P.SRM
004456 000100 1005 00 000 3807 MLR (1),(1)
004457 000000 0037 00 000 3808 ADSC9 ,,,SEND*4-.SHLF*4,P0
004460 100000 0037 00 000 3809 ADSC9 ,,,SEND*4-.SHLF*4,P1
3810 * * * * *
3811 * MODULE IS LOADED IN REAL MEMORY POOP
3812 * SO HERE PUT IT IN SSM PAGE OF THIS PROCESS
004461 3813 * AND PREPARE ISR TO ENTER IN
3814 CLD8 EQU *
004461 005766 7030 00 010 3815 TSX CPYSAX,CPYSSA *COPY PTW INTO SSM
004462 500011 2351 12 000 3816 LDA .SFNTR,XPAGE,P.SRM /* RESET MODULE EXECUTION LEVEL
004463 000041 7710 00 000 3817 ARL 33
    
```

CALL ASSA MODULE

004464	600043	1151	00	000	3818	CMPA	.SELVL,,P.SSA		
004465	004467	6020	00	010	3819	TNC	CLD9.0		
004466	600043	7551	00	000	3820	STA	.SELVL,,P.SSA		
	004467				3821	CLD9.0	EQU	*	
					3822	*****			
					3823	* IF GATED SSA, SHUT GATE			
004467	020000	2350	03	000	3824	LDA	SN.GAT,DU		
004470	500011	3151	12	000	3825	CANA	.SENTR,XPAGE,P.SRM	/* IS THIS GATED MODULE	
004471	004474	6000	00	010	3826	TZE	CLD9.1	*NO. GO ENTER	
004472	600217	2351	00	000	3827	LDA	.STMPW,,P.SSA	/* SET MODULE NO.	
004473	005446	7100	00	010	3828	TRA	GTSTS	/* SHUT MODULE GATE	
	004474				3829	CLD9	EQU	*	
	004474				3830	CLD9.1	EQU	*	
					3831	INHIB SAVE,ON /* 2 */			
004474	000000	6202	00	000	3832	EAXO	0		
004475	600105	2353	00	000	3833	LDA	.SLOAD+3,,P.SSA		
004476	000020	3152	07	000	3834	CANA	=020,DL	/* IF HSSA, SET SHRINK SIZE	
004477	000002	6012	04	000	3835	TNZ	2,IC	TO .SHALF WORDS	
004500	000002	6202	00	000	3836	EAXO	2	-- HSSA	
004501	600104	3753	00	000	3837	ANA	.SLOAD+2,,P.SSA		
004502	004000	3752	03	000	3838	ANA	SN.PRV,DU	*GET PRIVITY BIT FROM MDD	
004503	000024	7712	00	000	3839	ARL	26-6	FOR ISR FLAG	
004504	000000	6362	16	000	3840	EAQ	,KPX	MUST BUILD SHRINK VECTOR FOR EXCLUSIVE	00000020
004505	000400	1162	03	000	3841	CMPQ	256,DU	PAGE FOR THIS PROCESS --- IF KPX	00000020
004506	004511	6022	00	010	3842	TNC	CLD9A	UNDER 256, THEN PAGE IS IN SSM	00000020
004507	000400	1362	03	000	3843	SBLQ	256,DU	SEGMENT --- ELSE, PAGE IS IN	00000020
004510	000004	6202	10	000	3844	EAXO	4.0	SSX SEGMENT	00000020
004511	000012	7362	00	000	3845	CLD9A	QLS	10	00000020
004512	004540	2772	10	010	3846	ORAQ	SSMVSK.0	CREATE SHRINK IN AQ	00000020
004513	600226	7573	00	000	3847	STAQ	.SRMWK+2,,P.SSA	/* SET SHRINK VECTOR	
004514	006320	7032	00	010	3848	TSX	SETLDX,RETLD	/* RESET SSALODING STATUS	
004515	004366	7102	00	010	3849	TRA	TDSE	/* RETURN	
					3850	INHIB RESTORE /* 2 */			
	004516				3851	CLDED	EQU	*	
					3852	MODULE IS ALREADY LOADED AND FOUND IT			
					3853	UNLINK THE PAGE FROM AVAIL QUEUE			
	000001				3854	XFRTR	SET	1	*FRONT PAGE + .SCTRL + 1
	000000				3855	XNXTF	SET	0	*NEXT PAGE + .SCTRL + 1
					3856	INHIB SAVE,ON /* 2 */			
004516	000042	0112	07	000	3857	I.CLDD	NOP	MPCAC=MPBASE,DL MP = TRA MPCAC	00000020
004517	500001	2213	12	000	3858	LDX	XFRTR,1,XPAGE,P.SRM	*XFRTR = FRONT PAGE IN QUEUE	
004520	500000	2203	12	000	3859	LDX	XNXTF,,XPAGE,P.SRM	*NEXT PAGE IN QUEUE	
004521	004524	6002	00	010	3860	TZF	CLDD1	*THIS IS THE LAST PAGE IN QUEUE	
004522	500001	7413	10	000	3861	STX	XFRTR,1,XNXTF,P.SRM	*BACK PTR IN NEXT PAGE	
004523	004525	7102	00	010	3862	TRA	CLDD2		
	004524				3863	CLDD1	EQU	*	
004524	200055	4413	00	000	3864	SXL	XFRTR,,KLSRM+1,,P.KL	*SET FRONT PAGE IS NEW LAST	
	004525				3865	CLDD2	EQU	*	
004525	000000	6212	11	000	3866	EAX	XFRTR,,XFRTR	*IS THERE FRONT PAGE	
004526	004531	6002	00	010	3867	TZF	CLDD3	*NO	

C A L L A S S A M O D U L E

004527	577777	7403	11	000	3868	STX	XNXTF,-1,XFRTB,P.SRM *YES	SET NEXT PAGE PTR	
004530	004532	7102	00	010	3869	TRA	CLDD4		
004531	200055	7403	00	000	3870	CLDD3 STX	XNXTF,.KLSRM+1,,P.KL *SET NEXT PAGE IS QUEUE HEAD		
		004532			3871	CLDD4 EQU	*		
		004532			3872	OPEN.	DSP		
					3873	INHIB	RESTORE	/* 2 */	
004533	006356	7170	00	010	3874	XED	CAPTOR		00000020
004534	000003000000			000	3875	CAPT03 VFD	18/3,18/0		00000020
004535	006253	7030	00	010	3876	TSX	LINKX,LINK	*LINK THE PAGE INTO .SSPRQ	
004536	004445	7100	00	010	3877	TRA	CLD7	*RETURN X2 HAS PAGE HEAD ADDRESS	
004537	000000011007			000					
004540	001757772640			000	3878	SSMVSKEVEC	SD.SSM,.SBASE,.SEND-.SBASE,(R,W,E,S)		00000020
004541	000020006050			000					
004542	000777772640			000	3879	VEC	SD.SSM,.SBASE,.SHLF-.SBASE,(R,W,E,S)		00000020
004543	000020006050			000					
004544	001757772640			000	3880	VFC	SD.SSX,.SBASE,.SEND-.SBASE,(R,W,E,S)		00000020
004545	000020006076			000					
004546	000777772640			000	3881	VEC	SD.SSX,.SBASE,.SHLF-.SBASE,(R,W,E,S)		00000020
004547	000020006076			000					
004550	000000	000000		000	3882	SCRET ZFR0	0,0	*POINTER TO A PAGE FOR GEPOP	
		004551			3883	CLSHLD EQU	*		
004551	005652	7010	00	010	3884	TSX	LDSHX,LDSH	*GO LOAD SSSA	
004552	004461	7100	00	010	3885	TRA	CLD8		
					3886	INHIB	RESTORE	/* 1 */	
					3887	*			
					3888	*	SAVE STACK INTO DDS STACK		
	000000				3889	P.DDS SET	PO		PTCH5270
					3890	*			
		004553			3891	SVSTK EQU	*		
004553	600031	7213	00	000	3892	LXL	XPTR,.SDLVL,.P.SSA /* GET NEXT AVAIL POINTER OF DDS		
004554	006204	4706	07	000	3893	LDP	P.PSH,SD.PSH,DL		
004555	000026	6707	00	000	3894	LDD	P.DDS,PH.DDS,.P.PSH		
004556	001761	4706	07	000	3895	LDP	P.DDS,.CTYP,DL /* GET DDS SEGMENT		
004557	000000	6307	11	000	3896	EPPR	P.DDS,.XPTR,P.DDS AND POINT TO		
004560	000000	7553	00	000	3897	STA	,,P.DDS /* SAVE .SSA TALLY WORD		
004561	777440	6352	01	000	3898	EAA	-.SSAWK,AU /* GET STACK BODY SIZE		
004562	000002	7352	00	000	3899	ALS	2		
004563	000140	1007	40	000	3900	MLR	(1,1),(1,1) AND MOVE STACK BODY		
004564	600340	0000	01	000	3901	ADSC9	.SSAWK,.AU,P.SSA		
004565	000001	0000	01	000	3902	ADSC9	1,.AU,P.DDS		
004566	000002	7712	00	000	3903	ARL	2		
004567	600031	2363	00	000	3904	LDQ	.SDLVL,.P.SSA /* ALSO SAVE BACK POINTER		
004570	400000	2762	07	000	3905	ORQ	SEGID,DL AND SET INDICATOR TO SHOW THIS FRAME		
004571	000002	6352	01	000	3906	EAA	2,AU IS .SSA STACK FRAME		
004572	077777	7563	01	000	3907	STQ	D,DLVL,AU,P.DDS		
004573	000022	7712	00	000	3908	ARL	18 /* UPDATE DDS NEXT AVAIL POINTER		
004574	600031	0553	00	000	3909	ASA	.SDLVL,.P.SSA		
004575	000341	6352	00	000	3910	EAA	.SSAWK+1 /* RESET .SSA STACK TALLY		
004576	200000	2362	07	000	3911	LDQ	STYP16,DL		
004577	600012	7553	00	000	3912	STA	.SSA,.P.SSA		

1248T 02 12-27-79 09.322

H6600J7.057

GCOS IV

4VX

DISPATCHER

791219DISP

PAGE 111

CALL ASSA MODULE

004600 600340 7563 00 000 3913
004601 004375 7102 00 010 3914

STQ .SSAWK.,P.SSA
TRA CLSS1

/* SET TYPE 16 ENTRY FOR POP UP

EXIT A SSA MODULE

```

3916 *
3917 * THIS SECTION RELEASE SSA MODULE EXITED FROM AND POP UP SSA
3918 * MODULE IF ANY PUSHED. .EXIT AND .GOTO MACRO ENTER THIS SECTION
3919 * IF THE EXIT MODULE IS A SSA MODULE
3920 * NO PUSH-DOWN OCCURS IN HCM CALL SO EXIT FROM HCM
3921 * NEFD NO POP UP OF SSA MODULE
3922 * HSSA REQUIRES POP UP IN .GOTO BECAUSE PAGES ARE POOLED
004602 004602 3923 EXSSA EQU *
004602 006275 7032 00 010 3924 TSX SETLDX,SETLD /* MARK SSA LOADING STATUS
3925 TO PREVENT INTERRUPTION
3926 /* AND CHECK LINKS I/O
3927 INHIB SAVE,OFF /* 1 */
004603 600105 0341 00 000 3928 LDAC .SLOAD+3,.P.SSA *PULL OUT CURRENT .SNTRY
004604 600104 7551 00 000 3929 STA .SLOAD+2,.P.SSA *SAVE EXITED .SNTRY
004605 000002 6010 04 000 3931 TNZ 2,IC *MUST BE .SNTRY WORD
004606 3932 ZOPS
3933 * * * * *
3934 * UNLINK THE EXITED PAGE FROM .SSPRQ AND SAVE THE PAGE IN
3935 * .SRMWK IT WILL BE RELEASED OR REUSED LATER
004607 004607 3936 FPP1 EQU *
004607 006010 4704 07 000 3937 LDPO SD.PT1,DL MUST CLEAR PTW FOR EXCLUSIVE PAGE 00000020
004610 200062 6201 20 000 3938 EAXO .KLSRP+I,*,P.KL FOR SSA MODULE FOR THIS PROCESS 00000020
004611 000000 4501 10 000 3939 STZ 0,X0,PO 00000020
004612 600224 7221 00 000 3940 LXL XPAGE,.SRMWK,.P.SSA *IF SSSA IN USE
004613 005004 6010 00 010 3941 TNZ EPRLS
3942 INHIB SAVE,ON /* 2 */
004614 600172 2223 00 000 3943 LDX XPAGE,.SSPRQ,.P.SSA *GET CURRENT PAGE ADDRESS
004615 600224 7423 00 000 3944 STX XPAGE,.SRMWK,.P.SSA /* SAVE TRANSIENT PAGE ADDRESS
004616 004616 6002 00 010 3946 TZF *
004617 600154 2343 00 000 3947 SZN .SPUSH,.P.SSA 00000020
004620 004630 6012 00 010 3948 TNZ EPP5 00000020
004621 500000 2213 12 000 3949 LDX X1,.XPAGE,P.SRM *GET NEXT PAGE TO BE POPED
004622 600172 7413 00 000 3950 STX X1,.SSPRQ,.P.SSA *UNLINK THE EXIT PAGE FROM QUEUE
004623 004626 6012 00 010 3951 TNZ EPP4
004624 600172 4503 00 000 3952 STZ .SSPRQ,.P.SSA
004625 004630 7102 00 010 3953 TRA EPP5
004626 000000 6202 00 000 3954 FPP4 EAX X0,0
004627 500001 7403 11 000 3955 STX X0,1,X1,P.SRM
004630 000001 3362 03 000 3956 FPP5 EQU *
004631 600102 0563 00 000 3957 LCO I,DU
004631 600102 0563 00 000 3958 ASQ .SLOAD,.P.SSA *COUNT DOWN USING PAGE OF THE PROCESS
3959 INHIB RESTORE /* 2 */
3960 * DATA WHICH MUST BE RECOVERED
3961 * EXITED PAGE ADDRESS IN .SRMWK
3962 * .SNTRY OLD IN .SLOAD+2
3963 * POP UP PAGE ADDRESS IN .SSPRQ UPPER
3964 * ABOVE ARE ENOUGH TO CONTINUE
3965 * * * * *
3966 * CHECK THE MODULE IF IT IS A GATED OPEN MODULE GATE
3967 * AND ENABLE WHO WAITING THE GATE

```


F X I T A S S A M O D U L E

004632	020000	3150	03	000	3968	CANA	SN.GAT,DU	*IS IT GATED MOSULE	
004633	005527	6010	00	010	3969	TNZ	GTOPS	YES OPEN GATE AND ENABLE IF ANY WAIT	
	004634				3970	FPP14	EQU	*	
					3971	*****			
					3972	*	CHECK IF THERE WAS A PUSHE DOWN MODULE WHEN THIS EXITED		
					3973	*	SSA MODULE WAS CALLED.		
	000001				3974	XPTR	SET	1	
004634	600012	2361	54	000	3975	LDQ	.SSA,DI,P.SSA	/* GET STACK ENTRY	
004635	001777	3760	07	000	3976	ANQ	MDSK,DL	AND CHECK	
004636	004664	6000	00	010	3977	TZF	EPP50	/* NO MODULE # = NO PUSH DOWN	
004637	000000	6240	06	000	3978	EAX	XMOD,,QL		
004640	600103	4441	00	000	3979	SXL	XMOD,,SLOAD+1,,P.SSA		
	000000				3980	P.MDD	SET	P0	
004641	006134	4704	07	000	3981	LDP	P.MDD,SD.MDD,DL		
004642	000000	2351	14	000	3982	LDA	.XMOD,P.MDD	*IF THE PUSHED MODULE IS	
004643	000017	3750	03	000	3983	ANA	=017,DU	*SSSA	
004644	000006	1150	03	000	3984	CMPA	6,DU		
004645	005001	6000	00	010	3985	TZF	EPSH	*ALOCATE IT FROM SSSA POOL	
004646	600154	2341	00	000	3986	SZN	.SPUSH,,P.SSA		00000020
004647	004764	6010	00	010	3987	TNZ	EPP20		00000020
					3988	*****			
					3989	*	IN-CORE SSA MODULE POP UP		
					3990	*	XPAGE HAS NEW POP UP PAGE FROM HERE		
					3991	*			
004650	600172	2221	00	000	3992	LDX	XPAGE,,SSPRQ,,P.SSA		
004651	777772	6220	12	000	3993	EAX	XPAGE,,SCTRL,XPAGE	*ADJUST XPAGE TO POINT PAGE HEAD	
004652	005766	7030	00	010	3994	TSX	CPYSAX,CPYSSA	*COPY PTW FROM SRM TO SSM	
004653	600104	2351	00	000	3995	LDA	.SI0AD+2,,P.SSA	SEE WHAT KIND OF MODULE WE ARE LEAVING	00000070
004654	000020	3150	07	000	3996	CANA	=020,DL	TO SEE IF HALF SSA TYPE	00000070
004655	004664	6010	00	010	3997	TNZ	EPP50	* NOT HALF SSA	00000070
004656	600224	2241	00	000	3998	LDX4	.SRMWK,,P.SSA	X4 = PAGE WE ARE LEAVING	00000070
004657	501012	6305	14	000	3999	EPPR	P0,,SHLF=SCTRL,4,P.SRM		00000070
004660	501020	6315	12	000	4000	EPPR	P1,,SHLF,XPAGE,P.SRM		00000070
004661	000100	1005	00	000	4001	MLR	(1),(1)	MOVE UPPER 1/2 SSA FROM OLD TO NEW	00000070
004662	000000	0037	00	000	4002	ADSC9	,,SEND*4=,SHLF*4,P0		00000070
004663	100000	0037	00	000	4003	ADSC9	,,SEND*4=,SHLF*4,P1		00000070
					4004	*****			
					4005	*	RELEASE THE EXITED PAGE(.SRMWK,,P.SSA) TO MEMORY POOL		
					4006	*	IF GEPOP SAVE ONE PAGE FOR HIM		
					4007	*	XPAGE HAS EXITED OLD PAGE FROM HERE		
	004664				4008	EPP50	EQU	*	
004664	600224	2221	00	000	4009	LDX	XPAGE,,SRMWK,,P.SSA	/* GET PAGE ADDRESS TO RELEASE	
004665	004760	6000	00	010	4010	TZF	EPP100	IF ZERO, IT MUST BE SSSSA	
004666	000001	1060	03	000	4011	CMPX	KPX,,PNPOP,DU	*IS THIS GEPOP	
004667	004675	6010	00	010	4012	TNZ	EPP6	*NO. BACK TO POOL	
004670	004550	2340	00	010	4013	SZN	SECRET	*ANY SECRET PAGE FOR POP	
004671	004675	6010	00	010	4014	TNZ	EPP6	*YES POP HAS ALREADY ONE	
004672	004550	7420	00	010	4015	STX	XPAGE,SECRET	/* SAVE IT FOR POP. QUEUE IT INTO DISP	
004673	600224	4501	00	000	4016	STZ	.SRMWK,,P.SSA		
004674	004760	7100	00	010	4017	TRA	EPP100	*SKIP PAGE RELEASE	

F X I T A S S A M O D U L E

Address	Code	Op1	Op2	Op3	Op4	Op5	Op6	Op7	Op8	Description	Comments
004675	006166	1020	00	010	4019					CMPX	XPAGE,SSAV
004676	004723	6020	00	010	4020					TNC	EPP6S
004677	000001	2350	03	000	4021					LDA	1,DU
004700	006172	0550	00	010	4022					ASA	SSAVR
004701	200162	2341	00	000	4023					SZN	.KLMMG,,P.KL
004702	004723	6010	00	010	4024					TNZ	EPP6S
004703	006356	7170	00	010	4025					XED	CAPTOR
004704	000007000000			000	4026	CAPT07				VFD	18/7,18/0
004705	006166	1220	00	010	4027					SRLX	XPAGE,SSAV
004706	000000	6350	12	000	4028					EAA	0,XPAGE
004707	000034	7710	00	000	4029					ARL	10+18
004710	006166	0350	00	010	4030					ADLA	SSAV
004711	000000	6360	05	000	4031					EAQ	0,AL
004712	000001	2760	07	000	4032					ORQ	1,DL
004713	006010	4744	07	000	4033					LDP4	SD,PT1,DL
	004714				4034					.CALLX	.MDMM1,5
										INHIB	SAVE,ON
004714	600220	7403	00	000						STX0	.STMPX,,P.SSA
										ICLIMB	SD.SVX,,.MDMM1*64+5,EAX0
004715	006005713400			000						VFD	18/.MDMM1*64+5,09/713,1/1,1/0,1/0,6/M.
004716	000000606122			000						VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/SD.SVX
										INHIB	RESTORE
004717	006172	0540	00	010	4035					AOS	SSAVR
004720	000000	6200	00	000	4036					EAX0	0
004721	600224	7401	00	000	4037					STX0	.SRMWK,,P.SSA
004722	004760	7100	00	010	4038					TRA	EPP100
					4039	FPP6S				NULL	
004723	006042	4734	07	000	4040					LDP	P.PRQ,SD.PRQ,DL
					4041					INHIB	SAVE,ON
					4042					SHUT.	DSP
					4043					LDP	P.SRM,SD.SRM,DL
004725	006047	4756	07	000	4043					LDP	P.SRM,SD.SRM,DL
004726	000055	6202	00	000	4044					EAX	X0,,KLSRM+1
004727	600104	2353	00	000	4045					LDA	.SLOAD+2,,P.SSA
004730	010000	3152	03	000	4046					CANA	SN.RUS,DU
004731	004734	6012	00	010	4047					TNZ	EPP6.1
004732	500000	4503	12	000	4048					STZ	,XPAGE,P.SRM
004733	777777	6202	10	000	4049					EAX	X0,-1,X0
					4050	FPP6.1				EQU	*
004734	500001	4503	12	000	4051					STZ	1,XPAGE,P.SRM
004735	200000	7213	10	000	4052					LXL	X1,,X0,P.KL
004736	004741	6002	00	010	4053					TZE	EPP7
004737	577777	7423	11	000	4054					STX	XPAGE,-1,X1,P.SRM
004740	004742	7102	00	010	4055					TRA	EPP8
004741	200000	7423	10	000	4056	FPP7				STX	XPAGE,,X0,P.KL
					4057	EPP8				EQU	*
004742	500001	7413	12	000	4058					STX	X1,1,XPAGE,P.SRM
004743	000001	6212	12	000	4059					EAX	X1,1,XPAGE
004744	200000	4413	10	000	4060					SXL	X1,,X0,P.KL
004745	000000	6212	00	000	4061					EAX	X1,0

* NOT A BORROWED PAGE
 COUNT TIMES WE CONSIDERED RELEASE
 IN UPPER, ACTUAL IN LOWER
 IF LONG MEMORY MANG'T GATE IS SHUT,
 DON'T TRY TO RELEASE (MAYBE DEADLOCK)

ORIGIN OF BORROWED PAGE MINUS ORIGIN
 OF FIRST BORROWED PAGE DIVIDED
 BY 1024 = DELTA PAGE # IN LOWER
 PLUS FIRST PAGE OFFSET IN PT
 QU = OFFSET TO BORROWED PAGE PTW
 QL = WS# EQUAL ONE
 P4 = PAGE TABLE DESCRIPTOR
 RELEASE BORROWED PAGE

COUNT OUR RELEASES
 RESET AS NORML PATH DOES
 SKIP AS THO WE DIDN'T RELEASE PAGE

*POINT TO AVAIL QUEUE HEAD
 *RECOVER .SNTRY EXITED MODULE
 *IS THIS MODULE REUSEABLE
 *YES. SAVE MOD NO. IN .SCTRL
 *NO. CLEAR MOD NO.
 *POINT TO EMPTY QUEUE HEAD
 *CLEAR KPX IN .SCTRL+1

F X I T A S S A M O D U L E

004746	500000	7413	12	000	4062	STX	X1,,XPAGE,P,SRM	
004747	600224	7413	00	000	4063	STX	X1,,SRMWK,,P,SSA	/* CLEAR TRANSIENT POINTER
004750	300001	0113	56	000	4064	NOP	D,SSAP,ID,P,PRQ	/* COUNT UP PAGES IN POOL
004751	300002	7203	00	000	4065	LXL	X0,D,SSAP+1,,P,PRQ	/* CHECK IF ANY WAIT FOR SSA PAGE
004752	777743	1002	03	000	4066	CMPX	X0,D,SSAP+1-D,PRQ,DU	
004753	004757	6002	00	010	4067	TZE	EPP10	*NO ONE WAITINGFOR PAGE
004754	020000	2362	03	000	4068	LDQ	PS,SSA,DU	
004755	001402	2562	00	010	4069	ORSQ	DSPEVT	
004756	000001	0112	07	000	4070	I.EPP NOP	MPENB=MPBASE,DL	
					4071	*	IF MULTI-PROCESSOR,CHECK THE OTHER PROCESSOR.	
					4072	*	IF IDLE, PAT HIM ON THE SHOULDER.	
					4073	*	TSX PUTPRX,MPENB	* X2 X0 LOST
					4074			
	004757				4075	EPP10 EQU	*	
	004757				4076	OPEN.	DSP	
	004760				4077	FPP100 EQU	*	
004760	600012	2353	54	000	4078	LDA	.SSA,DI,P,SSA	/* RESTORE .STKSP
004761	600216	7553	00	000	4079	STA	.STKSP,,P,SSA	
004762	006320	7032	00	010	4080	TSX	SETLDX,RETLD	
004763	004366	7102	00	010	4081	TRA	TDSE	/* RETURN
					4082	INHIB	RESTORE	/* 2 */
					4083	***	*****	
					4084	*	SSA MODULE IS NOT IN CORE PUSHED. SO POP IT UP FROM DISK FILE	
	004764				4085	FPP20 EQU	*	
					4086	*	CHECK IF THIS IS A .GOTO FROM SSA TO SSA IF SO NO NEED TO POP UP	
					4087	*	BUT TO DO THIS, MUST GO FROM EXSSA TO CI.SSA DIRECTLY	
					4088	*	CAUTION- FROM HSSA TO HSSA. CALLEE HSSA MUST BE LOADED ON EXITED	
					4089	*	PAGE FROM PUSHDOWN FILE	
					4090	*	SKIP	
004764	600224	2221	00	000	4091	LDX	XPAGE,,SRMWK,,P,SSA	
004765	004774	6010	00	010	4092	TNZ	EPP11A	
					4093	INHIB	SAVE,ON	/* 2 */
	004766				4094	SHUT.	DSP	
004767	600103	4443	00	000	4095	SXL	XMOD,,SLOAD+1,,P,SSA	/* SAVE MODULE NO.
004770	006013	7012	00	010	4096	TSX	GETPGX,GETPG1	/* NO PAGE, SO GET ONE FROM POOL
	004771				4097	ZOPS		/* IF ANY , WHY WE CAME HERE
004772	006173	7012	00	010	4098	TSX	GETPGX,GETPG2	
004773	600103	7243	00	000	4099	LXL	XMOD,,SLOAD+1,,P,SSA	
					4100	INHIB	RESTORE	/* 2 */
	004774				4101	FPP11A EQU	*	
004774	500000	4441	12	000	4102	SXL	XMOD,,XPAGE,P,SRM	/* RESET MODUIE NO.
004775	006253	7030	00	010	4103	TSX	LINKX,LINK	/* RELINK TO .SSPRQ
004776	005174	7100	00	010	4104	TRA	POPUP	*GO POP UP FROM DISC
	004777				4105	FPP12 EQU	*	
004777	005766	7030	00	010	4106	TSX	CPYSAX,CPYSSA	*SET PTW AND .SLOAD+3 .SNTRY
005000	004760	7100	00	010	4107	TRA	EPP100	
	005001				4108	FPSH EQU	*	
005001	005652	7010	00	010	4109	TSX	LDSHX,LDSH	AND LOAD SSSA
005002	005766	7030	00	010	4110	TSX	CPYSAX,CPYSSA	/* COPY PTW
005003	004664	7100	00	010	4111	TRA	EPP50	*GO RELEASE EXITED PAGE

F X I T A S S A M O D U L E

	005004		4112	FPRLS	EQU	*		
			4113		INHIB	SAVE,ON		DISP8A3R
	005004		4114		SHUT.	DSP		DISP8A3R
005005	005577	7012 00 010	4115		TSX	RLSHX,RLSH	*RELEASE EXITED SSSA MODULE	
	005006		4116		OPEN.	DSP		DISP8A3R
			4117		INHIB	RESTORE		DISP8A3R
005007	004634	7100 00 010	4118		TRA	EPP14	*GO CHECK IF ANY PUSH DOWN	
			4119		INHIB	RESTORE	/* 1 */	

LOAD A MODULE

```

4121 *
4122 * THIS ROUTINE LOADS THE SSA MODULE FROM SYSTEM FILE OR
4123 * FROM IN-CORE MODULE IN LOAD SECTION OF START UP
4124 * CALLING TSX XLOAD,LOAD OR LOADS
4125 * PRECAL XPAGE = PAGE ADDRESS TO LOAD ON (MOD 1K)
4126 * P.SRM
4127 * .SLOAD+1 LOWER MOD # TO LOAD
4128 * LOAD = Q REG. = MDD ENTRY
4129 * LOADS = XMOD = MODULE NO.
4130 * POST XPAGE ADDRESS WHERE TO LOAD THE MODULE (MOD 1K)
4131 * OTHERS ARE LOST
000001 4132 P.MDD SET P1
000001 4133 P.DIT SET P1
000000 4134 P.PSH SET P0
000000 4135 P.PAT SET P0
000000 4136 P.PCH SET P0
000000 4137 P.HCM SET P0
000003 4138 XCOUNT SET 3 *REPEAT COUNT FOR PATCH
000001 4139 XPTR SET 1
000000 4140 XTMP SET 0
005010 4141 LOADS EQU *
4142 INHTB SAVE,OFF /* 1 */
005010 006134 4714 07 000 4143 LDP P.MDD,SD.MDD,DL
005011 100000 2361 14 000 4144 LDQ ,XMOD,P.MDD
005012 600012 7411 56 000 4145 LOAD EQU *
005013 500012 7561 12 000 4146 STX LOADX,,SSA,ID,P.SSA
005014 040000 3160 03 000 4147 STQ .SMDD,XPAGE,P.SRM /* SAVE MODULE DIRECTRY ENTRY
005015 005117 6010 00 010 4148 CANQ =0040000,DU *IF IT IS LOADED IN LOAD SECTION
4149 TNZ LOAD40 *GO TO INCORE MOVE
4150 * * * * *
4151 * SET UP IO COMMAND BLOCK IN .SSAIO
005016 000100 1004 00 000 4152 MLR ,(1)
005017 005320 0000 34 010 4153 ADSC9 LDIOCB,0,7*4
005020 600161 0000 34 000 4154 ADSC9 .SSAIO,0,7*4,P.SSA
005021 000000 6200 06 000 4155 EAX XTMP,,QL *FILE ADDRESS
005022 000002 6010 04 000 4156 TNZ 2,IC *MUST NOT ZERO
005023 4157 ZOP 3 *IF ZERO, UNDEFINED MODULE CALLED
005024 600167 4401 00 000 4158 SXL XTMP,,SSAIO+.IWSEK,,P.SSA *SET SEEK ADDRESS
4159 * * * * *
4160 * SET UP DCW'S BY MODULE TYPE AND MODULE NUMBRE
005025 500000 6305 12 000 4161 EPPR P0,.SDCW,XPAGE,P.SRM
005026 000100 1004 00 000 4162 MLR ,(1) *MOVE DCW LIST INTO THE PAGE
005027 005352 0000 20 010 4163 ADSC9 LDCW,,4*4
005030 000000 0000 20 000 4164 ADSC9 ,,4*4,P0
005031 000004 3160 03 000 4165 CANQ 4,DU *IF MODULE IS HSSA TYPE
005032 005035 6010 00 010 4166 TNZ LOAD2 *READ UPPER HALF
005033 001000 6200 00 000 4167 EAX XTMP,,SHLF-.SBASE
005034 500003 4401 12 000 4168 SXL XTMP,.SDCW+3,XPAGE,P.SRM
005035 006356 7170 00 010 4169 LOAD2 EQU *
4170 XED CAPTOR 00000020
    
```

LOAD A MODULE

005036	000004000000	000	4171	CAPT04	VFD	1874,1870	00000020
			4172	*****			
			4173	* SET UP .PSAPT PAT BODY TO READ FILE			
005037	006026	4714 07 000	4174	LDP	P.DIT,SD,DIT,DL		
005040	006204	4704 07 000	4175	LDP	P.PSH,SD,PSH,DL		
005041	000002	6705 00 000	4176	LDD	P.PAT,PH,PAT,,P.PSH		
005042	000760	3760 03 000	4177	ANQ	=0000760,DU	*ISOLATE DIT INDEX	
005043	000003	7720 00 000	4178	ORL	3	*DIT ENTRY IS MOD 2	
005044	100000	2371 02 000	4179	LDAQ	,QU,P,DIT		
005045	000040	7551 00 000	4180	STA	.PSAPA,,P,PAT		
005046	000044	7561 00 000	4181	STQ	.PSAPA+4,,P,PAT		
			4182	*****			
			4183	* GO TO READ THE MODULE			
005047	777774	6200 00 000	4184	VLOADV	EAX	XTMP,-4	
005050	600103	7401 00 000	4185	STX	XTMP,,SLOAD+1,,P.SSA		
		005051	4186	LOAD4	EQU	*	
005051	005255	7010 00 010	4187	TSX	DMIOX,DMIO		
			4188	*****			
			4189	* CHECK IF THE MODULE IS CORRECT ONR			
005052	500006	7241 12 000	4190	LXL	XMOD,,SCTRL,XPAGE,P.SRM		
005053	500020	6641 12 000	4191	ERX	XMOD,,SBASE,XPAGE,P.SRM		
005054	001777	3640 03 000	4192	ANX	XMOD,MDMSK,DU		
005055	005307	6010 00 010	4193	TNZ	DMIOLD	*NOT CORRECT MODULE	
			4194	*****			
			4195	* CHECK THE CHECKSUM WORD IF THERE ARE ANY FILE ERROR			
005056	500004	2361 12 000	4196	ICKS1	LDQ	.SDCW+4,XPAGE,P.SRM	
005057	001777	3760 07 000	4197	ANQ	=01777,DL	*MAX 1K-.SNTRY	
005060	000012	7360 00 000	4198	QLS	10		
005061	000000	6350 00 000	4199	EAA	0		
005062	000020	6210 12 000	4200	EAX	XPTR,,SBASE,XPAGE	/* START ADDRESS TO CHECKSUM	
005063	000000	6200 06 000	4201	EAX0	,QL	*SET FIRST LOOP COUNT	
		005064	4202	LOAD7	EQU	*	
005064	004200	6340 07 000	4203	LDI	SYSIR,DL	*SET CARRY INDICATER OFF	
005065	000000	5202 01 000	4204	RPTX	,1		
005066	500000	0711 11 000	4205	AWCA	,XPTR,P.SRM		
005067	000000	0710 03 000	4206	AWCA	,DU	*ADD LAST CARRY	
005070	000001	1360 03 000	4207	SBLQ	1,DU	*IF ANY MULTIPLE OF 256	
005071	005064	6054 00 010	4208	TPNZ	LOAD7	*GO RETRY	
005072	500016	1151 12 000	4209	CMPA	.SCKSM,XPAGE,P.SRM		
005073	005304	6010 00 010	4210	TNZ	DMIOCK	*CHECKSUM ERROR	
		005074	4211	ICKS1X	EQU	*	
			4212	*****			
			4213	* IF ANY PATCHES , APPLY IT			
005074	500006	7241 12 000	4214	LXL	XMOD,,SCTRL,XPAGE,P.SRM		
005075	500012	2361 12 000	4215	LDQ	.SMDD,XPAGE,P.SRM		
005076	020000	3160 03 000	4216	CANQ	=0020000,DU	*PATCH BIT OF MODULE DIRECTRY	
005077	005112	6000 00 010	4217	TZF	LOAD20	*NO PATCH EXISTS, SO SKIP	
005100	500020	6315 12 000	4218	EPPR	P1,,SBASE,XPAGE,P.SRM		
005101	006035	4704 07 000	4219	LDP	P.PCH,SD,PCH,DL		
005102	000000	6210 00 000	4220	EAX	XPTR,0	START AT +2 WORD. BUT PTR = 0	DISPOOFF

LOAD A MODULE

						005103	4221	LOAD10	EQU	*			
	005103	000002	1041	11	000	4222			CMPX	XMOD,2,XPTR,P.PCH	CHECK MOD # IN WORD PAIR	DISPOOFF	
	005104	005107	6010	00	010	4223			TNZ	LOAD15	* NOT OUR MODULE	DISPOOFF	
	005105	000002	2371	11	000	4224			LDAQ	2,XPTR,P.PCH	GOT A MATCH, PULI ENTRY	DISPOOFF	
	005106	100000	7561	05	000	4225			STQ	,AL,P1	/* APPLY PATCH		
						005107	4226	LOAD15	NULL			DISPOOFF	
	005107	000002	6210	11	000	4227			EAX	XPTR,2,XPTR	ADVANCE TO NEXT PATCH	DISPOOFF	
	005110	000000	1011	00	000	4228			CMPX	XPTR,0,,P.PCH	CHECK FOR END OF TABLE	DISPOOFF	
	005111	005103	6020	00	010	4229			TNC	LOAD10	* MORE PATCHES	DISPOOFF	
						005112	4230	LOAD20	EQU	*			
	005112	500020	2351	12	000	4231			LDA	.SBASE,XPAGE,P.SRM	/* SAVE .SNTRY WORD IN CONTROL AREA		
	005113	500011	7551	12	000	4232			STA	.SENTR,XPAGE,P.SRM			
	005114	600012	2211	54	000	4233			LDX	LOADX,,SSA,DI,P.SSA			
	005115	700735	0541	00	000	4234			AOS	.CRTCL,,P.CR	/* COUNT MODUIE LOAD		
	005116	000000	7100	11	000	4235		X.LOAD	TRA	.LOADX			
						4236			*****				
						4237			*	MOVE INCORF SSA MODULE LOADED IN LOAD SECTIONN			
						005117	4238	LOAD40	EQU	*			
	005117	006356	7170	00	010	4239			XED	CAPTOR		00000020	
	005120	000010000000			000	4240		CAPT08	VFD	18/8,18/0		00000020	
	005121	006021	4704	07	000	4241			LDP	P,HCM,SD,HCM,DL			
	005122	500020	6315	12	000	4242			EPPR	PI,,SBASE,XPAGE,P.SRM			
	005123	000004	3160	03	000	4243			CANQ	4,DU	*IF HSSA MOVE 512-.SNTRY		
	005124	005131	6000	00	010	4244			TZE	LOAD42			
	005125	000100	1005	20	000	4245			MLR	(1,0,1),(1)			
	005126	077777	0001	06	000	4246			ARG	-1,QL,P,HCM			
	005127	100000	0077	00	000	4247			ADSC9	,,,SEND*4-.SBASE*4,P1			
	005130	005134	7100	00	010	4248			TRA	LOAD45			
						005131	4249	LOAD42	EQU	*			
	005131	000100	1005	20	000	4250			MLR	(1,0,1),(1)			
	005132	077777	0001	06	000	4251			ARG	-1,QL,P,HCM			
	005133	100000	0040	00	000	4252			ADSC9	,,,SHLF*4-.SBASE*4,P1			
						005134	4253	LOAD45	EQU	*			
	005134	005112	7100	00	010	4254			TRA	LOAD20			
						4255			INHIB	RESTORE	/* 1 */		

PUSH A SSA MODULE INTO FILE

```

4257 *
4258 * THIS ROUTINE PUSHES DOWN A PAGE AT TAIL OF SSPRO
4259 * PRECAL P.SRM DISPV1.0
4260 * CALLING TSX XPUSH,PUSH
4261 * DFNIAL RETURN - NO PAGE TO PUSH DOWN
4262 * NOTMAL RETURN
4263 * POST XPAGE - FREE PAGE (+.SCTRL)
4264 * AVAIL - P.SRM
000000 4265 XZERO SET 0
000000 4266 XTMP SET 0
000001 4267 XBACK SET 1 *BACK PTR TEMPORARY
005135 4268 PUSH EQU *
005135 600172 2223 00 000 4269 LDX XPAGE,SSPRO,P.SSA 00000020
005136 000000 6002 11 000 4270 TZE ,PUSHX *NO PAGE
005137 600012 7413 56 000 4271 VPUSHV STX PUSHX,SSA,ID,P.SSA
4272 * * * * *
4273 * MOVE IOCB FOR PUSH DOWN I/O AND SET UP
005140 777777 6202 00 000 4274 EAX XZERO,-1
005141 600102 0403 00 000 4275 ASX XZERO,SLOAD,P.SSA /* COUNT DOWN UNLINKED PAGE
005142 600224 7423 00 000 4276 STX XPAGE,SRMWK,P.SSA AND TAKE IT AS TRANSIENT
4277 INHIB SAVE,OFF /* 1 */
005143 000100 1004 00 000 4278 MLR ,(1)
005144 005327 0000 34 010 4279 ADSC9 PDIOCB,0,7*4
005145 600161 0000 34 000 4280 ADSC9 .SSAIO,0,7*4,P.SSA
005146 777772 6220 12 000 4281 EAX XPAGE,-.SCTRL,XPAGE
005147 600156 2351 00 000 4282 LDA .SPUSH+2,P.SSA
005150 500010 7551 12 000 4283 STA .SFEK,XPAGE,P.SRM *SET POINTER IN FILE
005151 600154 2351 00 000 4284 LDA .SPUSH,P.SSA *ADDRESS TO PUSH DOWN THE MODULE
005152 600156 7551 00 000 4285 STA .SPUSH+2,P.SSA
005153 600167 7551 00 000 4286 STA .SSAIO+.IWSEK,P.SSA
005154 600155 0541 00 000 4287 AOS .SPUSH+1,P.SSA
005155 000020 2360 07 000 4288 LDQ 1024/64,DL *INCREMENT SIZE TO NEXT AVAIL AREA
005156 600154 0561 00 000 4289 ASQ .SPUSH,P.SSA
005157 005356 2370 00 010 4290 LDAQ PDCW *SET DCW TO WRITE THE PAGE
005160 500000 7571 12 000 4291 STAQ .SDCW,XPAGE,P.SRM
005161 005234 7030 00 010 4292 TCKS? TSX CKSMX,CKSMU CALCULATE CHECKSUM
005162 005245 7030 00 010 4293 TSX CKSMX,CKSML *FOR BOTH HALF
005163 500017 7561 12 000 4294 STQ .SCKSM+1,XPAGE,P.SRM
005164 500016 7551 12 000 4295 STA .SCKSM,XPAGE,P.SRM
005165 777774 6200 00 000 4296 TCKS?X EQU *
005166 600103 7401 00 000 4297 EAX XTMP,-4
005166 600103 7401 00 000 4298 STX XTMP,SLOAD+1,P.SSA
005167 700766 0541 00 000 4299 PUSH10 EQU *
005167 005255 7010 00 010 4300 TSX DMIOX,DMIO
005170 700766 0541 00 000 4301 AOS .CRNPS,P.CR
4302 INHIB SAVE,ON /* 2 */ MODULE COUNT INTERFACE
005171 600012 2213 54 000 4303 LDX PUSHX,SSA,DI,P.SSA
005172 000006 6222 12 000 4304 EAX XPAGE,SCTRL,XPAGE
005173 000001 7102 11 000 4305 X.PUSH TRA 1,PUSHX
4306 INHIB RESTORE /* 2 */

```


PUSH A SSA MODULE INTO FILE

4307 INHIB RESTORE /* 1 */

POP UP THE MODULE

```

4309 *
4310 * THIS ROUTINE POP UP THE MODULE PUSHED DOWN INTO DISK FILE
4311 *
000000 4312 XTMP SET 0
005174 4313 POPUP EQU *
4314 * * * * *
4315 * SET UP I/O COMMAND BLOCK
4316 INHIB SAVE,OFF /* 1 */
005174 000100 1004 00 000 4317 MLR ,(1) *MOVE IOCB
005175 005336 0000 34 010 4318 ADSC9 PPIOCB,0,7*4
005176 600161 0000 34 000 4319 ADSC9 .SSAIO,0,7*4,P.SSA
005177 600156 2351 00 000 4320 LDA .SPUSH+2,,P.SSA *SET SEEK ADDRESS
005200 600167 7551 00 000 4321 STA .SSAIO+.IWSEK,,P.SSA
4322 * * * * *
4323 * SET UP DCW TO READ BY MODULE TYPE
005201 600104 2351 00 000 4324 LDA .SLOAD+2,,P.SSA *SAVED .SNTRY OF EXITED MODULE
005202 000020 3150 07 000 4325 CANA 4*4,DL *DETERMINE TYPE
005203 005206 6000 00 010 4326 TZE POP2
005204 005357 2350 00 010 4327 LDA PPDCWF *FULL (2KW) SSA MODULE
005205 005207 7100 00 010 4328 TRA POP4
005206 005360 2350 00 010 4329 POP2 EQU *
005207 4330 LDA PPDCWH *HALF (0.5KW) SSA MODULE
005207 500001 7551 12 000 4331 POP4 EQU *
005210 005356 2350 00 010 4332 STA .SDCW+1,XPAGE,P.SRM
005211 500000 7551 12 000 4333 LDA PPDCW *SET UP DCWS
4334 STA .SDCW,XPAGE,P.SRM
4335 * * * * *
4336 * DO I/O TO POP UP THE MODULE
005212 777774 6200 00 000 4337 EAX XTMP,-4 *SET RETRY COUNT
005213 600103 7401 00 000 4338 STX XTMP,.SLOAD+1,,P.SSA
005214 005255 7010 00 010 4339 TSX DMIOX,DMIO
005215 4340 POP5 EQU *
4341 * * * * *
4342 * CHECKSUM CHECK IF THE MODULE IS CORRECT
005215 005234 7030 00 010 4343 ICKS3 TSX CKSMX,CKSMU *CHECK UPPER HALF
005216 500016 1151 12 000 4344 CMPA .SCKSM,XPAGE,P.SRM
005217 005233 6010 00 010 4345 TNZ POP70 *CHECKSUM ERROR
005220 600104 2351 00 000 4346 LDA .SLOAD+2,,P.SSA
005221 000020 3150 07 000 4347 CANA 4*4,DL *IF UPPER HALF WAS POPEd
005222 005226 6000 00 010 4348 TZE POP7 *SKIP LOWE CHECKSUM
005223 005245 7030 00 010 4349 TSX CKSMX,CKSML
005224 500017 1161 12 000 4350 CMPQ .SCKSM+1,XPAGE,P.SRM
005225 005233 6010 00 010 4351 TNZ POP70 CHECKSUMERROR
005226 4352 POP7 EQU *
4353 * * * * *
005226 600156 2351 00 000 4354 LDA .SPUSH+2,,P.SSA *POP UP FILE ADDRESS
005227 600154 7551 00 000 4355 STA .SPUSH,,P.SSA
005230 500010 2351 12 000 4356 LDA .SEEK,XPAGE,P.SRM *RECOVER PRIOR POP UP ADDRESS
005231 600156 7551 00 000 4357 STA .SPUSH+2,,P.SSA
005232 004777 7100 00 010 4358 TRA EPP12
    
```

POP UP THE MODULE

```

005233 4359 POP70 EQU *
005233 005304 7100 00 010 4360 TRA DMIOCK /* RETURN IS SAVED IN.SXRET+1
4361 * * * * *
4362 * CALICULATE CHECK SUM FOR 0.5K
4363 * PRFCAL XPAGE ( MOD 1k ) P.SRM
4364 * POST LOST XO X1 X3 AQ
000001 4365 XPTR SET 1 *WORK SAME AS DMIOX
005234 4366 CKSMU EQU *
005234 000000 6210 12 000 4367 FAX XPTR,0,XPAGE
005235 000000 4310 03 000 4368 FLD ,DU *INITIALIZE ALSO FOR CKSML
005236 004200 6340 07 000 4369 LDI SYSIR,DL *OFF SCARRY
005237 000200 5202 00 000 4370 RPT .SHLF=,SBASE-256
005240 500020 0711 11 000 4371 AWCA .SBASE,XPTR,P.SRM
005241 000200 5202 01 000 4372 RPT 0,1 *UPPER HALF CHECKSUM
005242 500000 0711 11 000 4373 AWCA ,XPTR,P.SRM
005243 000000 0710 03 000 4374 AWCA ,DU
005244 000000 7100 13 000 4375 TRA ,CKSMX
005245 4376 CKSML EQU *
005245 001000 6210 12 000 4377 EAX XPTR,512,XPAGE
005246 004200 6340 07 000 4378 LDI SYSIR,DL
005247 740200 5202 01 000 4379 RPT .SEND=,SHLF-256,1
005250 500000 0721 11 000 4380 AWCO ,XPTR,P.SRM
005251 000200 5202 01 000 4381 RPT 0,1
005252 500000 0721 11 000 4382 AWCO ,XPTR,P.SRM
005253 000000 0720 03 000 4383 AWCO ,DU
005254 000000 7100 13 000 4384 TRA ,CKSMX
4385 INHIB RESTORE /* 1 */
    
```

DO I/O FOR LOAD/PUSH/POP

```

4387 *
4388 * THIS ROUTINE DO THE I/O
4389 *
4390 * PRECAL XPAGE = PAGE ADDRESS ( MOD 1K )
4391 * CALL TSX DMIOX,DMIO
4392 * POST AVAIL = XPAGE
4393 * OTHERS ARE LOST
4394 * USED .SRMWK+1
4395 *
005255 4396 DMIO EQU *
005255 600225 4413 00 000 4397 SXL DMIOX,.SRMWK+1,.P.SSA
005256 600225 7423 00 000 4398 STX XPAGE,.SRMWK+1,.P.SSA /* SAVE REGISTER
005257 4399 DMIO EQU * *RETRY ENTRY
005257 005350 2372 00 010 4400 LDAQ IODVEC
005260 600226 7573 00 000 4401 STAQ .SRMWK+2,.P.SSA /* MOVE VECTOR
005261 600227 7423 00 000 4402 STX XPAGE,.SRMWK+3,.P.SSA
005262 600226 6727 00 000 4403 VCAL3V LDD P.IOD,.SRMWK+2,.P.SSA /* SHRINK I/O AREA DESCRIPTOR
4404 INHIB SAVE,OFF /* 1 */
005263 005346 6714 00 010 4405 LDD P.IOC,IOCVEC
005264 4406 .CALL .MIOS,51 /* DO I/O
INHIB SAVE,ON
005264 000003 6306 04 5267 EPPRO *+3,$
005265 700002 7103 00 000 TRA .CRCAL,.P.CR
005266 000002 000063 000 ZERO .MIOS,51
INHIB RESTORE
005267 4407 DMIO EQU *
005267 4408 .CALL .MDISP,4 /* WAIT RELINQISH
INHIB SAVE,ON
005267 000003 6306 04 5272 EPPRO *+3,$
005270 600012 4507 56 000 STPO .SSA,ID,P.SSA
005271 772513 7102 04 4 TR A 4,$
INHIB RESTORE
005272 006047 4754 07 000 4409 LDP P.SRM,SD,SRM,DL /* RESET POINTER
005273 006133 4724 07 000 4410 LDP P.KL,SD,KL,DL
005274 600165 2351 00 000 4411 LDA .SSAIO+.IWST1,.P.SSA
005275 005267 6050 00 010 4412 TPL DMIO2 /* I/O IS NOT COMPLETE - WAIT
4413 /* RECOVER DR INDEX LOST IN IOS
005276 600225 7211 00 000 4414 VCAL4V LXL DMIOX,.SRMWK+1,.P.SSA
005277 600225 2221 00 000 4415 LDX XPAGE,.SRMWK+1,.P.SSA
005300 005361 3150 00 010 4416 CANA DMMASK /* CHECK I/O STATUS
005301 000000 6000 11 000 4417 X.DMIO TZE .DMIOX STATUS IS READY, MP = TRA MPCRT 00000020
005302 000001 2360 07 000 4418 LDQ .AC001,DL I/O ERROR CODE 00000020
005303 005310 7100 00 010 4419 TRA DMIOER
005304 4420 DMIOCK EQU *
005304 700744 0541 00 000 4421 AOS .CRTKS,.P.CR
005305 000002 2360 07 000 4422 LDQ .AC002,DL CHECKSUM ERROR CODE 00000020
005306 005310 7100 00 010 4423 TRA DMIOER
005307 4424 DMIOCK EQU *
005307 000003 2360 07 000 4425 LDQ .AC003,DL LOADING ERROR CODE 00000020
4426 * * * * *

```


D O I / O F O R L O A D / P U S H / P O P

005356	000004	010001	000	4453	PDCW	IOTP	.SDCW+4.1		
005357	000010	001770	000	4454		IOTD	.SEEK;.SEND=.SEEK		
005360	000010	001010	000	4455	PPDCWH	IOTD	.SEEK;.SHLF=.SEEK		
		005356		4456	PPDCW	EQU	PDCW		
		005357		4457	PPDCWF	EQU	PDCW+1		
005361	370000	770000	000	4458	DMASK	OCT	370000770000	STATUS CHECK MASK	

OVERLAY I/O ERROR HANDLER - POQ3 INTERFACE

```

4460 *
4461 * THIS ROUTINE HANDLES DISPATCHER I/O ERROR, PUT MESSAGE INTO
4462 * POPQ TO POQ3, AND WAIT HIS PROCESSING
4463 * IF SUCCESS RETURN TO RETRY, IF NOT, GO TO .MBRT1.3
4464 *
4465 * PRECAL Q = ERROR CODE      1 I/O ERROR
4466 *                               2 CHECKSUM ERROR
4467 *                               3 CANT LOAD MODULE ( NOT CORRECT * )
4468 * POST IF CONTINUE .SLOAD+1 UPPER HAS RETRY COUNT (SET BY POQ3)
4469 *
000003 4470 W SET 3
4471 INHIB SAVE,OFF
005362 4472 ERHDL EQU *
005362 000001 1060 03 000 4473 CMPX KPX,,PNPOP,DU *IF THIS IS POP, SYSTEM CAN'T PROCESSED
005363 000002 6010 04 000 4474 TNZ 2,IC
005364 4475 ZOP 4 *SYSTEM I/O ERROR ON GEPOP
005365 600165 4501 00 000 4476 STZ .SSAIO+.IWST1,,P.SSA
4477 INHIB RESTORE
005366 4478 SHUT. DSP
005367 600017 2353 00 000 4479 LDA .STATE,,P.SSA CHECK SWAP IN CONTROL
005370 004000 3152 03 000 4480 CANA .TIISWP,DU
005371 000002 6002 04 000 4481 TZF 2,IC
005372 4482 ZOP 4
005373 4483 OPEN. DSP
005374 4484 FRH1 EQU *
005374 475001 6232 00 000 4485 FAX W,.MPOQ3*512+1
005375 600017 2353 00 000 4486 LDA .STATE,,P.SSA
005376 003551 7012 00 010 4487 TSX POPQX,POPQ *PUT MESSAGE INTO POP QUEUE
005377 005430 7102 00 010 4488 TRA ERH2 *QUEUE IS FULL WAIT
005400 005443 2362 00 010 4489 LDQ ERENB *ENABLE REQUEST TO POP
005401 4490 .CALL .MDISP,6
4491 INHIB SAVE,ON
005401 000003 6306 04 5404 4492 EPPRO **3,$
005402 600012 4507 56 000 4493 STPO .SSA,ID,P.SSA
005403 772403 7102 04 6 4494 TRA 6,$
4495 INHIB RESTORE
005404 000000 0112 07 000 4496 ERH3 EQU *
4497 ERHW EQU * *IGNORE ERROR RETURN
005405 4498 SHUT. DSP
005406 400000 2352 03 000 4499 LDA .RDEAD,DU *FROZEN THIS PROCESS WHILE POQ3 WORK
005407 600117 2553 00 000 4500 ORSA .SRQST,,P.SSA
005410 4497 OPEN. DSP
005411 4498 .CALL .MDISP,11 /* WAIT TILL ENABLE
4501 INHIB SAVE,ON
005411 000003 6306 04 5414 4502 EPPRO **3,$
005412 600012 4507 56 000 4503 STPO .SSA,ID,P.SSA
005413 772400 7102 04 13 4504 TRA 11,$
4505 INHIB RESTORE
005414 006047 4756 07 000 4499 LDP P.SRM,SD.SRM,DL /* RESTORE POINTERS

```

OVERLAY I/O ERROR HANDLER - POQ3 INTERFACE

005415	006133	4726	07	000	4500	LDP	P.KL,SD,KL,DL		
005416	600165	2353	00	000	4501	LDA	.SSAIO+.IWST1,,P.SSA		
005417	005405	6002	00	010	4502	TZE	ERHW	*NO STATUS. WAIT AGAIN	
005420	600225	2223	00	000	4503	LDX	XPAGE,,SRMWK+1,,P.SSA		
		400000			4504	BOOL	400000		
005421	400000	3152	03	000	4505	CANA	READY,DU	/* BIT 0	
005422	005257	6012	00	010	4506	TNZ	DMIOR	=1 - OK, CONTINUE	
005423	500005	2363	12	000	4507	LDQ	.SSAST,XPAGE,P.SRM	=0 - UNRECOVERABLE, GO ABORT	
005424	000022	7722	00	000	4508	QRL	18	Q-REG = ABORT CODE	
	005425				4509	.CALL	.MBRT1,3	/* GO ABORT	
						INHIB	SAVE,ON		
005425	000003	6306	04	5430		EPPRO	**3,\$		
005426	700002	7103	00	000		TRA	.CRCAL,,P.CR		
005427	000036	000003		000		ZERO	.MBRT1,3		
						INHIB	RESTORE		
					4510		.SSA STACK IS USED TEMPORARY. SO. MUST USE .CALI		
	005430				4511	FRH2	EQU	*	
	005430				4512		OPEN.	DSP	
	005431				4513		.CALL	.MDISP,16	/* DELAY AND WAIT
						INHIB	SAVE,ON		
005431	000003	6306	04	5434		EPPRO	**3,\$		
005432	600012	4507	56	000		STPO	.SSA,ID,P.SSA		
005433	772365	7102	04	20		TRA	16,\$		
						INHIB	RESTORE		
005434	006047	4756	07	000	4514	LDP	P.SRM,SD.SRM,DL		
005435	006133	4726	07	000	4515	LDP	P.KL,SD,KL,DL		
005436	600225	2223	00	000	4516	LDX	XPAGE,,SRMWK+1,,P.SSA	/* RECOVER	
005437	500005	2363	12	000	4517	LDQ	.SSAST,XPAGE,P.SRM	ERROR CODE	
005440	000007	3762	03	000	4518	ANQ	7,DU		
005441	000022	7722	00	000	4519	QRL	18		
005442	005374	7102	00	010	4520	TRA	ERH1	*RETRY QUEUEING	
005443	000001770000			000	4521	FRENB	VFD	18/.PNPOP,06/77,12/0 *POP ENABLE REQUEST	

G A T E D M O D U L E H A N D L E R

4523 * GATE SHUT ROUTINE FOR MODULE GATE

4524 *

000001 4525 XPTR SET 1

005444 4526 GTST EQU *

005444 600220 2353 00 000 4527 LDA .STMPX,,P.SSA /* MODULE NO.

005445 400000 2752 03 000 4528 ORA SEGID,DU /* SET INDICATOR OF HCM

005446 4529 GTSTS EQU * /* ENTRY FROM CLSSA

005446 4530 SHUT. DSP

005447 4531 SHUT. GTM

005450 005523 2362 00 010 4532 LDQ GTMASK

005451 200001 7203 00 000 4533 LXLO 1,,P.GTM *REPEAT X

005452 000002 6212 00 000 4534 EAX XPTR,2

005453 000000 5202 01 000 4535 RPTX ,1 *SEARCH FOR THE MODULE ENTRY

005454 200000 2113 11 000 4536 CMK ,XPTR,P.GTM

005455 005474 6012 00 010 4537 TNZ GTNEW *NOT FOUND , SO IT IS NEW MODULE

005456 277777 2363 11 000 4538 LDQ -1,XPTR,P.GTM *PULL OUT THE ENTRY

005457 777777 3162 07 000 4539 CANQ -1,DL

005460 005503 6012 00 010 4540 TNZ GTWT *MODULE IS USED. SO WAIT

005461 277777 4463 11 000 4541 SXL KPX,-1,XPTR,P.GTM *SO, WE GOT IT

005462 4542 GTST? EQU *

005462 600102 0543 00 000 4543 AOS .SLOAD,,P.SSA *COUNT UP USEING GATED MODULE

005463 001000 2362 03 000 4544 LDQ .TGATE,DU

005464 600017 2563 00 000 4545 ORSQ .STATE,,P.SSA *SHOW GATED MODULE IN USE

005465 4546 OPEN. GTM

005466 4547 OPEN. DSP

005467 400000 3152 03 000 4548 CANA SEGID,DU

005470 004366 6012 00 010 4549 TNZ TDSE

005471 006133 4726 07 000 4550 LDP P,KL,SD,KL,DL

005472 006047 4756 07 000 4551 LDP P.SRM,SD.SRM,DL

005473 004474 7102 00 010 4552 TRA CLD9

005474 4553 GTNEW EQU *

005474 000000 6362 01 000 4554 EAQ ,AU /* MODULE NO.

005475 001777 3762 03 000 4555 ANQ MDMSK,DU

005476 200000 7563 11 000 4556 STQ ,XPTR,P.GTM /* XPTR POINT NEXT AVAIL ENTRY AFTER R

005477 200000 4463 11 000 4557 SXL KPX,,XPTR,P.GTM *SHOW IN UXSE

005500 002000 2362 07 000 4558 LDQ =02000,DL *COUNT UP NO. OF ENTRIES

005501 200001 0563 00 000 4559 ASQ 1,,P.GTM

005502 005462 7102 00 010 4560 TRA GTST2

4561

4562

MODULE GATE WAIT ROUTINE

4563

005503 4564 GTWT EQU *

005503 600012 7553 56 000 4565 STA .SSA,ID,P.SSA /* SAVE INDICATO AND MOD#

005504 600012 7423 56 000 4566 STX XRQE,,SSA,ID,P.SSA 00000020

005505 400000 2362 03 000 4567 LDQ =0400000,DU *SHOE SOME ONF WAITING

005506 277777 2563 11 000 4568 ORSQ -1,XPTR,P.GTM *IN BIT 0

005507 4569 SHUT. PST

005510 000000 6222 00 000 4570 EAX XRQE,0 *GATE EVENT WAIT REQUEST

005511 4571 .CALL .MDISP,20

INHIB SAVE,ON

G A T E D M O D U L E H A N D L E R

005511	000003	6306	04	5514		EPPRO	**3,\$	
005512	600012	4507	56	000		STPO	.SSA, ID, P.SSA	
005513	772311	7102	04	24		TRA	20.\$	
						INHIB	RESTORE	
005514	600012	2223	54	000	4572	LDX	XRQE, .SSA, DI, P.SSA	00000020
005515	600012	2353	54	000	4573	LDA	.SSA, DI, P.SSA	
005516	005446	6052	00	010	4574	TPL	GTSTS	/* FROM SSA GATE
005517	400000	6752	03	000	4575	ERA	SEGID, DU	/* FROM HCM
005520	600220	7553	00	000	4576	STA	.STMPX, .P.SSA	/* RESET PARAMETER SAVE
005521	400000	2752	03	000	4577	ORA	SEGID, DU	
005522	005446	7102	00	010	4578	TRA	GTSTS	
005523	400000	777777		000	4579	GTMASK	OCT	400000777777

G A T E D M O D U L E H A N D L E R

```

4581 *
4582 * GATE OPEN ROUTINE FOR MODULE GATE
000000 4583 P.MDD SET P0
005524 4584 GTOP EQU *
005524 600220 2353 00 000 4585 LDA .STMPX,,P.SSA /* RECOVER MOD#
005525 005573 4502 17 010 4586 STZ GTWK,PN SET INDICATOR FOR HCM GATE 00000020
005526 000002 7102 04 000 4587 TRA 2,IC
005527 4588 GTOPS EQU * /* ENTRY FROM EXSSA
005527 005573 5542 17 010 4589 STC1 GTWK,PN SET SSA INDICATOR 00000020
005530 001777 3752 03 000 4590 ANA MDMSK,DU /* MODULE NUMBER TO OPEN
005531 000001 3362 07 000 4591 LCO 1,DL
005532 4592 SHUT. DSP
005533 600102 0563 00 000 4593 ASQ .SLOAD,,P.SSA *COUNT DOWN NUMBET OF GATE SHUT
005534 600102 7213 00 000 4594 LXI X1,,SLOAD,,P.SSA
005535 005542 6056 00 010 4595 TPNZ GTOP01 *OTHER GATED MODULE IS IN USE
005536 000002 6002 04 000 4596 TZE 2,IC
005537 4597 ZOPS *NUMBER TURNED TO NEGATIVE
005540 001000 2362 03 000 4598 LDQ .TGATE,DU *NO MORE GATED MODULE IS IN USE
005541 600017 6563 00 000 4599 ERSQ .STATE,,P.SSA *RESET GATE MODULE BIT IN .STATE
005542 4600 GTOP01 EQU *
005542 4601 SHUT. GTM
005543 005523 2362 00 010 4602 LDQ GTMASK
005544 200001 7203 00 000 4603 LXLO 1,,P.GTM *REPEAT INDEX
005545 000002 6212 00 000 4604 EAX X1,2
005546 000000 5202 01 000 4605 RPTX ,1
005547 200000 2113 11 000 4606 CMK ,X1,P.GTM
005550 000002 6002 04 000 4608 TZE 2,IC
005551 4609 ZOPS
005552 000002 7462 04 000 4610 STX KPX,2,IC
005553 277777 7203 11 000 4611 LXI X0,-1,X1,P.GTM
005554 000000 1002 03 000 4612 CMPX X0,**,DU
005555 000002 6002 04 000 4613 TZE 2,IC
005556 4614 ZOPS
005557 277777 2363 11 000 4616 LDQ -1,X1,P.GTM *PULL OUT GATE ENTRY
005560 277777 7553 11 000 4617 STA -1,X1,P.GTM *RESET THE ENTRY
005561 005565 6052 00 010 4618 TPL GTOPI *NO ONE WAIT FOR THIS MODULE
005562 010000 2362 03 000 4619 LDQ PS.GAT,DU
005563 001402 2562 00 010 4620 ORSQ DSPEVT
005564 000001 0112 07 000 4621 I.GTOP NOP MPENB=MPBASE,DL
4622 * IF MULTI-PROCESSOR,CHECK THE OTHER PROCESSOR.
4623 * IF IDLE, PAT HIM ON THE SHOULDER.
4624 * TSX PUTPRX,MPENB
005565 4625 GTOPI EQU *
005565 4626 OPEN. GTM
005566 4627 OPEN. DSP
005567 005573 2342 17 010 4628 SZN GTWK,PN WHICH MODULE OPENED 00000020
005570 004366 6002 00 010 4629 TZF TDSE HCM MODULE
005571 006133 4726 07 000 4630 LDP P.KL,SD,KL,DL
005572 004634 7102 00 010 4631 TRA EPP14
005573 4632 GTWK BSS .NRPRC WORK AREA FOR GATE 00000020

```

SHARABLE SSA MODULE ROUTINE

```

4634 *
4635 * THIS ROUTINE PROCESSES SSSA TYPE MODULE LOADING
4636 * ASSIGN AND RELEASE
4637 *
4638
4639
4640 *
4641 * RELEASE SSSA MODULE
4642 * PRECALL XPAGE=PAGE TO RELEASE + .SCTRL
4643 * SHUT = DSP
4644 * P.KL
4645 * POST LOST X0 X1 X2 X3 A Q P0 P1 P3
4646 *
000001 4647 P.SRM SET P1 /* IN THIS ROUTINE P1 IS USED
FOR INTERFACE WITH CILDS
4648
000000 4649 XTMP SET 0
005577 4650 RLSH EQU *
005577 600012 7413 56 000 4651 STX RLSHX,.SSA,DI,P.SSA
005600 006047 4716 07 000 4652 LDP P.SRM,SD.SRM,DL
005601 600224 4503 00 000 4653 STZ .SRMWK,.P.SSA
005602 000001 3362 07 000 4654 LCO 1,DL
005603 100001 0563 12 000 4655 ASQ 1,XPAGE,P.SRM *COUNT DOWN USING PROCESS COUNT
005604 100001 7203 12 000 4656 LXL XTMP,1,XPAGE,P.SRM
005605 005620 6012 00 010 4657 TNZ RLSHE /* SOME ONE IS USING YET. SKIP RELEASE
005606 177777 2363 12 000 4658 LDQ .SSAST-.SCTRL,XPAGE,P.SRM /* IF IN LOADING STATUS, THIS
005607 005626 6012 00 010 4659 TNZ RLSH20 RELEASE MEANS ERROR IN LOADING
005610 4660 RLSH5 EQU *
005610 006042 4736 07 000 4661 LDP P.PRQ,SD.PRQ,DL
005611 300001 0113 56 000 4662 NOP D.SSAP,DI,P.PRQ /* COUNT UP AVAILABLE PAGE COUNT
005612 300002 7203 00 000 4663 LXL XTMP,D.SSAP+1,.P.PRQ /* CHECK IF ANY WAIT
005613 777743 1002 03 000 4664 CMPX XTMP,D.SSAP+1-D.PRQ,DU
005614 005622 6002 00 010 4665 TZE RLSH10 *NO ONE WAIT. SKIP ENABLE
005615 020000 2362 03 000 4666 LDQ PS.SSA,DU
005616 001402 2562 00 010 4667 ORSQ DSPEVT
005617 4668 RLSH9 EQU *
005617 000001 0112 07 000 4669 I.RLSH NOP MPFNB-MPBASE,DL /* IF MULTI-PROCESSOR
4670 * TSX PUTPRX,MPENB /*ENABLE IDLE CPU
4671 * /*LOST X0, X1, X2, P0, P3
005620 4672 RLSHF EQU *
005620 600012 2213 54 000 4673 LDX RLSHX,.SSA,DI,P.SSA
005621 000000 7102 11 000 4674 TRA ,RLSHX
005622 4675 RLSH10 EQU *
005622 001402 2342 00 010 4676 SZN DSPEVT /* IF ANY REQUEST, GO ENABLE
005623 005617 6012 00 010 4677 TNZ RLSH9 ALSO
005624 600012 2213 54 000 4678 LDX RLSHX,.SSA,DI,P.SSA
005625 000000 7102 11 000 4679 TRA ,RLSHX
005626 4680 RLSH20 EQU *
005626 777777 3162 07 000 4681 CANQ -1,DL /* IF ANY WAITING
005627 005632 6002 00 010 4682 TZE RLSH21 WAKE UP THOSE
005630 004000 2362 03 000 4683 LDQ PS.SIO,DU

```

SHARABLE SSA MODULE ROUTINE

005631	001402	2562	00	010	4684	ORSQ	DSPEVT		
		005632			4685	RLSH21	EQU	*	
005632	500000	6317	00	000	4686	EPPR	P1,,,P5	ULSSSA ROUTINE REQUIRES SRM IN P5,	DISPOPGJ
005633	006047	4756	07	000	4687	LDP5	SD.SRM,DL	SO SAVE OUR P5 AND LOAD P5 W/ SRM	DISPOPGJ
005634	006237	7032	00	010	4688	TSX	LINKX,ULSSSA	/* UNLINK FROM SSSA QUEUE	
005635	100000	6357	00	000	4689	EPPR	P5,,,P1	RESTORE P1 AND P5	DISPOPGJ
005636	006047	4716	07	000	4690	LDP	P.SRM,SD.SRM,DL		DISPOPGJ
005637	100000	4503	12	000	4691	STZ	,XPAGE,P.SRM		
005640	100001	4503	12	000	4692	STZ	1,XPAGE,P.SRM		
005641	200054	7213	00	000	4693	LXL	X1,,KLSRM,,P.KL		
005642	000003	6002	04	000	4694	TZF	3,IC	/* AND LINK THE PAGE INTO	
005643	177777	7423	11	000	4695	STX	XPAGE,-1,X1,P.SRM	EMPTY QUEUE	
005644	000002	7102	04	000	4696	TRA	2,IC		
005645	200054	7423	00	000	4697	STX	XPAGE,,KLSRM,,P.KL		
005646	100001	7413	12	000	4698	STX	X1.1,XPAGE,P.SRM		
005647	000001	6212	12	000	4699	EAX	X1.1,XPAGE		
005650	200054	4413	00	000	4700	SXL	X1,,KLSRM,,P.KL		
005651	005610	7102	00	010	4701	TRA	RLSH5		
		000005			4702	P.SRM	SET	P5	/* REASSIGN

SHARABLE SSA MODULE ROUTINE

```

4704 *
4705 *   LOAD / GET / RECOVER SSSA MODULE
4706 *   PRECAL DSP = MUST BE SHUT
4707 *   CALL   TSX LDSHX,LDSH
4708 *   POST   XPAGE = ( MOD 1K )
4709 *
005652 4710 LDSH EQU *
005652 600012 7413 56 000 4711 STX LDSHX,,SSA,ID,P.SSA
005653 4712 LDSHR1 EQU *
005653 4713 SHUT. DSP
005654 777777 2362 03 000 4714 LDQ -1,DU
005655 200056 2223 00 000 4715 LDX XPAGE,,KLSRM+2,,P,KL *SSSA QUEUE HEAD
005656 005706 6002 00 010 4716 TZE LDSH4 NO QUEUE. GO LOAD MODULE
005657 4717 LDSHR2 NULL 00000070
005657 600103 2353 00 000 4718 LDA .SI OAD+1,,P.SSA *MODULE NO.
005660 000300 5002 00 000 4719 RPL ,TZE *SEARCH QUEUE
005661 500000 2113 12 000 4720 CMK ,XPAGE,P.SRM
005662 005706 6012 00 010 4721 TNZ LDSH4 *NOT FOUND. GO LOAD IT
005663 577777 2353 12 000 4722 LDA .SSAST-.SCTRL,XPAGE,P.SRM
005664 000007 3152 03 000 4723 CANA 7,DU /* IF IN ERROR
005665 005657 6012 00 010 4724 TNZ LDSHR2 *RETRY SEARCH
005666 400000 3152 03 000 4725 CANA =0400000,DU *IF LOADING I/O
005667 005752 6002 00 010 4726 TZE LDSHE *NO
005670 577777 4463 12 000 4727 SXL KPX,,SSAST-.SCTRL,XPAGE,P.SRM *SHOW WE WAIT FOR THE I/O
005671 4728 LDSH2 EQU *
005671 4729 SHUT. PST
005672 000002 6222 00 000 4730 EAX XRQE,2 *SSAIO WAIT REQUEST
005673 4731 .CALL .MDISP,20 /* WAIT
INHIB SAVE,ON
005673 000003 6306 04 5676 EPPRO **3,$
005674 600012 4507 56 000 STPO .SSA,ID,P.SSA
005675 772127 7102 04 24 TRA 20,$
INHIB RESTORE
005676 006047 4756 07 000 4732 LDP P.SRM,SD.SRM,DL /* RECOVER
005677 006133 4726 07 000 4733 LDP P.KL,SD.KL,DL
005700 005653 7102 00 010 4734 TRA LDSHR1
005701 4735 LDSH3 EQU *
005701 006042 4736 07 000 4736 LDP P.PRQ,SD.PRQ,DL
005702 300001 2203 00 000 4737 LDX X0,D.SSAP,,P,PRQ
005703 000000 6012 11 000 4738 TNZ ,GETPGX
005704 600012 7413 56 000 4739 STX GETPGX,,SSA,ID,P.SSA
005705 006053 7102 00 010 4740 TRA CLDP3
005706 4741 LDSH4 EQU *
005706 005701 7012 00 010 4742 TSX GETPGX,LDSH3 * GET EXCLUSIVE PAGE FOR SSSA
005707 300001 0113 54 000 4743 NOP D.SSAP,DI,P,PRQ
4744 *DSP IS OPEN
005710 006173 7012 00 010 4745 TSX GETPGX,GETPG2 *GET PAGE FROM POOL UNLINK IT
005711 4746 LDSH5 EQU *
005711 400000 2352 03 000 4747 LDA =0400000,DU *SET SSSA LOADING BIT
005712 577777 7553 12 000 4748 STA .SSAST-.SCTRL,XPAGE,P.SRM

```

SHARABLE SSA MODULE ROUTINE

005713	600103	7243	00	000	4749	LXL	XMOD,,SLOAD+1,,P.SSA		
005714	500000	4443	12	000	4750	SXL	XMOD,,XPAGE,P.SRM *SET MODULE NUMBER		
005715	600224	4423	00	000	4751	SXL	XPAGE,,SRMWK,,P.SSA *SAVE PAGE ADDRESS		
005716	500001	0543	12	000	4752	AOS	1,XPAGE,P.SRM *SHOW I AM USING IT		
005717	006356	7172	00	010	4753	XED	CAPTOR		00000020
005720	000002	000000		000	4754	CAPT02	VFD	18/2,18/0	00000020
		005721			4755	SHUT.	DSP		
		000000			4756	XBACK	SFT	0	
005722	200056	7203	00	000	4757	LXL	XBACK,,KLSRM+2,,P.KL *LINK THE PAGE TO END OF		
005723	500001	7403	12	000	4758	STX	XBACK,1,XPAGE,P.SRM *SSSA QUEUE		
005724	000003	6012	04	000	4759	TNZ	3,IC		
005725	200056	7423	00	000	4760	STX	XPAGE,,KLSRM+2,,P.KL		
005726	000002	7102	04	000	4761	TRA	2,IC		
005727	577777	7423	10	000	4762	STX	XPAGE,-1,XBACK,P.SRM		
005730	000001	6202	12	000	4763	EAX	XTMP,1,XPAGE		
005731	200056	4403	00	000	4764	SXL	XTMP,,KLSRM+2,,P.KL		
		005732			4765	OPEN.	DSP		
005733	777772	6222	12	000	4766	EAX	XPAGE,-,SCTRL,XPAGE *POINT TO PAGE HEAD		
005734	005010	7012	00	010	4767	TSX	LOADX,LOADS *GO LOAD THE MODULE		
		005735			4768	SHUT.	DSP		
005736	500005	2353	12	000	4769	LDA	.SSAST,XPAGE,P.SRM *ANY WAIT FOR THIS		
005737	400000	6752	03	000	4770	ERA	=0400000,DU		
005740	500005	4503	12	000	4771	STZ	.SSAST,XPAGE,P.SRM *CLEAR CELL		
005741	005747	6002	00	010	4772	TZE	LDSH6		
005742	004000	2352	03	000	4773	LDA	PS.SIO,DU		
005743	001402	2552	00	010	4774	ORSA	DSPEVT *ENABLE THOSE WAIT		
005744	000001	0112	07	000	4775	I.LDSH	NOP MPENB-MPBASE,DL *IF MULTI-PROCESSOR		
005745	600224	7223	00	000	4776	LXL	XPAGE,,SRMWK,,P.SSA /* RECOVER		
005746	777772	6222	12	000	4777	EAX	XPAGE,-,SCTRL,XPAGE		
		005747			4778	LDSH6	EQU *		
		005747			4779	OPEN.	DSP		
005750	600012	2213	54	000	4780	LDX	LDSHX,,SSA,DI,P.SSA		
005751	000000	7102	11	000	4781	TRA	,LDSHX		
		005752			4782	LDSHF	EQU *		
005752	500001	7203	12	000	4783	LXL	XTMP,1,XPAGE,P.SRM *IS IT IN USE		
005753	005756	6012	00	010	4784	TNZ	LDSHI *YES		
005754	006042	4736	07	000	4785	LDP	P.PRQ,SD,PRQ,DL		
005755	300001	0113	54	000	4786	NOP	D.SSAP,DI,P.PRQ /* COUNT DOWN AVAIL PAGE COUNT		
		005756			4787	LDSHI	EQU *		
005756	600224	4423	00	000	4788	SXL	XPAGE,,SRMWK,,P.SSA		
005757	500001	0543	12	000	4789	AOS	1,XPAGE,P.SRM *COUNT UP NO. OF PROCESS		
005760	777772	6222	12	000	4790	EAX	XPAGE,-,SCTRL,XPAGE		
		005761			4791	OPEN.	DSP		
005762	006356	7172	00	010	4792	XED	CAPTOR		00000020
005763	000001	000000		000	4793	CAPT01	VFD	18/1,18/0	00000020
005764	600012	2213	54	000	4794	LDX	LDSHX,,SSA,DI,P.SSA		
005765	000000	7102	11	000	4795	TRA	,LDSHX		

BASIC ROUTINES

					4797 *						
					4798 *	COPY PTW FROM SRM TO SSM. SSA MODULE IS MAPPED TO THE					
					4799 *	PROCESS SPECIFIC PAGE					
					4800 *	.SNTRY IN .SLOAD+3 SHOW WHAT MODULE IS MAPPED FOR USE					
					4801 *	PRFCALL X2-PAGE ADDRESS IN SRM OFFSET					
					4802 *	CALLING TSX CPYSAX,CPYSSA					
					4803 *	POST LOST X0,X1,A,Q,P0					
					4804 *						
			000000		4805 P.PT	SET	PO				
			005766		4806 CPYSSA	EQU	*				
	005766	006133	4726 07 000		4807	LDP	P.KL,SD,KL,DL				
	005767	006010	4706 07 000		4808	LDP	P.PT,SD,PT1,DL				
	005770	200061	6353 20 000		4809	EAA	.KLSRP,*,P.KL	*GET PTW INDEX	X2 IS USED HERE		
	005771	000012	7712 00 000		4810	ARL	10	*PAGE NUMBER			
	005772	000000	6202 01 000		4811	EAX	X0,,AU				00000020
	005773	000000	2363 10 000		4812	LDO	.X0,P.PT	GET PTW			00000020
	005774	500011	2353 12 000		4813	LDA	.SENTR,XPAGE,P.SRM				
	005775	600105	7553 00 000		4814	STA	.SLOAD+3,,P.SSA	*SHOW A MODULE IS IN SSM			
	005776	500012	3753 12 000		4815	ANA	.SMDD,XPAGE,P.SRM				
	005777	004000	3152 03 000		4816	CANA	SN.PRV,DU	*PRIVITY BIT IN .SNTRY			
	006000	000002	6012 04 000		4817	TNZ	2,IC	*YES ON			
	006001	000010	6762 07 000		4818	ERQ	=010,DL	*NOT TURN OFF HOUSE KEEPING BIT			
			006002		4819 CPYSSC	NULL					00000020
	006002	200062	6203 20 000		4820	EAX0	.KLSRP+1,*,P.KL	LOCATE EXCLUSIVE SSA PAGE FOR THIS			00000020
	006003	000000	7563 10 000		4821	STQ	0,X0,P0	PROCESS AND STORE PTW			00000020
			006004		4822	.DCAMP	P.KL	DEFERRED CLEAR ASS.V-MEM			00000020
						INHIB	SAVE,ON				
	006004	200147	7503 00 000		STC2	.KLCAM+0,,P.KL					
	006005	200150	7503 00 000		STC2	.KLCAM+1,,P.KL					
	006006	200151	7503 00 000		STC2	.KLCAM+2,,P.KL					
	006007	200152	7503 00 000		STC2	.KLCAM+3,,P.KL					
	006010	000000	5326 00 000		CAMP	0					
	006011	200147	4503 17 000		ST7	.KLCAM,7,P.KL					
					INHIB	RESTORE					
	006012	000000	7102 13 000	4823	TRA	.CPYSAX					

BASIC ROUTINES

```

4825 *
4826 * GET A PAGE IN COUNT OF D.SSA REAL PAGE WILL NOT BE GOTTEN
4827 * PRECAL DSP MUST BE SHUT
4828 * CALL TSX GETPGX,GETPGI
4829 * RETURN 1 - AVAIL PAGE BY XPAGE (+.SCTRL), DSP OPEN
4830 * RETURN 2 - SEARCH IN QUEUE, DSP SHUT
4831 * POST AVAIL P.SRM
4832 *
006013 4833 GETPG1 EQU *
006013 006042 4736 07 000 4834 LDP P,PRQ,SD,PRQ,DL
006014 600154 2343 00 000 4835 SZN .SPUSH,,P.SSA *ANY SSA PUSHED DOWN TO DISK
006015 006022 6012 00 010 4836 TNZ CLDPG *FORCE TO PUSH DOWN SSA
006016 4837 GPO EQU *
006016 300001 2203 00 000 4838 LDX X0,D.SSAP,,P.PRQ /* ANY SSA PAGE
006017 006022 6002 00 010 4839 TZE CLDPG *NO PAGE LEFT MANAGE IT
006020 4840 GPI EQU *
006020 300001 0113 54 000 4841 NOP D.SSAP,DI,P.PRQ /* COUNT DOWN LEFT PAGE
4842 * * * * *
4843 * SEARCH FOR THE REUSABLE MODULE IN AVAIL QUEUE
006021 000001 7102 11 000 4844 TRA I,GETPGX
006022 4845 CLDPG EQU *
4846 NO PAGE TO USE IN POOL
006022 600012 7413 56 000 4847 STX GETPGX,,SSA,DI,P.SSA
006023 000001 1062 03 000 4848 CMPX KPX,,PNPOP,DU *IS THIS GEPOP
006024 006033 6012 00 010 4849 TNZ CLDP1 *NOT POP
006025 004550 2222 00 010 4850 LDX X2,SECRET *SECRET PAGE FOR POP LEFT
006026 006033 6002 00 010 4851 TZE CLDP1 *NO. POP HAS ONE AT LEAST
006027 004550 4502 00 010 4852 STZ SECRET
006030 4853 OPEN. DSP
006031 600012 2213 54 000 4854 LDX GETPGX,,SSA,DI,P.SSA
006032 000000 7102 11 000 4855 TRA ,GETPGX *USE THIS PAGE FOR POP
4856 * *SECRET HAS POINTER .SCTRL
006033 4857 CLDP1 EQU *
006033 4858 OPEN. DSP
006034 600224 2223 00 000 4859 LDX X2,,SRMWK,,P.SSA /* CHECK TRANSIENT PAGE
006035 006042 6012 00 010 4860 TNZ CLDPIE YES WE HAVE. MUST BE IN EXIT
006036 005135 7012 00 010 4861 TSX PUSHX,PUSH *PUSH DOWN INTO DISK FILE
006037 006045 7102 00 010 4862 TRA CLDP2 *NO PAGE CAN BE PUSHED DOWN
006040 600012 2213 54 000 4863 LDX GETPGX,,SSA,DI,P.SSA
006041 000000 7102 11 000 4864 TRA ,GETPGX *GOTTEN ONE SO GO LOAD
4865 *X2 HAS PTR .SCTRL OF THE PAGE
006042 4866 CLDPIE EQU *
006042 600224 4503 00 000 4867 STZ .SRMWK,,P.SSA
006043 4868 CLDPE EQU *
006043 600012 2213 54 000 4869 LDX GETPGX,,SSA,DI,P.SSA
006044 000000 7102 11 000 4870 TRA ,GETPGX
006045 4871 CLDP2 EQU *
006045 4872 SHUT. DSP
006046 006042 4736 07 000 4873 LDP P,PRQ,SD,PRQ,DL
006047 300001 2203 00 000 4874 LDX X0,D.SSAP,,P.PRQ /* CHECK AGAIN BEFORE WAIT
    
```

BASIC ROUTINES

006050	006053	6002 00	010	4875	TZE	CLDP3	*NO. MUST WAIT	
006051	600012	2213 54	000	4876	LDX	GETPGX,,SSA,DI,P.SSA		
006052	006016	7102 00	010	4877	TRA	GPO		
006053	000001	2362 03	000	4879	LDQ	1,DU	COUNT TIMES WE CONSIDERED BORROW	DISP00Z9
006054	006171	0562 00	010	4880	ASQ	SSAVG	IN UPPER, ACTUAL IN LOWER	DISP00Z9
006055	006133	4746 07	000	4881	LDP4	SD,KL,DL		DISP00Z9
006056	400162	2343 00	000	4882	SZN	.KLMMG,,P4	IF LONG MEMORY MANG'T GATE IS SHUT,	DISP00Z9
006057	006124	6012 00	010	4883	TNZ	SSAVC	DON'T TRY TO BORROW (MAYBE DEADLOCK)	DISP00Z9
006060	006166	2362 00	010	4884	LDQ	SSAV	WE WILL TRY TO BORROW A PAGE FOR SRM	
006061	006010	4746 07	000	4885	LDP4	SD,PT1,DL		
006062	400000	2343 06	000	4886	SSAVA	SZN	SEARCH FOR EXTRA PAGE NOT ASGN'D	
006063	006070	6002 00	010	4887	TZE	SSAVB	* GOT ONE	
006064	006170	0362 00	010	4888	ADLQ	SSAVAD		
006065	006167	1162 00	010	4889	CMPQ	SSAVM		
006066	006062	6022 00	010	4890	TNC	SSAVA		
006067	006124	7102 00	010	4891	TRA	SSAVC		
006070	400000	7503 06	000	4892	SSAVB	STC2	FOUND A HOLE, RESERVE IT	
006072	000000	6222 02	000	4894	EAX2	0,QU	HOLD PAGE ADDRESS IN X2	
006073	000022	7362 00	000	4895	QLS	18	PUT PTW OFFSET IN QU	
006074	000001	2762 07	000	4896	ORQ	1,DL	AND WS# = 1 IN QL	
006075	600220	7403 00	000	4897	.CALLX	.MDMM1,4	ASK TO BORROW A PAGE	
006076	006004713400	000	000	4899	INHIB	SAVE,ON		
006077	000000606122	000	000	4900	STX0	.STMPX,,P.SSA		
006100	006123	7102 00	010	4898	ICLIMB	SD.SVX,,.MDMM1*64+4,EAX0		
006102	200054	2343 00	000	4900	VFD	18/.MDMM1*64+4,09/713,1/1,1/0,1/0,6/M.		
006103	006115	6012 00	010	4901	VFD	170,970,870,17.N,17.0,270,270,127SD.SVX		
006104	006171	0542 00	010	4902	INHIB	RESTORE		
006105	500000	4503 12	000	4903	TRA	SSAVF	* REQUEST DENIED	00000020
006106	200054	7423 00	000	4904	SHUT.	DSP		
006107	000001	6212 12	000	4905	SZN	.KLSRM,,P.KL	SEE IF ANOTHER PAGE APPEARED	
006110	200054	4413 00	000	4906	TNZ	SSAVE	* WE DONT NEED THIS PAGE NOW	
006111	300001	0113 56	000	4907	AOS	SSAVG	COUNT OUR ACQUISITIONS	
006112	006356	7172 00	010	4908	ST7	0,2,P.SRM	ZERO POINTER WIYHIN PAGE ASGN'D	
006113	000006000000	000	000	4909	STX2	.KLSRM,,P.KL	PUT OUR BORROWED PAGE IN AVAIL	
006114	006136	7102 00	010	4910	EAX1	1,2	CHAIN AND ADD TO COUNT	
006115	000000600000	000	000	4911	SXL1	.KLSRM,,P.KL		
006116	006136	7102 00	010	4912	NOP	D.SSAP,ID,P.PRQ		
006117	006005713400	000	000	4913	XED	CAPTOR		00000020
006120	000000606122	000	000	4913	VFD	1876,1870		00000020
006116	600220	7403 00	000	4913	TRA	SSAVD	NOW GO USE IT	
006117	006005713400	000	000	4913	SSAVF	NULL		
006118	006005713400	000	000	4913	OPEN.	DSP		
006119	006005713400	000	000	4913	.CALLX	.MDMM1,5	RELEASE THE PAGE WE DONT NEED	
006120	006005713400	000	000	4913	INHIB	SAVE,ON		
006121	006005713400	000	000	4913	STX0	.STMPX,,P.SSA		
006122	006005713400	000	000	4913	ICLIMB	SD.SVX,,.MDMM1*64+5,EAX0		
006123	006005713400	000	000	4913	VFD	18/.MDMM1*64+5,09/713,1/1,1/0,1/0,6/M.		
006124	006005713400	000	000	4913	VFD	170,970,870,17.N,17.0,270,270,127SD.SVX		

BASIC ROUTINES

						INHIB	RESTORE	
			006121	4914		SHUT.	DSP	00000020
006122	006136	7102 00 010	4915			TRA	SSAVD	
			006123	4916	SSAVF	NULL		00000020
			006123	4917		SHUT.	DSP	00000020
			006124	4918	SSAVC	NULL		
006124	006356	7172 00 010	4919			XED	CAPTOR	00000020
006125	000005000000	000	4920	CAPT05		VFD	18/5,18/0	00000020
			006126	4921		SHUT.	PST	
006127	000001	6222 00 000	4922			EAX	XRQE,1	*SSA PAGE WAIT REQUEST
			006130	4923		.CALL	.MDISP,20	
						INHIB	SAVE,ON	
006130	000003	6306 04 6133				EPPRO	*+3,\$	
006131	600012	4507 56 000				STPO	.SSA,ID,P.SSA	
006132	771672	7102 04 24				TRA	20,\$	
						INHIB	RESTORE	
006133	006047	4756 07 000	4924			LDP	P.SRM,SD.SRM,DL	/* RECOVER
006134	006133	4726 07 000	4925			LDP	P.KL,SD,KL,DL	
			006135	4926		SHUT.	DSP	
			006136	4927	SSAVD	NULL		
006136	600012	2213 54 000	4928			LDX	GETPGX,.SSA,DI,P.SSA	
006137	777777	7102 11 000	4929			TRA	=I,GETPGX	*RETRY TO GET A PAGE
			4930	*		ROUTINE	TO INITIALIZE FOR PAGE BORROW FOR SRM OVERFLOW	
006140	006165	2352 00 010	4931	SSAVIT		LDA	SSAVII	RESTORE ROUTINR THAT CALLED
006141	004372	7552 00 010	4932			STA	CLSSA+1	
006142	006166	2342 00 010	4933			SZN	SSAV	
006143	004372	6002 00 010	4934			TZF	CLSSA+1	RETURN IF NO PAGES TO BORROW
006144	200061	2353 00 000	4935			LDA	.KLSRP,.P.KL	ORIGIN OF SRM IN WS#1
006145	006166	0352 00 010	4936			ADLA	SSAV	PLUS INIT. BORROW PAGE OFFSET
006146	000034	7712 00 000	4937			ARL	10+18	GIVES PAGE TABLE WORD NUMBER
006147	006166	2552 00 010	4938			ORSA	SSAV	OF FIRST PAGE TO BORROW
006150	006166	2352 00 010	4939			LDA	SSAV	MUST NOW RELEASE THE LAST HALF
006151	000001	2362 03 000	4940			LDO	1,DU	OF THE ASSIGNED PAGES
006152	000022	7732 00 000	4941			LRL	18	
006153	000000	6232 05 000	4942			EAX3	0,AL	
006154	006010	4746 07 000	4943			LDP4	SD.PT1,DL	
			006155	4944	SSAVIA	.CALLX	.MDMM1,5	
						INHIB	SAVE,ON	
006155	600220	7403 00 000				STX0	.STMPX,.P.SSA	
			006156			ICLIMB	SD.SVX,.MDMM1*64+5,EAX0	
006156	006005713400	000				VFD	18/.MDMM1*64+5,09/713,1/1,1/0,1/0,6/M.	
006157	000000606122	000				VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/SD.SVX	
						INHIB	RESTORE	
006160	000001	0362 03 000	4945			ADLQ	1,DU	
006161	006170	0232 00 010	4946			ADLX3	SSAVAD	
006162	006167	1032 00 010	4947			CMPX3	SSAVM	
006163	006155	6022 00 010	4948			TNC	SSAVIA	
006164	004372	7102 00 010	4949			TRA	CLSSA+1	RETURN TO NORMAL PROCESSING
006165	600012	2353 00 000	4950	SSAVII		LDA	.SSA,.P.SSA	
			4951				CONTROL TABLE TO BORROW PAGES	

BASIC ROUTINES

006166	000000	000000	000	4952	SSAV	ZERO	**,**	ADDR OF FIRST PAGE + 6, FIRST PAGE #
006167	000000	000000	000	4953	SSAVM	ZERO	**,0	MAXIMUM ADDRESS
006170	002000	000001	000	4954	SSAVAD	ZERO	1024,1	ADDER FOR NEXT PAGE
006171	000000	000000	000	4955	SSAVG	ZERO	0,**	COUNT OF GETS
006172	000000	000000	000	4956	SSAVR	ZERO	0,**	COUNT OF RELEASES
				4957	*****			
				4958	*			GET PAGE FOR IN EMPTY PAGE QUEUE
				4959	*			PRECAL DSP MUST BE SHUT
				4960	*			CALL TSX GETPGX,GETPG2
				4961	*			POST XPAGE = GOTTEN PAGE (+.SCTRL)
				4962	*			
		006173		4963	GETPG2	EQU	*	
006173	600012	7413 56	000	4964	STX			GETPGX,SSA,ID,P.SSA
006174	200054	2223 00	000	4965	LDX			X2,.,KLSRM,.,P.KL *GET EMPTY QUFUE
006175	006206	6002 00	010	4966	TZF			GP4 *NO EMPTY QUEUE GO TO AVAIL QUEUE
006176	500000	2203 12	000	4967	LDX			X0,.,X2,P.SRM *NEXT PAGE
006177	200054	7403 00	000	4968	STX			X0,.,KLSRM,.,P.KL
006200	006204	6002 00	010	4969	TZF			GP3 *IF NO MORE PAGE IN QUEUE
006201	000000	6212 00	000	4970	EAX			X1,0
006202	500001	7413 10	000	4971	STX			X1,1,X0,P.SRM *EARTH BACK PTR AT NEXT PAGE
006203	006231	7102 00	010	4972	TRA			GP5
		006204		4973	GP3	EQU		*
006204	200054	4503 00	000	4974	STZ			.KI SRM,.,P.KL *CLEAR POINTER TO SHOW NO QYFUE
006205	006231	7102 00	010	4975	TRA			GP5
		006206		4976	GP4	EQU		*
006206	200055	2223 00	000	4977	LDX			X2,.,KLSRM+1,.,P.KL *GET AVAIL QUEUE HEAD
006207	006220	6002 00	010	4978	TZE			GP6 *NO. GO SSSA QUEUE SEARCH
006210	500000	2203 12	000	4979	LDX			X0,.,X2,P.SRM *NEXT PAGE
006211	200055	7403 00	000	4980	STX			X0,.,KLSRM+1,.,P.KL
006212	006216	6002 00	010	4981	TZE			GP4,5
006213	000000	6212 00	000	4982	EAX			X1,0
006214	500001	7413 10	000	4983	STX			X1,1,X0,P.SRM *TERMINATE BACK PTR CHAIN
006215	006231	7102 00	010	4984	TRA			GP5
		006216		4985	GP4.5	EQU		*
006216	200055	4503 00	000	4986	CLD4.5	STZ		.KI SRM+1,.,P.KL *SHOW NO QUEUF
006217	006231	7102 00	010	4987	TRA			GP5
		006220		4988	GP6	EQU		*
006220	200056	2223 00	000	4989	LDX			X2,.,KLSRM+2,.,P.KL *GET SSA QUEUF HEAD
006221	000002	6012 04	000	4990	TNZ			2,IC
		006222		4991	ZOPS			
		006223		4992	GP6A	EQU		*
006223	500001	7203 12	000	4993	LXL			X0,1,X2,P.SRM *IS THIS PAGE IN USE
006224	006230	6002 00	010	4994	TZE			GP6B *NO. AVAILABLE
006225	500000	2223 12	000	4995	LDX			X2,.,X2,P.SRM *TRY NEXT
006226	006223	6012 00	010	4996	TNZ			GP6A
		006227		4997	ZOPS			
		006230		4998	GP6B	EQU		*
006230	006237	7032 00	010	4999	TSX			LINKX,ULSSSA /* UNLINK FROM SSSA 0
		006231		5000	GP5	EQU		*
006231	777772	6212 12	000	5001	EAX			X1,.,SDCW=,SCTRL,XPAGE

BASIC ROUTINES

006232	040200	5202	01	000	5002	RPT	.SRASE,1	
006233	500000	4503	11	000	5003	STZ	,X1,P.SRM	IN SSA CONTROLL
		006234			5004	OPEN.	DSP	
006235	600012	2213	54	000	5005	LDX	GETPGX,,SSA,DI,P.SSA	
006236	000000	7102	11	000	5006	TRA	,GETPGX	
					5007	*		
					5008	*	ROUTINE TO UNLINK FROM SSSA QUEUE	
					5009	*	PRECAL	XPAGE = PAGE +.SCTRL TO REMOVE
					5010	*		DSP MUST BE SHUT
					5011	*	CALL	TSX LINKX,ULSSSA
					5012	*	POST	LOST X0 X1
					5013	*		
		006237			5014		ULSSSA EQU	*
006237	500000	2203	12	000	5015	LDX	X0,,X2,P.SRM	*NEXT PAGE IN QUEUE
006240	500001	2213	12	000	5016	LDX	X1,1,X2,P.SRM	*FRONT PAGE
006241	000003	6002	04	000	5017	TZE	3,IC	
006242	577777	7403	11	000	5018	STX	X0,-1,X1,P.SRM	*STORE NEXT PAGE PTR.
006243	000002	7102	04	000	5019	TRA	2,IC	
006244	200056	7403	00	000	5020	STX	X0,,KLSRM+2,,P.KL	*QUEUE HEAD ADDRESS
006245	000000	6202	10	000	5021	EAX	X0,,X0	
006246	000003	6002	04	000	5022	TZE	3,IC	
006247	500001	7413	10	000	5023	STX	X1,1,X0,P.SRM	
006250	000002	7102	04	000	5024	TRA	2,IC	
006251	200056	4413	00	000	5025	SXL	X1,,KLSRM+2,,P.KL	
006252	000000	7102	13	000	5026	TRA	,LINKX	

BASIC ROUTINES

					5028 *				
					5029 *				
					5030 *	ROUTINE TO LINK A PAGE INTO .SSPRQ QUEUE			
					5031 *	CALLING TSX LINKX, LINK			
					5032 *	PRECAL X2 = ADDRESS OF THE PAGE + .SCTRI			
					5033 *	POST X2 = PAGE HEAD ADDRESS			
					5034 *	LOST = X0, X1			
			006253		5035 LINK	EQU *			
	006253	600172	1023 00 000		5036	CMPX X2, .SSPRQ, .P.SSA	*CHECK LINK SAME PAGE		
	006254	006265	6002 00 010		5037	TZE LINK1	*YES, SKIP		
	006255	000001	6212 12 000		5038	EAX X1, 1, X2	*BACK PTR ADDRESS		
	006256	600172	2203 00 000		5039	LDX X0, .SSPRQ, .P.SSA	*LINK TO .SSPRQ		
	006257	500000	7403 12 000		5040	STX X0, X2, P.SRM			
	006260	000003	6002 04 000		5041	TZE 3, IC			
	006261	500001	7413 10 000		5042	STX X1, 1, X0, P.SRM			
	006262	000002	7102 04 000		5043	TRA 2, IC			
	006263	600172	4413 00 000		5044	SXL X1, .SSPRQ, .P.SSA			
	006264	600172	7423 00 000		5045	STX X2, .SSPRQ, .P.SSA			
			006265		5046 LINK1	EQU *			
	006265	000001	6352 00 000		5047	EAA 1			
	006266	600102	0553 00 000		5048	ASA .SI OAD, .P.SSA	*COUNT UP USING SSA PAGE NO.		
	006267	000000	6212 00 000		5049	EAX X1, 0	/* RELEASE TRANSIENT PAGE		
	006270	600224	7413 00 000		5050	STX X1, .SRMWK, .P.SSA			
	006271	500001	4503 12 000		5051	STZ 1, X2, P.SRM			PTCH5310
	006272	500001	4463 12 000		5052	SXL KPX, 1, X2, P.SRM	*SHOW WE HAVE THIS PAGE		
	006273	777772	6222 12 000		5053	EAX X2, -.SCTRL, X2	*POINT TO PAGE HEAD		
	006274	000000	7102 13 000		5054	TRA .LINKX			
					5055 *				
					5056 *	THIS ROUTINE SET IN SSA LOADING STATUS AND CHECK LINKS I/O			
					5057 *	ON THE SSA PAGE			
					5058 *	CALL TSX SETLDX, SETLD			
					5059 *	POST P.SRM, OTHERS ARE LOST			
					5060 *				
			006275		5061 SETLD	EQU *			
			006275		5062	SHUT. DSP			
			006276		5063 SETLD1	EQU *			
	006276	600017	2353 00 000		5064	LDA .STATE, .P.SSA	/* SET .STATE WORD TO SHOW		
	006277	020000	2752 03 000		5065	ORA .TLOAD, DU	SSA LOADING STATUS		
	006300	600017	7553 00 000		5066	STA .STATE, .P.SSA			
			006301		5067 SETLD2	EQU *			
	006301	000001	3152 07 000		5068	CANA .TLNKS, DL	/* CHECK I/O ON SSA PAGE		
	006302	006305	6012 00 010		5069	TNZ SETLD3	YES, THERE IS, GO WAIT		
			006303		5070	OPEN. DSP			
	006304	000000	7102 13 000		5071	TRA .SETLDX			
			006305		5072 SETLD3	EQU *			
			006305		5073	OPEN. DSP			
	006306	600012	7433 56 000		5074	STX SETLDX, .SSA, ID, P.SSA			
			006307		5075	.CALL .MDISP, 4	/* RELINQUISH AND WAIT		
						INHIB SAVE, ON			
	006307	000003	6306 04 6312		EPPRO	*+3, \$			

BASIC ROUTINES

006310	600012	4507	56	000		STPO	.SSA, ID, P.SSA	
006311	771473	7102	04		4	TRA	4, S	
						INHIB	RESTORE	
006312	600012	2233	54	000	5076	LDX	SETLDX, .SSA, DI, P.SSA	
006313	006047	4756	07	000	5077	LDP	P.SRM, SD.SRM, DL	
006314	006133	4726	07	000	5078	LDP	P.KL, SD.KL, DL	
		006315			5079	SHUT.	DSP	
006316	600017	2353	00	000	5080	LDA	.STATE, .P.SSA	/* CHECK AGAIN
006317	006301	7102	00	010	5081	TRA	SETLD2	
					5082 *			
					5083 *	RESET	SSA LOADING STATUS	
					5084 *	CALL	TSX SETLDX, RETLD	
					5085 *	POST	LOST - X0 X1 A	
					5086 *			
		006320			5087	RETLD	EQU	*
		006320			5088	SHUT.	DSP	
006321	020000	2352	03	000	5089	LDA	.TI OAD, DU	
006322	600017	6553	00	000	5090	ERSA	.STATE, .P.SSA	/* RESET
		006323			5091	OPEN.	DSP	
006324	000000	7102	13	000	5092	TRA	, SETLDX	
					5093 *			00000020
					5094 *	SET	CURRENT TIME TO .SPWRK (1 MICRO SECOND)	00000020
					5095 *	CALLING	SEQUENCE ... TSX OVHX, OVHW .. W/ SSA SET	00000020
					5096 *			00000020
		006325			5097	OVHW	NULL	00000020
006325	006063	4706	07	000	5098	LDP	P.RMS, SD.RMS, DL	00000020
006326	000040	4133	00	000	5099	RSCR	SCUCLK, .P.RMS	00000020
006327	600274	7563	00	000	5100	STQ	.SPWRK, .P.SSA	00000020
006330	000000	7102	12	000	5101	TRA	.OVHX	RETURN
					5102 *			00000020
					5103 *	SET	SLAVE PROCESS PROCESSOR TIME TO .SPTIM (16 MS)	00000020
					5104 *	CALLING	SEQUENCE ... TSX OVHX, OVHT .. W/ SSA, CR SET	00000020
					5105 *			00000020
		006331			5106	OVHT	NULL	00000020
006331	700072	2363	17	000	5107	LDA	.CRCK, PN, P.CR	00000020
006332	600274	1363	00	000	5108	SBLD	.SPWRK, .P.SSA	00000020
006333	000002	6052	04	000	5109	TPL	2, IC	00000020
006334	000000	5332	00	000	5110	NEGL		00000020
006335	000004	7722	00	000	5111	QRL	4	00000020
006336	600275	0563	00	000	5112	ASQ	.SPTIM, .P.SSA	00000020
006337	000000	7102	12	000	5113	TRA	.OVHX	RETURN
					5114	LIT		00000020

CAPTURE SSA OVERLAY USAGE PATTERNS

						5116	ENTRY POINT 25		00000020
						5117	CALLED FROM P0Q3 FOR DATA FOR CONSOLE MESSAGE		00000020
006340						5118	CAPT	NULL	00000020
006340	006166	2352	00	010	5119	LDA	SSAV	00000020	
006341	000034	7712	00	000	5120	ARL	10+18	00000020	
006342	200000	7553	00	000	5121	STA	0,,P2	NUMBER OFF PAGES IN SRM	
006343	006460	2352	00	010	5122	LDA	CAPTCT+1	00000020	
006344	006462	0352	00	010	5123	ADLA	CAPTCT+3	00000020	
006345	200001	7553	00	000	5124	STA	1,,P2	NUMBER OF FINDS	
006346	006463	2352	00	010	5125	LDA	CAPTCT+4	00000020	
006347	006467	0352	00	010	5126	ADLA	CAPTCT+8	00000020	
006350	200002	7553	00	000	5127	STA	2,,P2	NUMBER OF LOADS	
006351	006514	2352	00	010	5128	LDA	CAPTNE	00000020	
006352	200003	7553	00	000	5129	STA	3,,P2	NUMBER OF RELOADS	
006353						5130	.EXIT		00000020
							INHIB	SAVE,ON	
006353	000002	6306	04	6355		EPPRO	*+2,\$		
006354	700006	7103	00	000		TRA	.CREXT,,P.CR		
006355	000000	000000	000			ZERO	.RG,		
							INHIB	RESTORE	
006356						5131	CAPTORENULL		00000020
000024						5132	CAPNPG SET		00000020
006356	006431	5542	17	010	5133	STC1	CAPLOC,7	00000020	
006357	006360	7102	00	010	5134	TRA	CAPTUR	00000020	
006360						5135	CAPTUR NULL		00000020
006360	006435	7572	37	010	5136	STAQ	CAPSAQ,7*	00000020	
006361	006431	2362	17	010	5137	LDQ	CAPLOC,7	00000020	
006362	000000	2352	02	000	5138	LDA	0,QU	00000020	
006363	006457	0542	01	010	5139	AOS	CAPTCT,AU	00000020	
006364	000001	0362	03	000	5140	ADLQ	1,DU	00000020	
006365	006431	7562	17	010	5141	STQ	CAPLOC,7	00000020	
006366	006456	0542	00	010	5142	AOS	CAPCNT	00000020	
006367	777777	3752	03	000	5143	ANA	-1,DU	00000020	
006370	000007	1152	03	000	5144	CMPA	7,DU	00000020	
006371	006400	6012	00	010	5145	TNZ	CAPXAD	00000020	
006372	000000	6352	12	000	5146	EAA	0,2	00000020	
006373	000034	7712	00	000	5147	ARL	28	00000020	
006374	000024	1152	07	000	5148	CMPA	CAPNPG,DL	00000020	
006375	006427	6032	00	010	5149	TRC	CAPRET	00000020	
006376	006470	4502	05	010	5150	STZ	CAPLOD,AL	00000020	
006377	006427	7102	00	010	5151	TRA	CAPRET	00000020	
006400						5152	CAPXAD NULL		00000020
006400	000004	1152	03	000	5153	CMPA	4,DU	00000020	
006401	006427	6012	00	010	5154	TNZ	CAPRET	00000020	
006402	000000	6352	12	000	5155	EAA	0,2	00000020	
006403	000034	7712	00	000	5156	ARL	28	00000020	
006404	000024	1152	07	000	5157	CMPA	CAPNPG,DL	00000020	
006405	006427	6032	00	010	5158	TRC	CAPRET	00000020	
006406	600217	2363	00	000	5159	LDQ	.STMPW,,P.SSA	00000020	
006407	000777	3762	03	000	5160	ANQ	=0777,DU	00000020	

CAPTURE SSA OVERLAY USAGE PATTERNS

006410	006452	7402	17	010	5161	STX0	CAPXAB,7	00000020
006411	000024	2202	03	000	5162	LDX0	CAPNPG,DU	00000020
006412	006470	1162	10	010	5163	CAPXAA CMP0	CAPLOD,0	00000020
006413	006421	6002	00	010	5164	TZE	CAPXAC	00000020
006414	000001	1202	03	000	5165	SRLX0	1,DU	00000020
006415	006412	6052	00	010	5166	TPL	CAPXAA	00000020
006416	006470	7562	05	010	5167	ST0	CAPLOD,AL	00000020
006417	006452	2202	17	010	5168	LDX0	CAPXAB,7	00000020
006420	006427	7102	00	010	5169	TRA	CAPRET	00000020
		006421			5170	CAPXAC	NULL	00000020
006421	002001	0542	02	000	5171	I.CAPA AOS	MCTBL3-MCBASE,QU (NOP IF NO MOD-CT-OPT)	00000020
006422	000000	6202	02	000	5172	EAX0	0,QU	00000020
006423	002001	7402	02	000	5173	I.CAPB STX0	MCTBL3-MCBASE,QU (NOP IF NO MOD-CT-OPT)	00000020
006424	006514	0542	00	010	5174	AOS	CAPTNE	00000020
006425	006470	7562	05	010	5175	ST0	CAPLOD,AL	00000020
006426	006452	2202	17	010	5176	LDX0	CAPXAB,7	00000020
		006427			5177	CAPRET	NULL	00000020
006427	006435	2372	37	010	5178	LDAQ	CAPSAQ,7*	00000020
006430	006431	6302	17	010	5179	RET	CAPLOC,7	00000020
		006431			5180	CAPLOC BSS	4	00000020
006435	006442	000000		010	5181	CAPSAQ ZERO	CAPSXQ,0	00000020
006436	006444	000000		010	5182	ZERO	CAPSXQ+2,0	00000020
006437	006446	000000		010	5183	ZERO	CAPSXQ+4,0	00000020
006440	006450	000000		010	5184	ZERO	CAPSXQ+6,0	00000020
006441	000000011207			000				
		006442			5185	CAPSXQBSS	8	00000020
		006452			5186	CAPXAB BSS	4	00000020
006456	000000	000000		000	5187	CAPCNT ZERO	0,**	00000020
					5188		TOTAL COUNT OF EVENTS	00000020
							COUNT OF VARIOUS EVENT TYPES	00000020
006457	000000	000000		000	5189	CAPTCT ZERO	0,**	00000020
006460	000000	000000		000	5190	ZERO	0,**	00000020
006461	000000	000000		000	5191	ZFR0	0,**	00000020
006462	000000	000000		000	5192	ZERO	0,**	00000020
006463	000000	000000		000	5193	ZERO	0,**	00000020
006464	000000	000000		000	5194	ZERO	0,**	00000020
006465	000000	000000		000	5195	ZERO	0,**	00000020
006466	000000	000000		000	5196	ZFR0	0,**	00000020
006467	000000	000000		000	5197	ZFR0	0,**	00000020
		006470			5198	CAPLOD BSS	CAPNPG	00000020
006514	000000	000000		000	5199	CAPTNE ZERO	0,0	00000020
							SHOW MODULE IN EACH PAGE	00000020
							COUNT OF MODS LOADED AND ALSO PRESENT	00000020

START OF OPTION ROUTINES

5201 INHIB ON

5202 *

5203 * HERE LAYS DISPATCHER OPTION LIST AND PATCH AREA FOR EXTENSION

5204 * THIS PATCH AREA WILL BE REMOVED WHEN NO PATCH EXIST AND NO

5205 * OPTION ROUTINE IS SELECTED.

5206 *

5207 *

5208 * OPTION DECLARE MACRO

5209 *

5210 .OPTS. MACRO

5211 #1BASE BCI 1,#2

*START OF OPTION

5212 ENDM .OPTS.

5213

5214 .OPTE. MACRO

5215 LIT

5216 #1END EQU *

*END OF OPTION

5217 #1SIZE EQU #1END-#1BASE

*SIZE OF OPTION

5218 .NOPT. SET .NOPT.+1

*COUNT UP NO. OF OPTIONS

5219 ENDM .OPTE.

5220

000000

5221 .NOPT. SET 0

*COUNT OF OPTIONS

006515

5222 PTCH2 EQU *

5223 INHIB SAVE,OFF

5224 ***** PATCH LIST *****

5225 COMMENT CODING

ISSUED

006515

5226 LOC. CONTENTS 1 8 16

MMDDYY

5227 DUP 2,32

5228

006515 000000 000000 000

5229 OCTAL / / / /

5229

006516 000000 000000 000

5229 OCTAL / / / /

5229

006517 000000 000000 000

5229 OCTAL / / / /

5229

006520 000000 000000 000

5229 OCTAL / / / /

5229

006521 000000 000000 000

5229 OCTAL / / / /

5229

006522 000000 000000 000

5229 OCTAL / / / /

5229

006523 000000 000000 000

5229 OCTAL / / / /

5229

006524 000000 000000 000

5229 OCTAL / / / /

5229

006525 000000 000000 000

5229 OCTAL / / / /

5229

006526 000000 000000 000

5229 OCTAL / / / /

5229

006527 000000 000000 000

5229 OCTAL / / / /

5229

START OF OPTION ROUTINES

006530	000000	000000	000		OCTAL	/	/	/	/
				5229					
006531	000000	000000	000		OCTAL	/	/	/	/
				5229					
006532	000000	000000	000		OCTAL	/	/	/	/
				5229					
006533	000000	000000	000		OCTAL	/	/	/	/
				5229					
006534	000000	000000	000		OCTAL	/	/	/	/
				5229					
006535	000000	000000	000		OCTAL	/	/	/	/
				5229					
006536	000000	000000	000		OCTAL	/	/	/	/
				5229					
006537	000000	000000	000		OCTAL	/	/	/	/
				5229					
006540	000000	000000	000		OCTAL	/	/	/	/
				5229					
006541	000000	000000	000		OCTAL	/	/	/	/
				5229					
006542	000000	000000	000		OCTAL	/	/	/	/
				5229					
006543	000000	000000	000		OCTAL	/	/	/	/
				5229					
006544	000000	000000	000		OCTAL	/	/	/	/
				5229					
006545	000000	000000	000		OCTAL	/	/	/	/
				5229					
006546	000000	000000	000		OCTAL	/	/	/	/
				5229					
006547	000000	000000	000		OCTAL	/	/	/	/
				5229					
006550	000000	000000	000		OCTAL	/	/	/	/
				5229					
006551	000000	000000	000		OCTAL	/	/	/	/
				5229					
006552	000000	000000	000		OCTAL	/	/	/	/
				5229					
006553	000000	000000	000		OCTAL	/	/	/	/
				5229					
006554	000000	000000	000		OCTAL	/	/	/	/
				5229					
		006555		5231	DUP				2.32
				5232					
006555	000000	000000	000	5233	OCTAL	/	/	/	/
				5234					
006556	000000	000000	000		OCTAL	/	/	/	/
				5234					
006557	000000	000000	000		OCTAL	/	/	/	/
				5234					
006560	000000	000000	000		OCTAL	/	/	/	/

S T A R T O F O P T I O N R O U T I N E S

5234	006561	000000	000000	000	OCTAL	/	/	/	/
5234	006562	000000	000000	000	OCTAL	/	/	/	/
5234	006563	000000	000000	000	OCTAL	/	/	/	/
5234	006564	000000	000000	000	OCTAL	/	/	/	/
5234	006565	000000	000000	000	OCTAL	/	/	/	/
5234	006566	000000	000000	000	OCTAL	/	/	/	/
5234	006567	000000	000000	000	OCTAL	/	/	/	/
5234	006570	000000	000000	000	OCTAL	/	/	/	/
5234	006571	000000	000000	000	OCTAL	/	/	/	/
5234	006572	000000	000000	000	OCTAL	/	/	/	/
5234	006573	000000	000000	000	OCTAL	/	/	/	/
5234	006574	000000	000000	000	OCTAL	/	/	/	/
5234	006575	000000	000000	000	OCTAL	/	/	/	/
5234	006576	000000	000000	000	OCTAL	/	/	/	/
5234	006577	000000	000000	000	OCTAL	/	/	/	/
5234	006600	000000	000000	000	OCTAL	/	/	/	/
5234	006601	000000	000000	000	OCTAL	/	/	/	/
5234	006602	000000	000000	000	OCTAL	/	/	/	/
5234	006603	000000	000000	000	OCTAL	/	/	/	/
5234	006604	000000	000000	000	OCTAL	/	/	/	/
5234	006605	000000	000000	000	OCTAL	/	/	/	/
5234	006606	000000	000000	000	OCTAL	/	/	/	/
5234	006607	000000	000000	000	OCTAL	/	/	/	/
5234	006610	000000	000000	000	OCTAL	/	/	/	/
5234	006611	000000	000000	000	OCTAL	/	/	/	/

START OF OPTION ROUTINES

				5234					
006612	000000	000000	000		OCTAL	/	/	/	/
				5234					
006613	000000	000000	000		OCTAL	/	/	/	/
				5234					
006614	000000	000000	000		OCTAL	/	/	/	/
				5234					
	000100			5236	PTCH2S EQU				*-PTCH2
	006615			5237	XENDX EQU				*
				5238	INHIB				RESTORE

SYSTEM TRACE ROUTINE

006615 5240 .OPTS. TR.TRACE

5241 *

5242 *

5243 *

THIS SYSTEM TRACE ROUTINE IS COMPOSED OF FOLLOWING THREE ROUTINES

5244 *

5245 *

1. TRACE OPEN ROUTINE

5246 *

2. ENTRY PUT ROUTINE

5247 *

3. TRACE SELECT ROUTINE FOR PARTIAL TRACE

5248 *

5249 *

5250 *

5251 *****

5252 *

CONTROL CELLS

5253 *

5254 *

5255 *****

5256

5257

5258 *****

5259 *

.CRTRV TRACE ROUTINE ENTRY VECTOR

5260 *****

5261 *

5262 *

WHEN TRACE ON

WHEN TRACE OFF

5263 **0

TRA 2,IC

TRA 1,IC

5264 **1

NOP ,DL

ASIS

5265 **2

EPPRO 1,IC

TRA 1,IC

.TROPN GREG(SYS DOMAIN)

5266 **3

TRA .CRTRV+12,,P.CR

ASIS

5267 **4

EPPRO 1,IC

TRA 1,IC

.TROPN NONE(SYS DOMAIN)

5268 **5

TRA 2,2C

ASIS

5269 **6

EPPRO 1,IC

TRA 1,IC

.TROPN ALL (SLV DOMAIN)

5270 **7

TRA .CRTRV+14,,P.CR

ASIS

5271 **8

LDP7 SD.DSP,DL

.TRPUT (SYS DOMAIN)

5272 **9

TRA TPUTSY,,P7

.TROPN ALL(SYS DOMAIN) PROCESS

5273 **10

GCLIMB SD.DSP, TOPNAS

.TROPN GREG(SYS DOMAIN) PROCESS

5274 **12

GCLIMB SD.DSP, TOPNG

.TROPN ALL(SLV DOMAIN) PROCESS

5275 **14

LDD6 DP.OTE,,P.SSL

.TROPN ALL(SLV DOMAIN) PROCESS

5276 **15

ICLIMB .DR6

SAVE ALL REGISTERS

5277 **17

TRA 0,,PO

RETURN TO CALLER (SLAVE)

5278 *

5279 *

SYSTEM TRACE ROUTINE

```

5281 *****
5282 *      .CRTEP TRACE ENTRY BUILDING AREA POINTER *
5283 *****
5284 *
5285 *+0    ZERO    .CRTEP+4,0    POINTER FOR PROCESSOR 0
5286 *+1    ZERO    .CRTEP+8,0    POINTER FOR PROCESSOR 1
5287 *+2    ZERO    .CRTEP+12,0   POINTER FOR PROCESSOR 2
5288 *+3    ZERO    .CRTEP+16,0   POINTER FOR PROCESSOR 3
5289 *+4    BSS     4              ENTRY BUILDING AREA FOR PROCESSOR 0
5290 *+8    BSS     4              ENTRY BUILDING AREA FOR PROCESSOR 1
5291 *+12   BSS     4              ENTRY BUILDING AREA FOR PROCESSOR 2
5292 *+16   BSS     4              ENTRY BUILDING AREA FOR PROCESSOR 3
5293 *
5294 *
5295 *
5296 *
5297 *****
5298 *      .CRTTP TRACE TABLE SEGMENT POINTER *
5299 *****
5300 *+0    BSS     1              GATE WORD
5301 *+1    ZERO    KPX,0         PROCESS # OF TRACE COLLECTOR PROGRAM
5302 *+2    PTR     SD.TT0        CURRENT CE TABLE PTR (SYSTEM LINKAGE)
5303 *+3    PTR     SD.TT1        ALTERNATE TRACE TABLE PTR (SYSTEM LINKAGE)
5304 *+4    PTR     DP.TT0        CURRENT TRACE TABLE PTR (SUB SYSTEM LINKAGE)
5305 *+5    PTR     DP.TT1        ALTERNATE TRACE TABLE PTR (SUB SYSTEM LINKAGE)
5306 *
5307 *      WHEN SINGLE TRACE TABLE ENVIRONMENT, WORD 3 HAS SD.TT0
5308 *      AND WORD 5 HAS DP.TT0.
5309 *
5310 *
5311 *****
5312 *      .CRTCT TRACE CONTROL TABLE *
5313 *****
5314 *
5315 *+0    OCT                      TRACE CONTROL BITS FOR TRACE TYPE 0-35
5316 *+1    OCT                      TRACE CONTROL BITS FOR TRACE TYPE 36-71
5317 *+2    OCT                      TRACE CONTROL BITS FOR TRACE TYPE 72-107
5318 *+3    OCT                      TRACE CONTROL BITS FOR TRACE TYPE 108-127
5319 *+4    OCT     N              TOTAL TRACE COUNT
5320 *+5    OCT     0              RESERVED FOR TRACE ROUTINE

```

SYSTEM TRACE ROUTINE

5322 *****

5323 * *

5324 * ENTRY DESCRIPTORS FOR TRACE ROUTINE *

5325 * *

5326 *****

5327 * *

5328 * SD.OTE (DP.OTE) TRACE OPEN ENTRY DESCRIPTOR

5329 * *

5330 * E11DSC 0,0,480,SD.DSP,TSAVED

5331 * *

5332 * THIS ENTRY DESCRIPTOR IS USED TO SAVE ALL REGISTERS IN
5333 * SAFESTORE STACK THEN TRANSFER TO LOCATION "TSAVED" IN
5334 * THE TRACE ROUTINE, WHEN THE "ALL" OPTINON IS SPECIFIED
5335 * IN THE .TROPN MACRO INSTRUCTION.

5336 * WHEN THE REQUESTER IS IN SLAVE DOMAIN, ICLIMB

5337 * INSTRUCTION WHICH USE THIS ENTRY DESCRIPTOR IS IN THE

5338 * .CRTRV+15.

5339 * WHEN THE REQUESTER IS IN THE SYSTEM DOMAIN, THE ICLIMB

5340 * INSTRUCTION IS IN TRACE ROUTINE ITSELF.

5341 * *

5342 * *

5343 * SD.PTE (DP.PTE) TRACE PUT ENTRY DESCRIPTOR

5344 * *

5345 * E8DSC 0,0,480,SD.DSP,PUTSLV

5346 * *

5347 * THIS ENTRY DESCRIPTOR IS USED TO CHANGE CURRENT DOMAIN
5348 * TO THE SYSTEM DOMAIN THEN TRANSFER TO LOCATION "PUTSLV"
5349 * IN THE TRACE ROUTINE.

5350 * THE GCLIMB INSTRUCTION WITCH USE THIS ENTRY DESCRIPTOR

5351 * IS IN THE EXPANSION OF .TRPUT MACRO INSTRUCTION ONLY

5352 * WHEN THE REQUESTER IS IN SLAVE DOMAIN.

SYSTEM TRACE ROUTINE

```

5354 *****
5355 *
5356 *          TRACE OPEN ROUTINE
5357 *
5358 *****
5359 *
5360 *          TRACE OPEN MACRO
5361 *
5362 *          .TROPN  RET-ADDR,ALL  SAVE ALL REGISTERS
5363 *                    GREG  SAVE ALL GENERAL REGISTERS
5364 *                    NONE  NO SAVE ANY REGISTERS
5365 *
5366 *          MACRO EXPANSION FOR .TROPN MACRO
5367 *
5368 *          ALL (SLAVE DOMAIN)
5369 *          EXD   .CRTRV+6,,P.CR
5370 *          TRA   RET-ADDR
5371 *
5372 *          GREG(SYSTEM DOMAIN ONLY)
5373 *          EXD   .CRTRV+2,,P.CR
5374 *          TRA   RET-ADDR
5375 *
5376 *          NONE(SYSTEM DOMAIN ONLY)
5377 *          EXD   .CRTRV+4,,P.CR
5378 *          TRA   RET-ADDR
5379 *
5380 *
5381 *          REGISTER CONVENTION
5382 *          P.CR = DS.CR
5383 *          P.SSA= SD.SSA
5384 *          P.SSL= SD.SSL (SLAVE DOMAIN ONLY)
5385 *          X7  = PROCESSOR NUMBER
5386 *          X6  = PROCESS NUMBER
5387 *
5388 *
5389 *          RESULT
5390 *          PO WILL POINT TO RETURN INSTRUCTION (TRA  RET-ADDR)
5391 *
5392 *
5393 *
5394 *

```

SYSTEM TRACE ROUTINE

```

5396 *****
5397 *
5398 * .TROPN ALL ENTRY FROM SLAVE DOMAIN *
5399 *
5400 *****
5401 *
5402 * ENTER HERE FROM SLAVE DOMAIN MODULE VIA .CRTRV+15
5403 *
006616 5404 TSAVE NULL ALL REGISTERS HAVE BEEN SAVED IN S/S
006616 001764 4776 07 000 5405 LDP7 .SSR,DL COPY SSR
006617 001761 4776 07 000 5406 LDP7 .CTYP,DL CHANGE DESCRIPTOR TYPE
006620 006145 4766 07 000 5407 LDP P.SSA,SD,SSA,DL
006621 700044 0567 00 000 5408 STD P.SSA,.WDR6,.P7 RECOVER P.SSA FOR RETURN
5409 *
5410 * MAKE NEW FLAME TO RETURN TO CALLER'S ENTRY BUILDING PROCEDURE
5411 *
006622 000100 1007 00 000 5412 MLR (1),(1),0 MOVE CURRENT S/S FLAME TO NEW FLAME
006623 700000 0003 00 000 5413 ADSC9 .WSS,.48*4,P7
006624 700100 0003 00 000 5414 ADSC9 .WSS+64,.48*4,P7
006625 700130 2373 00 000 5415 LDAQ .WDR0+64,.P7 GET DRO AS ISR
006626 700110 7573 00 000 5416 STAQ .WISR+64,.P7 SET ISR TO RETURN TO ENTRY BUILDING PROC.
006627 700120 2203 00 000 5417 LDX0 .WPTR0+64,.P7 GET ARO AS IC
006630 000001 0202 03 000 5418 ADLX0 1,DU ADJUST IC
006631 700104 7403 00 000 5419 STX0 .WICI+64,.P7 SET IC
006632 700105 7203 00 000 5420 LXLO .WSCR+64,.P7 GET CURRENT SCR
006633 030000 2602 03 000 5421 ORX0 =030000,DU
006634 700105 4403 00 000 5422 SXLO .WSCR+64,.P7 FORCE SCR TO 3 FOR 64W FRAME
5423 *
5424 * ADJUST SSR FOR OUT-WORD CLIMB
5425 *
006635 006650 7536 37 010 5426 STSS TMPSSP,7* STORE CURRENT SSR FOR ADJUSTMENT
006636 006650 2202 17 010 5427 LDX0 TMPSSP,7 GET SSR SAVED LOCATION
006637 000400 2352 07 000 5428 LDA 64*4,DL SET ADJUST VALUE
006640 000001 0552 10 000 5429 ASA 1,0 ADD 64 WORD TO S/S BASE
006641 777700 6212 00 000 5430 EAX1 -64 NO.
006642 000000 0412 10 000 5431 ASX1 0,0 SHRINK S/S SIZE
006643 000002 2212 03 000 5432 LDX1 2,DU
006644 006756 7412 17 010 5433 STX1 TOPNID,7 SET OPEN ID (ALL FROM SLAVE DOMAIN)
5434 *
5435 * RETURN TO CALLFR'S ENTRY BUILDING PROCEDURE
5436 *
006645 5437 TOPN20 NULL
006645 006650 7736 37 010 5438 LDSS TMPSSP,7* RELOAD SSR FOR NEW FLAME
006646 000000713400 000 5439 OCLIMB RETURN TO CALLER'S ENTRY BUILDING PROC.
006647 000000010000 000 VFD 18/0,09/713,1/1,1/0,1/0,6/0
VFD 1/0,970,870,1/N,1/0,270,271,1270
5440 *
006650 006654 000000 010 5441 TMPSSP ZERO TMPSS0 TEMP SSR SAVE AREA PTR FOR PROCESSOR 0
006651 006656 000000 010 5442 ZFRO TMPSS1 TEMP SSR SAVE AREA PTR FOR PROCESSOR 1
006652 006660 000000 010 5443 ZFRO TMPSS2 TEMP SSR SAVE AREA PTR FOR PROCESSOR 2
    
```

S Y S T E M T R A C E R O U T I N E

006653	006662	000000	010	5444	ZERO	TMPSS3	TEMP SSR SAVE AREA PTR FOR PROCESSOR 3
	006654			5445	TMPSS0EBSS	2	TEMP SSR SAVE AREA FOR PROCESSOR 0
	006656			5446	TMPSS1EBSS	2	TEMP SSR SAVE AREA FOR PROCESSOR 1
	006660			5447	TMPSS2EBSS	2	TEMP SSR SAVE AREA FOR PROCESSOR 2
	006662			5448	TMPSS3FBSS	2	TEMP SSR SAVE AREA FOR PROCESSOR 3

SYSTEM TRACE ROUTINE

5450 *****

5451 * *

5452 * .TROPN GREG ENTRY (SYSTEM DOMAIN ONLY) *

5453 * *

5454 *****

5455 * *

5456 * ENTER HERE FROM SYSTEM DOMAIN MODULE VIA .CRTRV.12

5457 * *

006664 5458 TOPNG NULL

006664 006671 7532 37 010 5459 SREG TREGSP,7* SAVE ALL GENERAL REGISTERS

006665 777777 6202 00 000 5460 EAX0 -1

006666 006756 7402 17 010 5461 STX0 TOPNID,7 SET OPEN ID (GREG FROM SYSTEM DOMAIN)

006667 006671 2202 37 010 5462 LDX0 TREGSP,7* RE-LOAD X0

006670 000001 7103 00 000 5463 TRA 1.,P0 RETURN TO CALLER'S ENTRY BUILDING PROC.

5464 * *

006671 006700 000000 010 5465 TREGSP ZERO TREGS0 REGISTER SAVE AREA PTR FOR PROCESSOR 0

006672 006710 000000 010 5466 ZERO TREGS1 REGISTER SAVE AREA PTR FOR PROCESSOR 1

006673 006720 000000 010 5467 ZERO TREGS2 REGISTER SAVE AREA PTR FOR PROCESSOR 2

006674 006730 000000 010 5468 ZERO TREGS3 REGISTER SAVE AREA PTR FOR PROCESSOR 3

5469 * *

006675 000003710204 000

006700 5470 TREGS08BSS 8 REGISTER SAVE AREA FOR PROCESSOR 0

006710 5471 TREGS18BSS 8 REGISTER SAVE AREA FOR PROCESSOR 1

006720 5472 TREGS28BSS 8 REGISTER SAVE AREA FOR PROCESSOR 2

006730 5473 TREGS38BSS 8 REGISTER SAVE AREA FOR PROCESSOR 3

SYSTEM TRACE ROUTINE

```

5475 *****
5476 *
5477 *          TRACE PUT ROUTINE
5478 *
5479 *****
5480 *
5481 *          TRACE PUT MACRO
5482 *
5483 *          .TRPUT  ASIS          PUT ENTRY ASIS
5484 *                   PNO          PUT ENTRY WITH SETTING CPU# AND PROCESS#
5485 *                   TOD          PUT ENTRY WITH SETTING TIME-OF-DAY
5486 *                   TODPNO       PUT ENTRY WITH SETTING TOD, CPU# AND PRO#
5487 *
5488 *          MACRO EXPANSION FOR .TRPUT MACRO
5489 *
5490 *          PNO (SLAVE DOMAIN)
5491 *          LDP6  DP,PTE,,P,SSL
5492 *          GCLIMB .DR6,0,EAX0
5493 *
5494 *          PNO (SYSTEM DOMAIN)
5495 *          EAX0  0
5496 *          EXD  .CRTRV+8,,P,CR
5497 *
5498 *          TOD (SLAVE DOMAIN)
5499 *          LDP6  DP,PTE,,P,SSL
5500 *          GCLIMB .DR6,1,EAX0
5501 *
5502 *          TOD (SYSTEM DOMAIN)
5503 *          EAX0  1
5504 *          EXD  .CRTRV+8,,P,CR
5505 *
5506 *          TODPNO (SLAVE DOMAIN)
5507 *          LDP6  DP,PTE,,P,SSL
5508 *          GCLIMB .DR6,2,EAX0
5509 *
5510 *          TODPNO (SYSTEM DOMAIN)
5511 *          EAX0  2
5512 *          EXD  .CRTRV+8,,P,CR
5513 *
5514 *          ASIS (SLAVE DOMAIN)
5515 *          LDP6  DP,PTE,,P,SSL
5516 *          GCLIMB .DR6,3,EAX0
5517 *
5518 *          ASIS (SYSTEM DOMAIN)
5519 *          EAX0  3
5520 *          EXD  .CRTRV+8,,P,CR
5521 *
5522 *

```

S Y S T E M T R A C E R O U T I N E

5524 *****

5525 * * *

5526 * REGISTER CONVENTION * *

5527 * * *

5528 *****

5529

5530

5531 * P.CR = SD.CR

5532 * P.SSA= SD.SSA

5533 * P.SSL= SD.SSL (SUB SYSTEM LINKAGE FOR SLAVE DOMAIN ONLY)

5534 * P0 = RETURN INSTRUCTION(TRA RET-ADDR) POINTER

5535 * X7 = PROCESSOR NUMBER

5536 * X6 = PROCESS NUMBER

5537 *

5538 * THE FOLLOWING REGISTERS WILL BE CHANGED BY THE PUT ROUTINE

5539 *

5540 * X0

5541 * X2

5542 * X3

5543 * X4

5544 * AR

5545 * QR

5546 *

5547 *

5548 * THE X1 SHOULD NOT BE CHANGED FOR MME TRACE PROCEDURE IN •MFALT

5549 *

5550 *

SYSTEM TRACE ROUTINE

5552 *****

5553 * *

5554 * .TRPUT ENTRY FROM SYSTEM DOMAIN *

5555 * *

5556 *****

5557 * *

5558 * ENTER HERE FROM SYSTEM DOMAIN MODULE VIA .CRTRV+8

5559 * *

006740 5560 TPUTSY NULL

006740 006130 4776 07 000 5561 LDP P.CR,SD.CR,DL RECOVER P.CR

006741 006742 7102 10 010 5562 TRA TPUT,0

006742 5563 TPUT NULL

006742 006763 7102 00 010 5564 TRA TPPNO X0 = 0, PNO OPTION

006743 006775 7102 00 010 5565 TRA TPTOD X0 = 1, TOD OPTION

006744 007004 7102 00 010 5566 TRA TODPNO X0 = 2, TODPNO OPTION

006745 007012 7042 00 010 5567 TPASIS TSX4 TREPUD X0 = 3, ASIS OPTION. PUT TRACE ENTRY

006746 006756 2202 17 010 5568 LDX0 TOPNID,7 TEST OPEN ID FOR EXIT

006747 000000 6003 00 000 5569 TZE 0,,PO IF ID IS "NONE". RETURN TO CALLER

006750 006756 4502 17 010 5570 STZ TOPNID,7 CLEAR OPEN ID CELL

006751 006754 6042 00 010 5571 TMI TPUTIO IF ID IS "GREG". RELOAD GENERAL REG'S

006752 5572 OCLIMB IF ID IS "ALL". RETURN TO NEXT OF ICLIMB

006752 000000713400 000 VFD 1870,097713,171,170,170,670

006753 000000010000 000 VFD 170,970,870,17N,170,270,271,1270

006754 5573 TPUTIO NULL

006754 006671 0732 37 010 5574 LRFG TREGSP,7* RELOAD ALL GENERAL REGISTERS

006755 000000 7103 00 000 5575 TRA 0,,PO RETURN TO CALLER'S RET-ADDR

5576 * *

006756 000000000000 000 5577 TOPNID DEC 0,0,0,0 TRACE OPEN ID BY PROCESSOR

006757 000000000000 000

006760 000000000000 000

006761 000000000000 000

5578 = 0 NONE

5579 = - GREG

5580 = 2 ALL FROM SLAVE DOMAIN

SYSTEM TRACE ROUTINE

5582 *****

5583 * *

5584 * .TRPUT ENTRY FROM SLAVE DOMAIN *

5585 * *

5586 *****

5587 * *

5588 * ENTRE HERE FROM SLAVE DOMAIN MODULE VIA .TRPUT MACRO DIRECTLY

5589 * *

006762 5590 TPUTSL NULL

006762 006742 7102 10 010 5591 TRA TPUT,0

X0 HAS PUT OPTION CODE

X0 = 0 PNO

X0 = 1 TOD

X0 = 2 TODPNO OPTION

X0 = 3 ASIS

P7 = SD.CR

P6 = SD.SSA

SYSTEM TRACE ROUTINE

					5599 *				
					5600 *			SET PROCESSOR AND PROCESS NUMBER IN ENTRY	
					5601 *				
				006763	5602	TPPNO	NULL		
15	006763	700312	2203	17 000	5603	LDX0	.CRTEP,7,P.CR	GET TRACE ENTRY LOCATION	
05	006764	000000	6242	16 000	5604	EAX4	0,6	GET PROCESS NUMBER	
65	006765	177777	3642	03 000	5605	ANX4	=0177777,DU	ISOLATE PROCESS NUMBER	
85	006766	006771	2642	17 010	5606	ORX4	TCPUN0,7	OR PROCESSOR NUMBER	
75	006767	700001	4443	10 000	5607	SXL4	1,0,P.CR	SET PROCESSOR AND PROCESS # IN ENTRY+1	
95	006770	006745	7102	00 010	5608	TRA	TPASIS	GO TO PUT ENTRY	
					5609 *				
45	006771	000000000000		000	5610	TCPUN0	OCT	0,200000000000,400000000000,600000000000	
44	006772	200000000000		000					
43	006773	400000000000		000					
42	006774	600000000000		000					
41					5611 *				
40					5612 *			SET TIME-OF-DAY IN ENTRY	
39					5613 *				
38				006775	5614	TPTOD	NULL		
37	006775	006063	4766	07 000	5615	LDP6	SD.RMS,DL	GET REAL MEMORY DESCRIPTOR	
36	006776	600040	4133	00 000	5616	RSCR	32,,P6	READ SCU CLOCK	
35	006777	000004	7732	00 000	5617	LRL	4	SHFT 4 BIT FOR 16 USEC	
34	007000	700105	0363	00 000	5618	ADLQ	.CRDAT+1,,P.CR	ADD ADJUST VALUE	
33	007001	700312	2203	17 000	5619	LDX0	.CRTEP,7,P.CR	GET TRACE ENTRY LOCATION	
32	007002	700001	7563	10 000	5620	STQ	1,0,P.CR	SET TOD	
31	007003	006745	7102	00 010	5621	TRA	TPASIS	GO TO PUT ENTRY	
30					5622 *				
29					5623 *			SET PROCESSOR, PROCESS NUMBER AND TOD IN ENTRY	
28					5624 *				
27				007004	5625	TODPNO	NULL		
26	007004	700312	2203	17 000	5626	LDX0	.CRTEP,7,P.CR	GET TRACE ENTRY LOCATION	
25	007005	000000	6242	16 000	5627	EAX4	0,6	GET PROCESS NUMBER	
24	007006	177777	3642	03 000	5628	ANX4	=0177777,DU	ISOLATE PROCESS NUMBER	
23	007007	006771	2642	17 010	5629	ORX4	TCPUN0,7	OR PROCESSOR NUMBER	
22	007010	700000	7443	10 000	5630	STX4	0,0,P.CR	SET PROCESSOR AND PROCESS # IN ENTRY+0	
21	007011	006775	7102	00 010	5631	TRA	TPTOD	GO TO SET TOD	

SYSTEM TRACE ROUTINE

```

5633 *****
5634 *
5635 * PUT TRACE ENTRY INTO TRACE TABLE (SD.TT0 OR SD.TT1) *
5636 *
5637 *****
5638 *
5639 *
5640 * CALLING SEQUENCE
5641 * TSX1 TREPUT
5642 *
5643 * STRUCTURE OF TRACE TABLE
5644 **0 TALLY PUT TALLY
5645 **1 TALLY REFRESH TALLY
5646 **2 OCT 0 RESERVED
5647 **3 IOTP DCW LIST
5648 **4 IOTP
5649 **5 IOTP
5650 **6 IOTD
5651 **7 ZERO 1,SIZE BLOCK CONTROL NUMBER
5652 **8 TRACE ENTRY

```

SYSTEM TRACE ROUTINE

007012	007057	7022	00	010	5655	TREPUT NULL	TXIS01	TSX2	TSI ECT	SELECT TRACE ENTRY FOR PARTIAL TRACE NOP WHEN FULL TRACE	
007013	700310	0543	00	000	5657		AOS		.CRTCT+4,,P.CR	COUNT TOTAL TRACE ENTRY NEXT 2 ARE NOP'S WHEN SINGLE=PROC	00000020
007014	700342	0343	00	000	5659	TREPUT NULL	TGIS02	NULL			MPRC5670
007015	007053	6002	00	010	5660		TGSHUT	LDAC	.CRTTP,,P.CR		MPRC5680
007016	700344	4767	00	000	5661		TZF		TGWAIT		MPRC5690
007017	700312	2203	17	000	5662		LDP6		.CRTTP+2,,P.CR		
007020	600000	2223	00	000	5663		TPUT50	LDX0	.CRTEP,7,P.CR	GET TRACE ENTRY LOCATION	
007021	700000	2373	10	000	5664		LDX2		0,,P6	GET PUT LOCATION	
007022	600000	7573	12	000	5665		LDAQ		0,0,P.CR	PUT ENTRY INTO TRACE TABLE SEGMENT	
007023	700002	2373	10	000	5666		STAQ		0,2,P6		
007024	600002	7573	12	000	5667		LDAQ		2,0,P.CR		
007025	600000	0113	53	000	5668		STAQ		2,2,P6		
007026	007037	6072	00	010	5669	X.TTT	NOPT		,AD,P6	UPDATE TALLY	
					5670	TXIS04	TTF	TGOPEN		IF TABLE IS NOT FULL, GO TO OPEN GATE TTF TPUTEX IF SINGLE PROCESSOR	
					5671	*					
					5672	*	EXCHANG	TRACE TABLE			
					5673	*					
007027	600001	2353	00	000	5674		LDA		1,,P6	REFRESH TALLY	
007030	600000	7553	00	000	5675		STA		0,,P6		
007031	700344	2373	00	000	5676		LDAQ		.CRTTP+2,,P.CR	EXCHANGE CURRENT TRACE TABLE POINTER	
007032	000044	7772	00	000	5677		LLR		36		
007033	700344	7573	00	000	5678	X.TPUT	STAQ		.CRTTP+2,,P.CR	*/ IF TRACE DUMP OPTION, EXCHANGE .CRTTP+4 ALSO AND ENABLE DUMPER	
007034	700346	2373	00	000	5680		LDAQ		.CRTTP+4,,P.CR		
007035	000044	7772	00	000	5681		LLR		36		
007036	700346	7573	00	000	5682		STAQ		.CRTTP+4,,P.CR		
					5683	TGOPEN	NULL				
					5684	TXIS03	NULL			NEXT IS NOP WHEN SINGLE=PROC	00000020
007037	700342	5543	00	000	5685		STC1		.CRTTP,,P.CR	OPEN TRACE GATE	
007040	000070	2342	00	010	5686		TPUTFX	SZN	TRAPTR	TEST FOR TRAP IN USE	00000070
007041	007051	6002	00	010	5687		TZF		TRAPOK	← NO TRAP ENABLED	00000070
007042	000070	4766	00	010	5688		LDP6		TRAPTR	TRAPPING -- GET LOCATION (INSURING THAT ADDRESS REGISTER HAS OFFSET AND DESCRIPTOR IS TYPE 0) OF CELL TO BE MONITORED IN AR VIA P6, MASK IT FOR DESIRED PATTERN, AND COMPARE IT WITH BAD VALUE THAT IS TO BLOW SYSTEM	00000070
007043	000074	7466	00	010	5689		SAR6		TRAPCT		00000070
007044	000074	4766	00	010	5690		LDP6		TRAPCT		00000070
007045	600000	2353	00	000	5691		LDA		0,,P6		00000070
007046	000072	3752	00	010	5692		ANA		TRAPMK		00000070
007047	000071	1152	00	010	5693		CMPA		TRAPVL		00000070
007050	000073	7162	00	010	5694	TRAPEX	XEC	TRAPER		EXECUTE THE PROPER KIND OF TRANSFER	DISP8A2F
007051	006145	4766	07	000	5695	TRAPOK	LDP6	SD.SSA,DL		RELOAD P.SSA (HERE IF NO7OK TRAP)	00000070
					5696	*				TRA MONTR IF MONITOR ACTIVE	00000020
007052	000000	7102	14	000	5697		TRA		0,4	EXIT	
					5698	*					
					5699	*	GATE WAIT	ROUTINE			
					5700	*					
					5701	TGWAIT	NULL				
007053	000000	7742	00	000	5702		GTB			WAIT A FEW MICROSECONDS	MPRC5710
007054	007014	7102	00	010	5703		TRA	TGSHUT			MPRC5720

SYSTEM TRACE ROUTINE

					5704 *				00000070
					5705 *				00000070
					5706 *	WHEN TRAP IS IN USE AND DESIRED CONDITION HAS BEEN FOUND,			00000070
					5707 *	CONTROL COMES HERE TO TURN OFF TRAP CONTROL AND "ZOP"			00000070
					5708 *				00000070
			007055		5709 GOTCHA NULL				00000070
	007055	000070	0342 00	010	5710	LDAC TRAPTR	RESET TRAP FLAG WITH ZERO, BUT SAVE		00000070
	007056	000000	000000	000	5711	ZERO 0.0	*** TRAP HAS SPRUNG ***		00000070

SYSTEM TRACE ROUTINE

5713 *****

5714 * *

5715 * PARTIAL TRACE ROUTINE *

5716 * *

5717 *****

5718

5719 * THIS ROUTINE TESTS THE TRACE CONTROL BIT DEPENDING ON EACH

5720 * TRACE TYPE IN .CRTCT CELL.

5721 * IF THE BIT IS ON (TRACE OFF) THE TRACE ENTRY BUILD IN .CRTEP

5722 *

5723 * CALLING SEQUENCE

5724 *

5725 * TSX2 TSLECT

5726 * RETURN WHEN TRACE ON

5727 *

5728 * WHEN TRACE OFF, RETURN TO LOC. "TPIJTEX"

5729 *

5730 *

007057

5731 TSLECT NULL

007057 000000 2202 03 000 5732 LDX0 0,DU INITIALIZE X0 FOR TYPE 0-71

007060 700312 7233 37 000 5733 LXL3 .CRTEP,7*,P.CR GET TRACE ENTRY TYPE

007061 000177 3632 03 000 5734 ANX3 =0177,DU ISOLATE TRACE TYPE CODE

007062 000110 1032 03 000 5735 CMPX3 72,DU IS TYPE LESS THAN 72

007063 007066 6022 00 010 5736 TNC *+3 YES. X0 MUST BE ZERO

007064 000002 2202 03 000 5737 LDX0 2,DU NO. SET X0 FOR TYPE 72-127

007065 000110 1232 03 000 5738 SBLX3 =0110,DU

007066 001000 4312 03 000 5739 FLD =0001000,DU

007067 000000 7732 13 000 5740 LRL 0,3

007070 700304 3173 10 000 5741 CANAQ .CRTCT,0,P.CR IS IT TRACE ON

007071 000000 6002 12 000 5742 TZE 0,2 YES. EXIT

007072 006145 4766 07 000 5743 LDP6 SD.SSA,DL IGNORE THIS ENTRY & EXIT

00000020

007073 000000 7102 14 000 5744 TRA 0,4

00000020

DISPATCHER TRACE ROUTINE

```

5746 *
5747 * THIS SECTION BUILDS UP DISPATCHER TRACE ENTRIES
5748 * THE BUILD-UP ROUTINES ARE LINKED VIA. TRA Y.XXXX AT IYXXXX
5749 * LOCATION. RETURN IS AT IYXXXX+1 IN GENERAL
5750 * THIS SECTION MAY RELEASED IF TRACE OPTION IS OFF
5751 * TRACE TYPE IS SYMBOLIZED IN .Y XXXX
5752 *
5753 * TRACE FROM BASIC DISPATCHER USE GREG OR NONE OPTION AT .TROPN
5754 * TRACE FROM MACRO PROCESSOR SAVES ISCRIPTR IN TDS SEGMENT
5755 *
5756 * MUST CHECK .CRTRV BECAUSE OF DYNAMIC TRACE ON/OFF FUNCTION
5757 * VIA OPERATOR VERB
5758 *
007074 5759 CPU BSS .NRPRC CPU# (X7) SAVED 00000020
000004 5760 XTLNK SET 4
000002 5761 XTEP SET 2
000000 5762 XTMP SET 0
000000 5763 P.SSR SET P.MCRO
5764 *
5765 * .YCALH TRACE ENTRY
5766 *
007100 5767 Y.CALH EQU *
007100 006130 4776 07 000 5768 LDP P.CR,SD.CR,DL
007101 700042 7163 00 000 5769 XEC .CRTRV,,P.CR /* CHECK IF OPTION
007102 004052 7102 00 010 5770 TRA IYCALH+1 NO. TRACE DISABLED
007103 006671 7532 37 010 5771 SREG TREGSP,PN*
007104 700312 2223 17 000 5772 LDY XTFP,,CRTEP,PN,P.CR
007105 700000 7407 12 000 5773 SAR P.MCRO,,XTEP,P.CR /* SET IC .CALL ( TO RETURN )
007106 700002 0507 12 000 5774 STD P.MCRO,2,XTEP,P.CR AND ISR BASE
007107 000022 6202 00 000 5775 EAX XTMP,,YCALH
007110 700000 4403 12 000 5776 SXL XTMP,,XTEP,P.CR
007111 700002 7553 12 000 5777 STA 2,XTEP,P.CR /* CALLEE MOD# AND EP#
007112 007267 7042 00 010 5778 TSX XTLNK,YTCOM /* SET COMMON KPX,CPUNO AND PUT IN
007113 006671 0732 37 010 5779 LREG TREGSP,PN*
007114 004052 7102 00 010 5780 TRA IYCALH+1
5781 *
5782 * .YCALL TRACE ENTRY
5783 *
007115 5784 Y.CALL EQU *
007115 600214 7573 00 000 5785 STAQ .STMPA,,P.SSA
007116 000002 2312 00 000 5786 RSW 2 00000020
007117 000003 3752 07 000 5787 ANA 3,DL MPRC5520
007120 007074 4472 05 010 5788 SXL PN,CPU,AL 00000020
007121 007074 1152 05 010 5789 CMPA CPU,AL 00000020
007122 000002 6002 04 000 5790 TZF 2,IC 00000020
007123 714647000203 000 5791 VFD H187ZOP,970,372,673 00000020
007124 700042 7163 00 000 5792 XEC .CRTRV,,P.CR /* CHECK OPTION
007125 004033 7102 00 010 5793 TRA IYCALL+1 NO. DISABLED
007126 006671 7532 37 010 5794 SREG TREGSP,PN*
007127 007240 7042 00 010 5795 TSX XTLNK,YCALM /* SET COMMON DATA FOR CALL

```

DISPATCHER TRACE ROUTINE

007130	000002	2752	07	000	5796	ORA	.YCALL,DL	/* SET ENTRY TYPE	
007131	700000	7553	12	000	5797	STA	.XTEP,P.CR		
007132	007267	7042	00	010	5798	TSX	XTLNK,YTCOM	/* SET CPUNO,KPX AND PUT IN	
007133	006671	0732	37	010	5799	LREG	TREGSP,PN*		
007134	004033	7102	00	010	5800	TRA	IYCALL+1		
					5801	*			
					5802	*	.YCALX TRACE ENTRY		
					5803	*			
	007135				5804	*	Y.CAIX EQU		
007135	600214	7573	00	000	5805	STAQ	.STMPA,,P.SSA		
007136	000002	2312	00	000	5806	RSW	2		00000020
007137	000003	3752	07	000	5807	ANA	3,DL		MPRC5560
007140	007074	4472	05	010	5808	SXL	PN,CPU,AL		00000020
007141	007074	1152	05	010	5809	CMPA	CPU,AL		00000020
007142	000002	6002	04	000	5810	TZE	2,IC		00000020
007143	714647000203			000	5811	VFD	H18/ZOP,9/0,3/2,6/3		00000020
007144	700042	7163	00	000	5812	XFC	.CRTRV,,P.CR	/* CHECK OPTION	
007145	004030	7102	00	010	5813	TRA	IYCALX+1		
007146	006671	7532	37	010	5814	SREG	TREGSP,PN*		
007147	007240	7042	00	010	5815	TSX	XTLNK,YCALM	/* SET COMMON DATA	
007150	000001	2752	07	000	5816	ORA	.YCALX,DL	AND TRACE TYPE	
007151	700000	7553	12	000	5817	STA	.XTEP,P.CR		
007152	007267	7042	00	010	5818	TSX	XTLNK,YTCOM	/* SET CPUNO,KPX AND PUT IT IN	
007153	006671	0732	37	010	5819	LREG	TREGSP,PN*		
007154	004030	7102	00	010	5820	TRA	IYCALX+1		
					5821	*			
					5822	*	.YEXTH TRACE ENTRY		
					5823	*			
	007155				5824	*	Y.FXTH EQU		
007155	700042	7163	00	000	5825	XFC	.CRTRV,,P.CR	/* CHECK OPTION	
007156	007173	7102	00	010	5826	TRA	YEXTHE		
007157	006671	7532	37	010	5827	SREG	TREGSP,PN*		
007160	700312	2223	17	000	5828	LDX	XTEP,,CRTEP,PN,P.CR		
007161	700000	7407	12	000	5829	SAR	P.MCRD,,XTEP,P.CR	/* EXITED IC	
007162	700002	7563	12	000	5830	STQ	2,XTEP,P.CR	/* RETURN IC AND SEGID	
007163	600105	2363	00	000	5831	LDQ	.SI,OAD+3,,P.SSA		
007164	700003	7563	12	000	5832	STQ	3,XTEP,P.CR	/* .SNTRY WORD	
007165	000000	6202	05	000	5833	EAX	XTMP,,AL	/* EXIT#	
007166	700001	7403	12	000	5834	STX	XTMP,1,XTEP,P.CR		
007167	000023	6202	00	000	5835	EAX	XTMP,,YEXTH		
007170	700000	4403	12	000	5836	SXL	XTMP,,XTEP,P.CR	/* SET TYPE	
007171	007267	7042	00	010	5837	TSX	XTLNK,YTCOM	/* SET CPUNO,KPX AND PUT IN	
007172	006671	0732	37	010	5838	LREG	TREGSP,PN*		
	007173				5839	*	YEXTHE EQU		
007173	600012	4707	51	000	5840	LDP	P.MCRD,,SSA,I,P.SSA		
007174	004132	7102	00	010	5841	TRA	IYEXTH+1		
					5842	*			
					5843	*	.YEXIT TRACE ENTRY		
					5844	*			
	007175				5845	*	Y.EXIT EQU		

DISPATCHER TRACE ROUTINE

```

007175 700042 7163 00 000 5846 XFC .CRTRV,,P.CR /* CHECK OPTION
007176 007205 7102 00 010 5847 TRA YEXTE
007177 006671 7532 37 010 5848 SREG TRFGSP,PN*
007200 007254 7042 00 010 5849 TSX XTLNK,YEXTCM /* SET COMMON FOR EXIT
007201 000007 6202 00 000 5850 EAX XTMP,,YEXIT /* SET TYPE
007202 700000 4403 12 000 5851 SXL XTMP,,XTEP,P.CR
007203 007267 7042 00 010 5852 TSX XTLNK,YTCOM /* SET CPUNO,KPX AND PUT IN
007204 006671 0732 37 010 5853 LREG TRFGSP,PN*
007205 001764 4706 07 000 5854 YEXTF EQU *
007206 004140 7102 00 010 5855 LDP P,SSR,,SSR,DL
007206 004140 7102 00 010 5856 TRA IYEXIT+1
5857 *
5858 * .YEXTX TRACE ENTRY
007207 5859 *
007207 5860 Y.FXTX EQU *
007207 700042 7163 00 000 5861 XFC .CRTRV,,P.CR /* CHECK OPTION
007210 007217 7102 00 010 5862 TRA YEXTXE
007211 006671 7532 37 010 5863 SREG TRFGSP,PN*
007212 007254 7042 00 010 5864 TSX XTLNK,YEXTCM /* SET COMMON FOR EXIT
007213 000000 6202 00 000 5865 EAX XTMP,,YEXTX /* SET TYPE
007214 700000 4403 12 000 5866 SXL XTMP,,XTEP,P.CR
007215 007267 7042 00 010 5867 TSX XTLNK,YTCOM
007216 006671 0732 37 010 5868 LREG TRFGSP,PN*
007217 001764 4706 07 000 5869 YEXTXE EQU *
007217 001764 4706 07 000 5870 LDP P,SSR,,SSR,DL
007220 004153 7102 00 010 5871 TRA IYEXTX+1
5872 *
5873 * .GOTO TRACE ENTRY
007221 5874 *
007221 5875 Y.GOTO EQU *
007221 700042 7163 00 000 5876 XFC .CRTRV,,P.CR
007222 007236 7102 00 010 5877 TRA YGOTOE
007223 006671 7532 37 010 5878 SREG TRFGSP,PN*
007224 700312 2223 17 000 5879 LDX XTEP,,CRTEP,PN,P.CR
007225 700000 7407 12 000 5880 SAR P,MCRO,,XTEP,P.CR /* .GOTO IC
007226 700002 0507 12 000 5881 STD P,MCRO,2,XTEP,P.CR AND ISR
007227 700002 7553 12 000 5882 STA 2,XTEP,P.CR /* CALLEE MOD# AND EP#
007230 600105 2203 00 000 5883 LDX XTMP,,SLOAD+3,,P.SSA
007231 700001 7403 12 000 5884 STX XTMP,1,XTEP,P.CR /* .SNTRY WORD
007232 000011 6202 00 000 5885 EAX XTMP,,YGOTO /* ENTRY TYPE
007233 700000 4403 12 000 5886 SXL XTMP,,XTEP,P.CR
007234 007267 7042 00 010 5887 TSX XTLNK,YTCOM /* SET CPUNO KPX AND PUT IN
007235 006671 0732 37 010 5888 LREG TRFGSP,PN*
007236 600012 2363 54 000 5889 YGOTOE EQU *
007236 600012 2363 54 000 5890 LDQ .SSA,DI,P.SSA
007237 004350 7102 00 010 5891 TRA IYGOTO+1
5892 *
5893 * COMMON FOR MACRO TRACE
5894 *
007240 5895 YCALM EQU *

```


DISPATCHER TRACE ROUTINE

007240	001764	4706	07	000	5896	LDP	P,SSR,DL	
007241	001761	4706	07	000	5897	LDP	P,SSR,CTYP,DL	
007242	700312	2223	17	000	5898	LDX	XTEP,CRTEP,PN,P,CR	
007243	700001	7403	12	000	5899	STX0	1,XTEP,P,CR	/* CALLEE MOD# EP#
007244	000010	2373	00	000	5900	LDAQ	.WISR,P,SSR	/* ISR OF CALLER
007245	700002	7573	12	000	5901	STAQ	2,XTEP,P,CR	
007246	600105	2203	00	000	5902	LDX	XTMP,SLOAD+3,P,SSA	
007247	700002	7403	12	000	5903	STX	XTMP,2,XTEP,P,CR	/* .SNTRY
007250	000004	2353	00	000	5904	LDA	.WICI,P,SSR	/* IC AND I OF CALLER
007251	007253	3752	00	010	5905	ANA	YMASK	
007252	000000	7102	14	000	5906	TRA	,XTLNK	
007253	77777777	7600		000	5907	YMASK OCT	777777777600	
	007254				5908	YEXTCM EQU	*	
007254	700312	2223	17	000	5909	LDX	XTEP,CRTEP,PN,P,CR	
007255	700000	7407	12	000	5910	SAR	P,MCRO,XTEP,P,CR	/* SET EXITED IC
007256	000000	6202	05	000	5911	EAX	XTMP,AL	/* EXIT#
007257	700001	7403	12	000	5912	STX	XTMP,1,XTEP,P,CR	
007260	001764	4706	07	000	5913	LDP	P,SSR,DL	
007261	001761	4706	07	000	5914	LDP	P,SSR,CTYP,DL	
007262	000010	2373	00	000	5915	LDAQ	.WISR,P,SSR	/* RETURN ISR
007263	700002	7573	12	000	5916	STAQ	2,XTEP,P,CR	
007264	000004	2203	00	000	5917	LDX	XTMP,WICI,P,SSR	/* RETURN IC
007265	700002	7403	12	000	5918	STX	XTMP,2,XTEP,P,CR	
007266	000000	7102	14	000	5919	TRA	,XTLNK	
	007267				5920	YTCOM EQU	*	
007267	000000	6202	16	000	5921	EAX	XTMP,KPX	
007270	006771	2602	17	010	5922	ORX	XTMP,TCPUND,PN	
007271	700001	4403	12	000	5923	SXL	XTMP,1,XTEP,P,CR	
007272	007013	7102	00	010	5924	TRA	TRFPUT+1	/* PUT TRACE ENTRY IN BUFFER
	007273				5925	Y.SEVT EQU	*	
	007273				5926	.TROPN	IYSEVT+1,GREG	
007273	700044	7173	00	000		XED	.CRTRV+2,P,CR	
007274	774336	7102	04	3632		TRA	IYSEVT+1,\$	
007275	000017	2352	07	000	5927	LDA	.YSEVT,DL	*SET ENTRY TYPE
	007276				5928	YCOM EQU	*	*Y.ECC MERGE HERE
007276	700312	2223	17	000	5929	LDX	XTFP,CRTEP,PN,P,CR	
007277	700000	7553	12	000	5930	STA	,XTEP,P,CR	*SET TYPR
007300	600017	2353	00	000	5931	LDA	.STATE,P,SSA	
007301	600117	2363	00	000	5932	LDQ	.SRQST,P,SSA	
007302	700002	7573	12	000	5933	STAQ	2,XTEP,P,CR	
007303	007004	7102	00	010	5934	TRA	TODPNO	/* .TRPUT TODPNO
	007304				5935	Y.DISP EQU	*	
	007304				5936	.TROPN	IYDISP+1,NONE	
007304	700046	7173	00	000		XED	.CRTRV+4,P,CR	
007305	772254	7102	04	1561		TRA	IYDISP+1,\$	
007306	700312	2223	17	000	5937	LDX	XTFP,CRTEP,PN,P,CR	
007307	000003	2352	07	000	5938	LDA	.YDISP,DL	
007310	700000	7553	12	000	5939	STA	,XTEP,P,CR	
007311	700002	7537	12	000	5940	STSS	2,XTEP,P,CR	
007312	007004	7102	00	010	5941	TRA	TODPNO	/* .TRPUT TODPNO

DISPATCHER TRACE ROUTINE

							007313	5942	Y.ENBL	EQU	*	
							007313	5943		.TROPN	IYENBL+1,GREG	
	007313	700044	7173	00	000					XED	.CRTRV+2,,P.CR	
	007314	773420	7102	04	2734					TRA	IYENBL+1,\$	
	007315	006136	4746	07	000	5944				LDP	P.PST,SD.PST,DL	
	007316	700312	2223	17	000	5945				LDX	XTEP,,CRTEP,PN,P.CR	
	007317	000006	2352	07	000	5946				LDA	.YENBL,DL	
	007320	700000	7553	12	000	5947				STA	,XTEP,P.CR	
	007321	700002	7563	12	000	5948				STQ	2,XTEP,P.CR	
	007322	400000	2353	02	000	5949				LDA	,QU,P.PST	*PST ENTRY
	007323	700003	7553	12	000	5950				STA	3,XTEP,P.CR	
	007324	007004	7102	00	010	5951				TRA	TODPNO	/* .TRPUT TODPNO
							007325	5967	Y.IDLE	EQU	*	
							007325	5968		.TROPN	IYIDLE+1,NONE	
	007325	700046	7173	00	000					XFD	.CRTRV+4,,P.CR	
	007326	772017	7102	04	1345					TRA	IYIDLE+1,\$	
	007327	700312	2223	17	000	5969				LDX	XTFP,,CRTEP,PN,P.CR	
	007330	000012	2352	07	000	5970				LDA	.YIDLE,DL	
	007331	006771	2752	17	010	5971				ORA	TCPUNO,PN	
	007332	700000	7553	12	000	5972				STA	,XTEP,P.CR	
	007333	700002	4543	12	000	5973				STT	2,XTEP,P.CR	
	007334	700003	4503	12	000	5974				STZ	3,XTEP,P.CR	
	007335	006775	7102	00	010	5975				TRA	TPTOD	/* .TRPUT TOD
							007336	5976	Y.SCC	EQU	*	
							007336	5977		.TROPN	IYSCC+1,NONE	
	007336	700046	7173	00	000					XED	.CRTRV+4,,P.CR	
	007337	772453	7102	04	2012					TRA	IYSCC+1,\$	
	007340	000000	6352	16	000	5978				EAA	,KPX	
	007341	006771	2752	17	010	5979				ORA	TCPUNO,PN	
	007342	000016	2752	07	000	5980				ORA	.YSCC,DL	
	007343	700312	2223	17	000	5981				LDX	XTFP,,CRTEP,PN,P.CR	
	007344	700000	7553	12	000	5982				STA	,XTEP,P.CR	
	007345	700002	0517	12	000	5983				STD	P.FNT,2,XTEP,P.CR	
	007346	006775	7102	00	010	5984				TRA	TPTOD	/* .TRPUT TOD
							007347	5985		.OPTE.	TR	*END OF TRACE OPTION ROUTINE

MULTI-PROCESSOR ROUTINE

		007347		5987		.OPTS.	MP,MLTPRC		
				5988	*				
				5989	*	THIS ROUTINE IS SELECTED IF MULTI-PROCESSOR SYSTEM.			
				5990	*	THE FUNCTION OF THIS SECTION IS			
				5991	*	TO ENABLE IDLE PROCESSORS			
				5992	*				
		000000		5993	XTMP	SET	0		*TEMPORARY
		000000		5994	XNPC	SET	0		*NUMBER OF PROCESSOR TO CHECK
		000002		5995	XCPUNO	SET	2		*CPU INDEX OF PROT MASK
		000000		5996	T.KL	SET	P0		*TEMPORARY P.KL
		007350		5997	MPENB	EQU	*		
	007350	006042	4736	07	000	5998	LDP	P,PRQ,SD,PRQ,DL	
	007351	300036	2203	00	000	5999	LDX	XTMP,D,DSP,,P,PRQ	*IF THERE ARE NO PROCESSOR IDLE,
	007352	000000	6002	11	000	6000	TZE	,PUTPRX	*GO RETURN
	007353	700271	2203	00	000	6001	LDX	XNPC,,CRNPC,,P,CR	
			007354			6002	MPE1	EQU	*
	007354	777777	6202	10	000	6003	EAX	XNPC,-1,XNPC	*IF THERE ARE NO MORE PROCESSOR,
	007355	000000	6042	11	000	6004	TMI	,PUTPRX	*GO RETURN
	007356	300013	2223	10	000	6005	LDX	XCPUNO,D,CPU,XNPC,P,PRQ	MPRC5380
	007357	777775	6042	04	7354	6006	TMI	MPF1,\$	PROC'R IS ACTIVE. SKIP CIOC
	007360	300013	1073	10	000	6007	CMPX	PN,D,CPU,XNPC,P,PRQ	00000020
	007361	777773	6002	04	7354	6008	TZE	MPF1,\$	OWN PROC'R, SKIP CIOC
	007362	700100	2363	12	000	6009	LDQ	.CRCMC,XCPUNO,P,CR	IS PROCESSOR RETIRING
	007363	000003	6052	04	7366	6010	TPL	MPF2,\$	NO, CONTINUE
	007364	040000	3162	03	000	6011	CANQ	.FBT3,DU	MAYBE SO
	007365	777767	6002	04	7354	6012	TZF	MPF1,\$	RETIRED, SKIP CIOC
			007366			6013	MPE2	NULL	00000020
	007366	700100	0153	12	000	6014	CIOC	.CRCMC,XCPUNO,P,CR	CONNECT IT
	007367	777765	7102	04	7354	6015	TRA	MPF1,\$	MPRC5430
						6016	*		
						6017	*	SET UP .CRORR/.CRORS - THERE MAY BE MORE HARDWARE	
						6018	*	OPTIONS WHICH ARE AVAILABLE TO SLAVE	
						6019	*	SO, NOT TO LOST OPTION REG. IN GATING MECHANISUM	
						6020	*	X.RED	TRA MPOR
		004000				6021	ORNCHE	BOOL	4000
						6022	MPOR	EQU	*
	007370	600116	1727	00	000	6023	LDO	.SORSV,,P,SSA	
	007371	700272	1527	17	000	6024	STO	.CRORR,PN,P,CR	*SET WITH CRCF ON
	007372	700276	1527	17	000	6025	STO	.CRORS,PN,P,CR	
	007373	004000	2352	07	000	6026	LDA	ORNCHE,DL	
	007374	700276	6553	17	000	6027	ERSA	.CRORS,PN,P,CR	*RESET CRCF TO OFF
	007375	001554	7102	00	010	6028	TRA	X.RED+1	
						6029	*		00000020
		000002				6030	P.KL	SET	P2
						6031	*		00000020
						6032	MPCCAC	NULL	00000020
	007376	200000	2143	17	000	6033	SZNC	.KLCAC,PN,P,KL	00000020
	007377	001541	7102	00	010	6034	TRA	RDO	*** EXPEDIENCY FOR CACHE PROBLEMS ***
	007400	001541	6012	00	010	6035	TNZ	RDO	CLEAR CACHE
	007401	600302	1073	00	000	6036	CMPX	PN,,SCPUN,,P,SSA	00000020

MULTI-PROCESSOR ROUTINE

007402	001541	6012	00	010	6037	TNZ	RDO	PROCESSOR # IS NOT EQUAL	00000020
007403	001536	7102	00	010	6038	TRA	I.RDO+1	RETURN	00000020
					6039	*			00000020
		000000			6040	P.RMS	SET	PO	00000020
		007404			6041	MPCCRT	NULL		00000020
007404	600302	7473	00	000	6042	STX	PN.,SCPUN.,P.SSA		00000020
007405	006063	4706	07	000	6043	LDP	P.RMS,SD.RMS,DL		00000020
007406	000040	4133	00	000	6044	RSCR	SCUCLK.,P.RMS		00000020
007407	600300	7573	00	000	6045	STAQ	.SCCRT.,P.SSA		00000020
007410	002527	7102	00	010	6046	TRA	I.DCNO+1	RETURN	00000020
					6047	*			00000020
		007411			6048	MPCAC	NULL		00000020
007411	500014	2373	00	000	6049	LDAQ	.SLDCK.,P.SRM		00000020
007412	200240	1173	17	000	6050	CMPAQ	.KLCCT,PN,P.KL		00000020
007413	004517	6012	00	010	6051	TNZ	I.CLDD+1	CACHE WAS CLEARED	00000020
		007414			6052	.CCAC	P.KL		00000020
						INHIB	SAVE,ON		
007414	000000	0116	00	000		CCAC			
007415	700171	7163	00	000		XEC	.CRACC+9.,P.CR		
007416	700040	4133	00	000		RSCR	32.,P.CR		
007417	200240	7573	37	000		STAQ	.KLCCT,7*,P.KL		
007420	200000	4503	17	000		STZ	.KLCAC,7,P.KL		
						INHIB	RESTORE		
007421	004517	7102	00	010	6053	TRA	I.CLDD+1		00000020
					6054	*			00000020
		007422			6055	MPCRT	NULL		00000020
007422	005302	6012	00	010	6056	TNZ	X.DMIO+1	STATUS NOT READY. ERROR RETURN	00000020
007423	600300	2373	00	000	6057	LDAQ	.SCCRT.,P.SSA	OK STATUS	00000020
007424	500014	7573	00	000	6058	STAQ	.SLDCK.,P.SRM	SET SCU CLOCK	00000020
007425	000000	7102	11	000	6059	TRA	.DMIOX		00000020
		007426			6060	.OPTE.	MP		

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

1248T 02 12-27-79 09.322 H6600J7.057 GCOS IV 4VX DISPATCHER 791219DISP PAGE 174

P R I O R I T Y F O R U R G E N C Y A N D I / O

007446 6112 .OPTE. CM *END OF COMMON

P R I O R I T Y F O R U R G E N C Y A N D I / O

			007446	6114	.OPTS. IO.IORATE			
				6115 *				
				6116 *	I/O RATE OPTION CODE			
				6117 *				
				6118 *	CALLED TO SET ZIOWEN BIT			
				6119 *	X.FD5 TSX CKEVTX,PRI01	*AT RELINC,ROADBLOCK		
				6120 *	-OR			
				6121 *	X.EL10 TSX CKEVTX,PRI01	*AFTER END EVENT		
				6122 *				
			000000	6123	P.PDP SET	P0		
			007447	6124	PRI01 EQU	*		
	007447	006036	4706 07 000	6125	LDP	P.PDP,SD.PDP,DL		
	007450	000040	2352 03 000	6126	LDA	ZIOWEN,DU		
	007451	000000	2553 16 000	6127	ORSA	,KPX,P.PDP	*SET I/O WAIT BIT	
	007452	000000	7102 11 000	6128	TRA	,CKEVTX	*RETURN	
				6129 *				
				6130 *	COMPUTE PRIORITY CODE ZIOURC BY I/O RATE			
				6131 *				
			007453	6132	PRI02 EQU	*		
	007453	600106	2343 00 000	6133	SZN	,SLPRT,,P.SSA	*IF NO LOCAL CPU TIME	
	007454	000007	6002 04 7463	6134	TZE	PRI03,\$	*GIVE MAX COUNT. HE MUST BE NEW	
	007455	600107	2363 00 000	6135	LDQ	,SLTT,,P.SSA		
	007456	600106	5063 00 000	6136	DIV	,SLPRT,,P.SSA	*GET RATE OF CHANNEL TIME	
	007457	000002	7722 00 000	6137	QRL	2	*VIS CPU TIME * 2	
	007460	000001	6362 06 000	6138	EAQ	ZINTER,QL	*ADD MINIMUM DISPATCH COUNT	
	007461	000017	1162 03 000	6139	CMPQ	ZIOURC,DU	*BETWEEN CODE RECOMPUTE	
	007462	000002	6022 04 7464	6140	TNC	PRI04,\$	*IF RATE OVER. SET IT TO MAX	
			007463	6141	PRI03 EQU	*		
	007463	000017	6362 00 000	6142	EAQ	ZIOURC		
			007464	6143	PRI04 EQU	*		
	007464	000000	2563 16 000	6144	ORSQ	,KPX,P.PDP		
	007465	600107	2363 00 000	6145	LDQ	,SLTT,,P.SSA		
	007466	000001	7722 00 000	6146	QRL	1	*DECREMENT CHANNEL TIME AND CPU TIME	
	007467	600107	7563 00 000	6147	STQ	,SLTT,,P.SSA	*TO GET LOCAL WORKING SET	
	007470	600106	2363 00 000	6148	LDQ	,SI PRT,,P.SSA	*OF CHANNEL TIME AND CPU TIME	
	007471	000001	7722 00 000	6149	QRL	1		
	007472	600106	7563 00 000	6150	STQ	,SI PRT,,P.SSA		
	007473	002545	7102 00 010	6151	TRA	X.DCN3	*RETURN	
			007474	6152	.OPTE. IO			

P R I O R I T Y F O R U R G E N C Y A N D I / O

	007474		6154		.OPTS. UR,URGCPR			
			6155 *					
			6156 *		URGENCY OPTION CODE			
			6157 *					
			6158 *		CALLED TO COMPUTE PRIORITY CODE ZIOURC BY URGENCY			
			6159 *		X.DCN2 TRA PRUR			
			6160 *					
		007475	6161	PRUR1	EQU	*		
	007475	006136 4746 07 000	6162		LDP	P.PST,SD,PST,DL		
	007476	400000 2363 16 000	6163		LDQ	,KPX,P,PST		
	007477	000077 3762 07 000	6164		ANQ	=077,DL	*GET URGENCY	
	007500	000020 7362 00 000	6165		QLS	18-2	*DEVIDE BY 2	
	007501	000001 6362 02 000	6166		EAQ	ZINTER,QU	*ADD MINIMUM DISPATCH COUNT	
	007502	000017 1162 03 000	6167		CMPQ	ZIOURC,DU	*BETWEEN RECOMPUTE	
	007503	000002 6022 04 7505	6168		TNC	PRUR2,\$	*IF OVER FLOW	
	007504	000017 6362 00 000	6169		EAQ	ZIOURC	*SET IT MAX	
		007505	6170	PRUR2	EQU	*		
	007505	000000 2563 16 000	6171		ORSQ	,KPX,P,PDP	*SET TALLY CODE	
		007506	6172		.OPTE.	UR		

P R I O R I T Y F O R U R G E N C Y A N D I / O

	007506		6174		.OPTS. IU,IOURPR			
			6175 *					
			6176 *		CODE FOR BOTH URGENCY AND I/O RATE			
			6177 *					
			6178 *		COMPUTE PRIORITY CODE ZIOURC			
			6179 *		SET ZIOWEN BIT			
			6180 *					
			6181 *		THIS CODE IS SAME AS PRI01			
			6182 *					
		000000	6183	P.PDP	SET	P0		
		007507	6184	PRIU1	EQU	*		
	007507	006036 4706 07 000	6185		LDP	P.PDP,SD,PDP,DL		
	007510	000040 2352 03 000	6186		LDA	ZIOWEN,DU	*SET I/O WAIT BIT	
	007511	000000 2553 16 000	6187		ORSA	,KPX,P,PDP		
	007512	000000 7102 11 000	6188		TRA	,CKEVTX		
			6189					
			6190 *					
			6191 *		COMPUTE PRIORITY CODE ZIOURC FOR BOTH OPTION			
			6192 *		X.DCN2 TRA PRIU2			
			6193 *					
		007513	6194	PRIU2	EQU	*		
	007513	006136 4746 07 000	6195		LDP	P,PST,SD,PST,DL		
	007514	400000 2363 16 000	6196		LDQ	,KPX,P,PST	*GET URGENCY	
	007515	000070 3762 07 000	6197		ANQ	=070,DL		
	007516	000017 7362 00 000	6198		QLS	18-3	/* URGENCY/3	
	007517	000023 7562 04 7542	6199		STQ	PRIUW,\$	/* SAVE URGENCY CODE	
	007520	600106 2343 00 000	6200		SZN	.SLPRT,,P.SSA		
	007521	000007 6002 04 7530	6201		TZF	PRIU3,\$		
	007522	600107 2363 00 000	6202		LDQ	.SLTT,,P.SSA		
	007523	600106 5063 00 000	6203		DIV	.SLPRT,,P.SSA		
	007524	000003 7722 00 000	6204		QRL	3		
	007525	000001 6362 06 000	6205		EAQ	ZINTER,QL	/* ADD MINIMUM INTERVAL	
	007526	000007 1162 03 000	6206		CMPQ	ZIOURC/2,DU		
	007527	000002 6022 04 7531	6207		TNC	PRIU4,\$		
		007530	6208	PRIU3	EQU	*		
	007530	000007 6362 00 000	6209		EAQ	ZIOURC/2		
		007531	6210	PRIU4	EQU	*		
	007531	000011 0362 04 7542	6211		ADLQ	PRIUW,\$		
	007532	000000 2563 16 000	6212		ORSQ	,KPX,P,PDP		
	007533	600107 2363 00 000	6213		LDQ	.SLTT,,P.SSA		
	007534	000001 7722 00 000	6214		QRL	1		
	007535	600107 7563 00 000	6215		STQ	.SLTT,,P.SSA		
	007536	600106 2363 00 000	6216		LDQ	.SLPRT,,P.SSA		
	007537	000001 7722 00 000	6217		QRL	1		
	007540	600106 7563 00 000	6218		STQ	.SLPRT,,P.SSA		
	007541	002545 7102 00 010	6219		TRA	X.DCN3		
		007542	6220	PRIUW	BSS	1	/* TEMP SAVE	
		007543	6221		.OPTE. IU			

CLASS B PRIORITY

				007543	6223	.OPTS.	BP,BPRIOR		
					6224 *				
					6225 *		PRIORITY CLASS B OPTION		
					6226 *				
					6227 *		TABLE AND DATA FOR CLASS B PROCESS		
					6228 *				
				000007	6229	BP.NSZ SET	7	NUMBER PRIORITY B PROCESSES ALLOWED	00000020
					6230				
				007544	6231	BP.TAL EQU	*		
				007544	6232	DUP	1,RP.NSZ		
	007544	000000	000007	000	6233	ZERO	,7	*COUNT TALLY OF DISPATCH	
	007545	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
	007546	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
	007547	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
	007550	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
	007551	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
	007552	000000	000007	000		ZERO	,7	*COUNT TALLY OF DISPATCH	
					6234				
				007553	6235	BP.SNB BSS	BP.NSZ	*SNUMB OF CLASS B PROCESS	
					6236				
				007562	6237	BP.TQT EQU	*		
				007562	6238	DUP	1,RP.NSZ		
	007562	000134	000000	000	6239	ZERO	92,0	/* DEFAULT 92 MS	
	007563	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
	007564	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
	007565	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
	007566	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
	007567	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
	007570	000134	000000	000		ZERO	92,0	/* DEFAULT 92 MS	
					6240 *				
					6241 *		TIME QUANTUM CHECK AND SET		
					6242 *		X.RD1A TRA BPRD1		
					6243 *				
				000001	6244	P.PDP SET	P1		
				007571	6245	BPRD1 EQU	*		
	007571	100000	2363 16	000	6246	LDQ	,KPX,P.PDP		
	007572	000100	3162 03	000	6247	CANQ	ZBPRI0,DU	*IF B PRIORITY PROCESS	
	007573	000003	6012 04	7576	6248	TNZ	BPRD2,\$	*GO LOAD HIS QUANTUM	
	007574	001615	2362 00	010	6249	LDQ	TQTM	*NO. THEN STANDARD QUANTUM	
	007575	001601	7102 00	010	6250	TRA	X.RD1A+1		
				007576	6251	BPRD2 EQU	*		
	007576	000007	3762 07	000	6252	ANQ	=07,DL	*GET B PRIORITY INDEX	
	007577	000017	2362 06	000	6253	I.BPRD LDQ	BP.TQT-BPBASE,QL	*GET SPECIED QUANTUM	
	007600	001601	7102 00	010	6254	TRA	X.RD1A+1		
					6255 *				
					6256 *		PUT PRIORITY B PROCESS INTO QUEUE		
					6257 *				
				000000	6258	PPX SET	0		
				007601	6259	BPP EQU	*		
	007601	000100	3002 03	000	6260	CANX	PPX,ZBPRI0,DU		

C L A S S B P R I O R I T Y

007602	003335	6002	00	010	6261	X.BPP	TZF	X.PP1+1	*NO. NOT CLASS B
					6262				*CHECK I/O, URGENCY. IF OPTION SELECT
007603	001400	3002	03	000	6263		CANX	PPX,ZEXCOD,DU	*IN MAIN LEVEL
007604	003335	6012	00	010	6264		TNZ	X.PP1+1	*NO. SKIP AND GO
007605	040000	3152	03	000	6265		CANA	PS.DWT,DU	*IN DISPATCH QUEUE
007606	003341	6012	00	010	6266		TNZ	PP2	*START FROM CURRENT POSITION
007607	100000	2353	16	000	6267		LDA	,KPX,P.PDP	
007610	000007	3752	07	000	6268		ANA	=07,DL	*GET B PRIORITY INDEX
007611	000001	2352	05	000	6269	I.BPP1	LDA	BP.TAL-BPBASE,AL	*GET DISPATCH COUNT
007612	000000	6222	00	000	6270		EAX	PPY,0	
007613	300037	2223	12	000	6271	BPP1	LDX	PPY,D.PRQ,PPY,P.PRQ	
007614	003356	6002	00	010	6272		TZF	PPTL1	*END OF QUFUE - PUT AT TAIL
007615	100000	2203	12	000	6273		LDX	PPX,,PPY,P.PDP	
007616	777700	3002	03	000	6274		CANX	PPX,-ZBPRI0,DU	*CHECK PRIORITY
007617	777774	6012	04	7613	6275		TNZ	BPP1,\$	*IT HAS. GO NEXT
007620	000001	1752	07	000	6276		SBA	I,DL	*COUNT DOWN TALLY
007621	777772	6012	04	7613	6277		TNZ	BPP1,\$	*NOT RUNNOUT YET. GO NEXT
007622	003345	7102	00	010	6278		TRA	PP3	*PUT IT HERE

CLASS A PRIORITY

007716	6368	.OPTS.	AP.APRIOR		
	6369 *				
	6370 *	PRIORITY CLASS A CONTROL OPTION			
	6371 *				
	6372 *	DATA FOR CLASS A CONTROL			
	6373 *				
000007	6374	AP.NSZ SET	7	*NO. OF A PRIORITY PROCESS	
	6375			7 IS MAXIMUM VALUE	
000002	6376	AP.ESZ SFT	2	/* PJT TABLE ENTRY SIZE	
	6377				
000020	6378	AP.TSZ SFT	AP.ESZ*AP.NSZ+AP.ESZ	/* SIZE OF SD.PJT SEGMENT	
	6379			INCLUDING DUMMY ENTRY FOR LEVEL 0	
	6380			AND GATE WORD	
	6381				
007717	000000	0001	00 000	6382	AP.TAL TALLY ,1
				6383	*TALLY OF A PRIORITY PROCESS
				6384	*ID = WHEN A-PRIOR PROCESS ACTIVATED
				6385	*DI = WHEN A-PRIOR PROCESS DEACTIVATED
				6386	*TALLY RUNOUT = WHEN THERE APPEARED
				6387	ONE A-PRIORITY PROCESS
007720	000000	0000	00 000	6388	AP.ACT TALLY 0,0
				6389	*TALLY OF A-PRIOR AND
				6390	ENABLED-BY-A-PRIOR PROCESS
				6391	*ZERO = NO PRIORITY PROCESS, SO DELETE
				6392	SYSTEM PRIORITY
				6393	*NON-ZERO = THERE ARE SOME PRIORITY
				6394	PROCESS, MAINTAIN SYSTEM PRIORITY
007721	000000	000000	000	6395	AP.FLG ZERO
				6396	*FLAG TO HONOR SYSTEM PRIORITY PROCESS
				6397	*ZERO = A-PRIORITY DISPATCH HAS
				6398	REACHED TO LIMIT
				6399	*NON-ZERO = A-PRIORITY DISPATCH
				6400	IS ALLOWED YET
				6401	* STZ = ON A-PRIORITY DISPATCH IN REDSP
				6402	* IF AP.CNT HAS REACHED TO AP.DSP
				6403	* STC1 = ON NON-A-PRIORITY DISPATCH IN REDSP
007722	000000	000000	000	6404	AP.CNT ZERO
				6405	*COUNT OF CONTINUOUS DISPATCHES
007723	000000	000000	000	6406	AP.DSP ZERO ,**
				6407	FOR A-PRIOR PROCESS
				6408	/* LIMIT OF CONTINUOUS DISPATCHES
				6409	FOR A-PRIORITY PROCESS
				6410	(.CRNPC)*2
	100000	6410	AP.OPR BOOL 100000		*OPERATOR RESFRVED ENTRY
	200000	6411	AP.RVD BOOL 200000		*RESERVED BIT (ENTRY NOT EMPTY)
	400000	6412	AP.EXC BOOL 400000		*CURRENTLY ACTIVE FLAG
		6413 *			
		6414 *	ROUTINE TO PUT A PRIORITY PROCESS INTO QUEUE		
		6415 *	IF IT IS INACTIVE , SET IT ACTIVE AND COUNT UP AP.TAL		
		6416 *	X.PP1 TRA APP1		
	000000	6417	PPX SET 0		

C L A S S A P R I O R I T Y

					000002	6418	PPY	SET	2		
					000001	6419	P.PDP	SET	P1		
					007724	6420	APP1	EQU	*		
	007724	200200	3002 03	000	6421		CANX	PPX,ZAPRIO,ZAPRWT,DU			
	007725	000002	6012 04	7727	6422		TNZ	APP2,\$			
	007726	003335	7102 00	010	6423	X.APP1	TRA	X.PPI+1		*IF B OPTION GO CHECK BPRIOR	
					007727	6424	APP2	EQU	*		
	007727	000200	3002 03	000	6425		CANX	PPX,ZAPRWT,DU			
	007730	000011	6002 04	7741	6426		TZE	APP3,\$		*NOT INACTIVE STATUS	
	007731	100000	7203 16	000	6427		LXL	PPX,,KPX,P,PDP			
	007732	034000	3602 03	000	6428		ANX	PPX,ZAPCOD,DU		*SET A PRIORITY LEVEL CODE	
	007733	100000	2603 16	000	6429		ORX	PPX,,KPX,P,PDP			
	007734	200200	6602 03	000	6430		ERX	PPX,ZAPRIO,ZAPRWT,DU		*ACTIVATE THE PROCFS	
	007735	100000	7403 16	000	6431		STX	PPX,,KPX,P,PDP			
	007736	000002	0112 56	000	6432	I.APP1	NOP	AP.ACT-APBASE,ID			
	007737	000001	0112 56	000	6433	I.APP2	NOP	AP.TAL-APBASE,ID		*COUNT UP NO. OF ACTIVES	
	007740	000007	6066 04	7747	6434		TTN	APP4,\$		*TALLY RUNOUT. SO GIVE SYSTEM PRIOR	
					007741	6435	APP3	EQU	*		
	007741	040000	3152 03	000	6436		CANA	PS.DWT,DU			
	007742	003341	6012 00	010	6437		TNZ	PP2		*ALREADY IN QUEUE MOVE FORWARD	
	007743	777756	2342 04	7721	6438		SZN	AP.FLG,\$		*DISPATCH COUNT REACHED TO LIMIT	
	007744	003337	6012 00	010	6439		TNZ	PP1A		*NO. PUT IN NORMALLY	
	007745	000200	2202 03	000	6440		LDX	PPX,ZAPRWT,DU		*PUT IN QUEUE BY INACTIVE PRIORITY	
	007746	003337	7102 00	010	6441		TRA	PP1A			
					007747	6442	APP4	EQU	*		
	007747	000021	7402 04	7770	6443		STX	PPX,APPSV,\$			
	007750	000022	2362 04	7772	6444		LDQ	APRPTX,\$			
	007751	000000	6202 06	000	6445		EAX0	,QL		*GET REPEAT INDEX	
	007752	000001	6222 00	000	6446		EAX	PPY,1			
	007753	000016	2352 04	7771	6447		LDA	APSYS,\$		*SET ZSYSR BIT (UPPER AND LOWER)	
					007754	6448	APP5	EQU	*		
	007754	000000	5202 01	000	6449		RPTX	,1		*SEARCH FOR BIT ZSYSR	
	007755	100000	3153 12	000	6450		CANA	,PPY,P,PDP			
	007756	000004	6002 04	7762	6451		TZE	APP6,\$			
	007757	177777	2553 12	000	6452		ORSA	-1,PPY,P,PDP		*SET ZSYSR BIT	
	007760	753500	3002 03	000	6453		CANX0	=0776000,DU			
	007761	777773	6012 04	7754	6454		TNZ	APP5,\$		*GO CHECK LEFT	
					007762	6455	APP6	EQU	*		
	007762	000001	1362 03	000	6456		SBLQ	1,DU		*CHECK MULTIPLE OF 256	
	007763	777771	6052 04	7754	6457		TPL	APP5,\$		*GO CHECK NEXT 256	
	007764	000004	2222 04	7770	6458		LDX	PPY,APPSV,\$		*RESTORE	
	007765	400000	2353 16	000	6459		LDA	,KPX,P,PST			
	007766	100000	2203 16	000	6460		LDX	PPX,,KPX,P,PDP			
	007767	777752	7102 04	7741	6461		TRA	APP3,\$			
					007770	6462	APPSV	BSS	1		
	007771	100000	100000	000	6463	APSYS	ZERO	ZSYSR,ZSYSR		*PDP ENTRY ZSYSR CHECK DATA	
	007772	000000	000000	000	6464	APRPTX	ZERO			*REPEAT COUNT - SET IN INITIALIZE	
					6465	*					
					6466	*		ROUTINE TO PUT A-PRIORITY PROCESS IN INACTIVE STATUS			
					6467	*		X.PPTL TRA APTL			

C L A S S A P R I O R I T Y

						6468 *					
						000001	6469	P.PDP	SET	P1	
						007773	6470	APTL	EQU	*	
	007773	100000	2203	16	000	6471		LDX	PPX,,KPX,P.PDP		
	007774	200000	3002	03	000	6472		CANX	PPX,ZAPRIO,DU	*CHECK IF IT HAS A-PRIORITY	
	007775	003356	6002	00	010	6473		TZE	PPTLI	*NO	
	007776	200200	6602	03	000	6474		ERX	PPX,ZAPRIO+ZAPRWT,DU		
	007777	743777	3602	03	000	6475		ANX	PPX,-ZAPCOD-1,DU	*SET INACTIVE STATUS	
	010000	100000	7403	16	000	6476		STX	PPX,,KPX,P.PDP		
	010001	000001	0112	54	000	6477	I.APT1	NOP	AP.TAL-APBASE,DI	*DECREMENT NO. OF ACTIVE PROCESSES	
	010002	000002	0112	54	000	6478	I.APT2	NOP	AP.ACT-APBASE,DI		
	010003	003356	7102	00	010	6479		TRA	PPTLI		
						6480 *					
						6481 *			ROUTINE TO DELETE A-PRIORITY FOR EPI17GEWAKE		
						6482 *		X.DSCN	TRA APDCN		
						6483 *					
						000002	6484	XPDP	SET	2	
						000001	6485	P.PDP	SFT	P1	
						010004	6486	APDCN	EQU	*	
	010004	006036	4716	07	000	6487		LDP	P.PDP,SD,PDP,DL		
	010005	100000	2223	16	000	6488		LDX	XPDP,,KPX,P.PDP		
	010006	340200	3022	03	000	6489		CANX	XPDP,ZAPRIO+ZSYSR+ZAENBD+ZAPRWT,DU		
	010007	001164	6002	00	010	6490		TZF	ED4		
	010010	200000	3022	03	000	6491		CANX	XPDP,ZAPRIO,DU		
	010011	000005	6002	04	10016	6492		TZE	APDC1,\$		
	010012	200200	6622	03	000	6493		ERX	XPDP,ZAPRIO+ZAPRWT,DU		
	010013	743777	3622	03	000	6494		ANX	XPDP,-ZAPCOD-1,DU	*RESET PRIORITY LEVEL	
	010014	000002	0112	54	000	6495	I.APD1	NOP	AP.ACT-APBASE,DI		
	010015	000001	0112	54	000	6496	I.APD2	NOP	AP.TAL-APBASE,DI	*COUNT DOWN NO. OF ACTIVES	
						010016	6497	APDC1	EQU	*	
	010016	040000	3022	03	000	6498		CANX	XPDP,ZAENBD,DU	*CHECK IF IT HAS ENABLED PRIORITY	
	010017	000003	6002	04	10022	6499		TZF	APDC2,\$	NO	
	010020	000002	0112	54	000	6500	I.APD3	NOP	AP.ACT-APBASE,DI	*COUNT DOWN NO. OF ACTIVES	
	010021	743777	3622	03	000	6501		ANX	XPDP,-1-ZAPCOD,DU	AND RESET.	
						010022	6502	APDC2	EQU	*	
	010022	100000	3022	03	000	6503		CANX	XPDP,ZSYSR,DU	*SYSTEM PRIORITY PROCESS	
	010023	000004	6002	04	10027	6504		TZE	APDC3,\$	NO	
	010024	777674	2342	04	7720	6505		SZN	AP.ACT,\$	/* CHECK IF ANY PRIORITY PROCESS	
	010025	000002	6012	04	10027	6506		TNZ	APDC3,\$	LEFT IN ACTIVE	
	010026	677777	3622	03	000	6507		ANX	XPDP,-ZSYSR-1,DU	*NO. SO DELETE SYSTEM PRIOR	
						010027	6508	APDC3	EQU	*	
	010027	100000	7423	16	000	6509		STX	XPDP,,KPX,P.PDP	/* RESET PDP ENTRY	
	010030	001164	7102	00	010	6510		TRA	ED4		
						6511 *					
						6512 *			ROUTINE TO GIVE ENABLED-A-PRIORITY FOR POP TO SWAP IN A-PRIOR		
						6513 *		X.EB8A	TRA APEB		
						6514 *					
						010031	6515	APFB	EQU	*	
	010031	006036	4716	07	000	6516		LDP	P.PDP,SD,PDP,DL		
	010032	003073	2202	00	010	6517		LDX	XTMP,EBMARK	/* CHECK IF THE REQUESTER	

CLASS A PRIORITY

010033	100000	2363	10	000	6518	LDQ	,XTMP,P,PDP	HAS A-PRIORITY
010034	200200	3162	03	000	6519	CANQ	ZAPRIO+ZAPRWT,DU	
010035	003062	6002	00	010	6520	X.APFB	TZF	EB10 *NO. RETURN
					6521			*IF I/O-URG OPTION GO CHECK THEM
010036	000077	2362	07	000	6522	LDQ	=077,DL	/* GIVE TOP URGENCY TO SWAP IN
010037	400000	2563	10	000	6523	ORSQ	,XTMP,P,PST	THE PRIORITY PROCESS
010040	000002	0112	56	000	6524	I.APF	NOP	AP.ACT-APBASE,ID *COUNT UP ENABLED PROCESS (POP)
010041	040000	2202	03	000	6525	LDX	XTMP,ZAENBD,DU	
010042	100001	2403	00	000	6526	ORSX	XTMP,,PNPOP,,P,PDP	*MARK ENABLED BIT
010043	003062	7102	00	010	6527	X.APF2	TRA	EB10 *IF OPTION, GO CHECK THEM
					6528	*		
					6529	*		ROUTINE TO GIVE ENABLED-A-PRIORITY OR
					6530	*		DELETE ENABLED-A-PRIORITY (IF ENABLED BY ZERO URGENCY)
					6531	*	X.EB8	TRA APEE
					6532	*		
					6533	*		MUST NOT LOST EBX A
	000002				6534	FBX	SET	2
	000001				6535	P,PDP	SET	P1
	010044				6536	APEE	EQU	*
010044	000003	3022	03	000	6537	CANX	EBX,3,DU	*CHECK IF THIS IS INTER-PROCESS ENABLE
010045	000027	6012	04	10074	6538	TNZ	APEE3,\$	*NO. ALARM OR NEW
010046	006036	4716	07	000	6539	LDP	P,PDP,SD,PDP,DL	
010047	200044	2363	17	000	6540	LDQ	,KLPRG,PN,P,KL	
010050	000002	6012	04	000	6541	TNZ	2,TC	/* IF ZERO, IT MUST BE INTERRUPT HANDL
010051	000001	6362	00	000	6542	EAQ	,PNPOP	HANDLER - DNET
010052	100000	2363	02	000	6543	LDQ	,QU,P,PDP	*GET PDP OF REQUESTER AND CHECK
010053	200200	3162	03	000	6544	CANQ	ZAPRIO+ZAPRWT,DU	IF IT HAS A-PRIORITY
010054	000020	6002	04	10074	6545	TZF	APEE3,\$	
010055	770077	3152	07	000	6546	CANA	=0770077,DL	*WHICH REQUEST. ENABLE OR DISABLE
010056	000010	6002	04	10066	6547	TZF	APEE2,\$	*URGENCY IS ZERO. SO DISABLE
010057	100000	2363	16	000	6548	LDQ	,KPX,P,PDP	
010060	040000	3162	03	000	6549	CANQ	ZAFNBD,DU	/* IF IT HAS ALREADY ENABLE PRIORITY
010061	000013	6012	04	10074	6550	TNZ	APEE3,\$	SKIP
010062	040000	2762	03	000	6551	ORQ	ZAFNBD,DU	/* ADD A-ENABLED PRIORITY
010063	100000	7563	16	000	6552	STQ	,KPX,P,PDP	
010064	000002	0112	56	000	6553	I.APF1	NOP	AP.ACT-APBASE,ID *COUNT UP NO. OF ACTIVE PRIORITY
010065	000007	7102	04	10074	6554	TRA	APEE3,\$	
	010066				6555	APEE2	EQU	*
010066	100000	2363	16	000	6556	LDQ	,KPX,P,PDP	*CHECK IF THE DISABLED PROCESS HAS
010067	040000	3162	03	000	6557	CANQ	ZAFNBD,DU	ENABLED PRIORITY
010070	000004	6002	04	10074	6558	TZF	APEE3,\$	*NO. SO NOTHING TO DO
010071	040000	6762	03	000	6559	FRQ	ZAFNBD,DU	*TAKE OUT ENABLED PRIORITY
010072	000002	0112	54	000	6560	I.APF2	NOP	AP.ACT-APBASE,DI AND COUNT DOWN
010073	100000	7563	16	000	6561	STQ	,KPX,P,PDP	
	010074				6562	APEE3	EQU	*
010074	003024	7102	00	010	6563	X.APFF	TRA	X.FB8+1 *CHECK IF OTHER OPTION
					6564	*		
					6565	*		ROUTINE TO BYPASS LOOP CHECK
					6566	*	I.SLCT	TRA APLPCK
					6567	*		

CLASS A PRIORITY

					000000	6568	P.PDP	SET	P0	
					010075	6569	APLPCK	EQU	*	
	010075	006036	4706	07	000	6570		LDP	P.PDP,SD,PDP,DL	
	010076	000000	2363	16	000	6571		LDQ	,KPX,P.PDP	/* CHECK PRIORITY BIT
	010077	340000	3162	03	000	6572		CANQ	ZAPRIO+ZSYSR+ZAENBD,DU	
	010100	001515	6002	00	010	6573		TZE	SLCT40	NO PRIORITY - CHECK
	010101	001466	7102	00	010	6574		TRA	SLCT16	PRIORITY - SKIP CHECK
						6575	*			
						6576	*			SET TIME QUANTUM AND CHECK A-PRIOR COUNT
						6577	*			TO DISPATCH FOR SYSTEM PRIORITY PROCESS
						6578	*			X.RD1A TRA APRD1
						6579	*			
					000001	6580	P.PDP	SET	P1	
					000000	6581	P.PJT	SET	P0	
					010102	6582	APRD1	EQU	*	
	010102	100000	2363	16	000	6583		LDQ	,KPX,P.PDP	
	010103	240000	3162	03	000	6584		CANQ	ZAPRIO+ZAENBD,DU	
	010104	000004	6012	04	10110	6585		TNZ	APRD2,\$	
	010105	777614	5542	04	7721	6586		STC1	AP.FLG,\$	/* NON A-PRIOR, ALLOW A-PRIOR DISPATCH
	010106	001615	2362	00	010	6587	X.APRD	LDQ	TQTM	/* IF B-PRIORITY OPTION, CHECK IT
	010107	001601	7102	00	010	6588		TRA	X.RD1A+1	NO B-PRIOR. RETURN
					010110	6589	APRD2	EQU	*	
	010110	777612	0542	04	7722	6590		AOS	AP.CNT,\$	/* COUNT UP A-PRIOR DISPATCH
	010111	777611	2352	04	7722	6591		LDA	AP.CNT,\$	
	010112	777611	1152	04	7723	6592		CMPA	AP.DSP,\$	/* CHECK CONTINUOUS A-PRIOR
	010113	000003	6022	04	10116	6593		TNC	APRD3,\$	DISPATCH COUNT LIMIT
	010114	777606	4502	04	7722	6594		STZ	AP.CNT,\$	
	010115	777604	4502	04	7721	6595		STZ	AP.FLG,\$	/* A-PRIOR DISPATCH REACHED LIMIT
					010116	6596	APRD3	EQU	*	
	010116	200000	3162	03	000	6597		CANQ	ZAPRIO,DU	
	010117	000003	6012	04	10122	6598		TNZ	APRD4,\$	
	010120	001615	2362	00	010	6599		LDQ	TQTM	/* A-ENABLED PRIORITY HAS STANDARD
	010121	001601	7102	00	010	6600		TRA	X.RD1A+1	TIME QUANTUM
					010122	6601	APRD4	EQU	*	
	010122	006040	4706	07	000	6602		LDP	P.PJT,SD,PJT,DL	
	010123	000037	3762	07	000	6603		ANQ	=037,DL	/* ISOLATE PJT ENTRY POINTER
	010124	000001	2363	06	000	6604		LDQ	1,QL,P.PJT	AND PULL OUT TIME QUANTUM
	010125	077777	3762	03	000	6605		ANQ	-1-AP,OPR-AP,RVD-AP,EXC,DU	
	010126	001601	7102	00	010	6606		TRA	X.RD1A+1	

C L A S S A P R I O R I T Y

						6608 *					
						6609 *	ENTRY POINT 21. ENABLE NEW PROCESS ROUTINE				
						6610 *	CHECK PRIORITY FOR THE PROCESS				
						6611 *	X.ENBP+1 TRA APENB				
						6612 *					
		000004				6613	XOBJ SET 4				
		000002				6614	P.PJT SET P2				
		000000				6615	P.SNR SET P0				
		000000				6616	P.PID SET P0				
		000001				6617	P.PDP SET P1				
		010127				6618	APENB EQU *				
	010127	000275	7022	04	10424	6619	TSX API STX,APLIST,\$				
			010130			6620	SHUT. DSP				
	010131	006036	4716	07	000	6621	LDP P.PDP,SD,PDP,DL				
	010132	100000	2363	14	000	6622	LDQ ,XOBJ,P.PDP				
	010133	200200	3162	03	000	6623	CANQ ZAPRIO+ZAPRWT,DU				
	010134	000016	6002	04	10152	6624	TZE APFN12,\$				
	010135	006040	4726	07	000	6625	LDP P.PJT,SD,PJT,DL				
	010136	000000	6212	06	000	6626	FAX XPTR,,QL				
	010137	000017	3612	03	000	6627	ANX XPTR,15,DU				
	010140	200001	2343	11	000	6628	SZN 1,XPTR,P.PJT /* IS THE ENTRY ACTIVE				
	010141	000005	6052	04	10146	6629	TPL APFN11,\$ NO				
	010142	200001	7203	11	000	6630	LXL XTMP,1,XPTR,P.PJT				
	010143	000001	7402	04	10144	6631	STX XTMP,APEN1,\$				
	010144	000000	1042	03	000	6632	APEN1 CMPX XOBJ,**,DU /* CHECK KPX IN PJT				
	010145	000027	6002	04	10174	6633	TZE APFN5,\$ YES THIS PROCESS HAS A-PRIORITY				
			010146			6634	APEN11 EQU *				
	010146	200000	3162	03	000	6635	CANQ ZAPRIO,DU /* IS IT ACTIVE NOW				
	010147	000003	6002	04	10152	6636	TZE APFN12,\$ NO				
	010150	000001	0112	54	000	6637	T.APR1 NOP AP.TAL-APBASE,DI				
	010151	000002	0112	54	000	6638	T.APR2 NOP AP.ACT-APBASE,DI				
			010152			6639	APEN12 EQU *				
	010152	000027	3762	04	10201	6640	ANQ APFNMK,\$ /* RESET PRIORITY FLAG				
	010153	100000	7563	14	000	6641	STQ ,XOBJ,P.PDP				
			010154			6642	APEN15 EQU *				
	010154	006024	4706	07	000	6643	LDP P.PID,SD,PID,DL				
	010155	000000	6352	14	000	6644	EAA ,XOBJ				
	010156	000002	7352	00	000	6645	ALS 2				
	010157	003075	7526	00	010	6646	STWS EBWSV *SAVE WSR4-7				
	010160	000001	7727	01	000	6647	LDWS 1,AU,P.PID *CHANGE WSR TO ACCESS SSA				
	010161	600005	2353	00	000	6648	LDA .SATR,,P.SSA *GET ATTRIBUTE - TO CHECK SYSTEM PRIORITY.				
						6649					
	010162	003075	7726	00	010	6650	LDWS EBWSV *RESTOR				
	010163	000400	3152	03	000	6651	CANA .ASYSP,DU *CHECK IF IT IS SYSTEM PROCESS				
	010164	000006	6002	04	10172	6652	TZF APFN3,\$ AND SYSTEM PRIORITY IS GRANTED				
	010165	100000	2352	07	000	6653	LDA ZSYSPR,DL *YES				
	010166	777532	2342	04	7720	6654	SZN AP.ACT,\$ /* CHECK IF THERE ARE ACTIVE				
	010167	000002	6002	04	10171	6655	TZF APFN2,\$ PRIORITY PROCESS NOW				
	010170	100000	2752	03	000	6656	ORA ZSYSPR,DU *YES. SO ASSIG SYSTEM PRIORITY NOW				
			010171			6657	APEN2 EQU *				

CLASS A PRIORITY

010171	100000	2553	14	000	6658	ORSA	,XOBJ,P.PDP	
		010172			6659	APEN3	EQU	*
		010172			6660		OPEN.	DSP
010173	000707	7102	00	010	6661	X.APEN	TRA	X.FNEW+1
		010174			6662	APEN5	EQU	*
		010174			6663		SHUT.	PST
010175	000077	2362	07	000	6664		LDQ	=077,DL
010176	400000	2563	14	000	6665		ORSQ	,XOBJ,P.PST
		010177			6666		OPEN.	PST
010200	777754	7102	04	10154	6667		TRA	APEN15,\$
010201	543577	743760		000	6668	APENMK	ZERO	-1-ZAPRIO-ZAPRWT-ZAPCOD,-1-ZAPCOD-15

/* IF CLASS B OPTION CHECK IT

C L A S S A P R I O R I T Y

					6670 *				
					6671 *	ENTRY POINT 22 ROUTINE			
					6672 *	UPDATE ASSIGN AND DELETE PJT ENTRY			
					6673 *				
					6674 *	REQUEST IS IDENTIFIED BY XID INDEX			
					6675 *	XID = 0 MAKE NEW A-PRIORITY ENTRY			
					6676 *	XID = -1 REFERENCE A ENTRY			
					6677 *	XID = 1-7 DELETE THE ENTRY			
					6678 *				
		000000			6679	XID SET 0			
		010202			6680	APJT EQU *			
	010202	000000	6202 10 000		6681	EAX XID,,XID			
	010203	000052	6042 04 10255		6682	TMT APREF,\$			
	010204	000100	6002 04 10304		6683	TZE APNEW,\$			
					6684 *				
					6685 *	DELFT A-PRIORITY ENTRY ROUTINE			
					6686 *	ARGUMENT XID = PRIORITY POSITION CODE			
					6687 *	ENTRY ADDRESS = XID*AP.ESZ+1			
					6688 *				
		000000			6689	P.SN1 SET P0			
		010205			6690	APDLT EQU *			
	010205	000010	1002 03 000		6691	CMPX XID,AP.NSZ+1,DU	*CHECK PRIORITY POSITION		
	010206	003527	6032 00 010		6692	TRC EXIT1	TOO HIGH - ERROR		
	010207	000000	6362 10 000		6693	EAQ ,XID	*SEAVE POSITION CODE		
	010210	000001	7362 00 000		6694	QLS 1	/* OFFSET ADDRESS		
					6695	SHUT. DSP			
					6696	APDLTT EQU *	/* ENTRY FROM TRACE DUMPER		
	010212	000254	7012 04 10466		6697	TSX Z,PJTST,\$			
	010213	200001	2353 02 000		6698	LDA 1,QU,P,PJT			
	010214	000036	6052 04 10252		6699	TPL APDLTE,\$	/* NOT ACTIVE		
	010215	000000	6242 05 000		6700	EAX XOBJ,,AL			
	010216	300000	3752 03 000		6701	ANA AP.RVD+AP.OPR,DU			
	010217	200001	7553 02 000		6702	STA 1,QU,P,PJT	/* RESET AP.EXC, TQTM, KPX		
	010220	100000	3152 03 000		6703	CANA AP.OPR,DU			
	010221	000003	6012 04 10224		6704	TNZ APDLT1,\$			
	010222	200000	3152 03 000		6705	CANA AP.RVD,DU			
	010223	000003	6012 04 10226		6706	TNZ APDLT2,\$	/* RESERVED ENTRY - SNUMB IS NOT RESET		
					6707	APDLT1 EQU *			
	010224	000077	2352 07 000		6708	LDA =077,DL			
	010225	200000	3553 02 000		6709	ANSA ,QU,P,PJT	/* RESET SNUMB		
					6710	APDLT2 EQU *			
	010226	000245	7012 04 10473		6711	TSX Z,PJTOP,\$			
	010227	006036	4716 07 000		6712	LDP P,PDP,SD,PDP,DL			
	010230	100000	2353 14 000		6713	LDA ,XOBJ,P,PDP			
	010231	200000	3152 03 000		6714	CANA ZAPRIO,DU	/* IF ACTIVE NOW RESET COUNTER		
	010232	000003	6002 04 10235		6715	TZE APDLT3,\$			
	010233	000002	0112 54 000		6716	I.APL1 NOP AP.ACT-APBASE,DI			
	010234	000001	0112 54 000		6717	I.APL2 NOP AP.TAL-APBASE,DI			
					6718	APDLT3 EQU *			
	010235	777744	3752 04 10201		6719	ANA APFNMK,\$	/* RESET ZAPRIO, ZAPRWT, ZAPCOD		

CLASS A PRIORITY

010236	100000	7553	14	000	6720	STA	,XOBJ,P,PDP	
					010237	6721	OPEN.	DSP
010240	006142	4706	07	000	6722	LDP	P,SN1,SD,SN1,DL	
010241	000000	2353	14	000	6723	LDA	,XOBJ,P,SN1	
010242	770000	3752	07	000	6724	ANA	=0770000,DL	/* GET URGENCY ORIGINAL
010243	000000	6362	14	000	6725	EAQ	,XOBJ	
010244	000022	7732	00	000	6726	LRL	18	
010245	000022	7762	00	000	6727	QLR	18	/* MAKE ENABLE REQUEST
010246	002733	7032	00	010	6728	TSX	ENBLX,ENABL	
010247	000000	0112	07	000	6729	NOP	,DL	
010250	000154	7022	04	10424	6730	TSX	APLSTX,APLIST,\$	
010251	003524	7102	00	010	6731	TRA	EXIT0	
					010252	6732	APDLTE EQU	*
010252	000221	7012	04	10473	6733	TSX	Z,PJTOP,\$	
					010253	6734	OPEN.	DSP
010254	003527	7102	00	010	6735	TRA	EXIT1	
					6736	*		
					6737	*	REFERENCE AN ENTRY IN PJT BY KPX	
					6738	*	ARGUMENT	XID = -1
					6739	*		XOBJ = KPX OF OBJECT PROCESS TO CHECK IN PJT
					6740	*	RETURN	A = SNUMB
					6741	*		Q = PJT ENTRY +1 WORD
					6742	*		NOTE. BIT 33-35 WILL BE PRIORITY POSITION CODE
					6743	*		MUST BE CONVERTED FROM ZAPCOD
					6744	*		
		000004			6745	XOBJ	SET	4
		000001			6746	XPTR	SET	1
					010255	6747	APREF	EQU *
010255	777777	1002	03	000	6748	CMPX	XID,-1,DU	*CHECK REQUEST.
010256	003527	6012	00	010	6749	TNZ	EXIT1	NOT VALID - SO DENIAL RETURN
010257	000145	7022	04	10424	6750	TSX	APLSTX,APLIST,\$	
010260	000206	7012	04	10466	6751	TSX	Z,PJTST,\$	
010261	000000	6352	14	000	6752	EAA	,XOBJ	
010262	000022	7712	00	000	6753	ARL	18	
010263	777777	6362	00	000	6754	EAQ	-1	
010264	000002	6212	00	000	6755	EAX	XPTR,AP,ESZ	
010265	016300	5202	02	000	6756	RPT	AP,NSZ,AP,ESZ,TZE	
010266	200001	2113	11	000	6757	CMK	1,XPTR,P,PJT	/* SEARCH FOR THE KPX IN PJT
010267	000013	6012	04	10302	6758	TNZ	APREFE,\$	NOT FOUND
010270	777775	6352	11	000	6759	FAA	-AP,ESZ-1,XPTR	/* GET PRIORITY LEVEL CODE
010271	000023	7712	00	000	6760	ARL	19	
010272	277776	2363	11	000	6761	LDQ	-AP,ESZ,XPTR,P,PJT	AND CONTROL DATA
010273	000022	7732	00	000	6762	LRL	18	
010274	000022	7762	00	000	6763	QLR	18	
010275	277775	2353	11	000	6764	LDA	-AP,ESZ-1,XPTR,P,PJT	
010276	000175	7012	04	10473	6765	TSX	Z,PJTOP,\$	
					010277	6766	.EXIT	0,(A,Q)
							INHIB	SAVE,ON
010277	000002	6306	04	10301		EPPRO	**2,\$	
010300	700006	7103	00	000		TRA	.CREXT,,P.CR	

C L A S S A P R I O R I T Y

010301	001400	000000	000		ZFR0	.RG,0	
					INHIB	RESTORE	
		010302	6767	APREFE	EQU	*	
010302	000171	7012	04	10473	6768	TSX	Z,PJT0P,\$
010303	003527	7102	00	010	6769	TRA	EXIT1
			6770	*			
			6771	*		MAKE UP NEW ENTRY IN PJT TABLE	
			6772	*		ARGUMENT	XID = 0
			6773	*		XAPL = PRIORITY POSITION CODE	
			6774	*		IF -1, OPERATOR REQUEST	
			6775	*		Q = TIME QUANTUM IN MS (8-17)	
			6776	*		IF ZERO, STANDARD TIME	
			6777	*		A = SNUMB IN BCD	
			6778	*			
		000003	6779	XAPLVL	SET	3	
		000001	6780	XAPL	SET	1	
		000001	6781	XPTR	SET	1	
		000000	6782	XTMP	SET	0	
		010304	6783	APNEW	EQU	*	
010304	000000	6232	11	000	6784	EAX	XAPLVL,,XAPL
010305	000117	7022	04	10424	6785	TSX	APLSTX,APLIST,\$ /* CHECK PRIORITY LIST
010306	006144	4706	07	000	6786	LDP	P.SNB,SD.SNB,DL
010307	000077	2362	07	000	6787	LDQ	=077,DL
010310	600214	2353	00	000	6788	LDA	.STMPA,,P.SSA /* SNUMB
010311	000112	3752	04	10423	6789	ANA	APSNB,\$
010312	000001	6212	00	000	6790	EAX	XPTR,1
010313	777457	7202	04	7772	6791	LXLO	APRPTX,\$
010314	000000	5202	01	000	6792	RPTX	,1 /* LOOK FOR THE SNUMB REQUESTED
010315	000000	2113	11	000	6793	CMK	,XPTR,P.SNB
010316	000070	6012	04	10406	6794	TNZ	APNE6,\$ NOT FOUND. DENY
010317	777777	6242	11	000	6795	EAX	XOBJ,-1,XPTR
		010320	6796			SHUT.	DSP
010321	000145	7012	04	10466	6797	TSX	Z,PJTST,\$
010322	000000	6362	13	000	6798	FAQ	,XAPLVL /* IS THIS OPERATER REQUEST
010323	000064	6052	04	10407	6799	TPL	APNE7,\$ NO
010324	000064	2212	04	10410	6800	LDX	XPTR,I,APN2,\$ /* GET ENTRY ADDRESS FOR OPERATOR
010325	000057	6002	04	10404	6801	TZF	APNE62,\$ NO ENTRY - DENY REQUEST
		010326	6802	APNE2	EQU	*	
010326	200001	2343	11	000	6803	SZN	1,XPTR,P,PJT /* ACTIVE NOW
010327	000045	6042	04	10374	6804	TMI	APNE6,\$ YES
010330	000077	2362	07	000	6805	LDQ	=077,DL /* CLEAR SNUMB
010331	200000	3563	11	000	6806	ANSQ	,XPTR,P,PJT
010332	200000	2553	11	000	6807	ORSA	,XPTR,P,PJT
010333	200001	4443	11	000	6808	SXL	XOBJ,1,XPTR,P,PJT
		010334	6809	APNE0	EQU	*	
010334	600215	2363	00	000	6810	LDQ	.STMPQ,,P.SSA /* REQUEST PARAMETER
010335	001777	3762	03	000	6811	ANQ	=01777,DU TIME SLICE
010336	000002	6012	04	10340	6812	TNZ	APNE1,\$
010337	001615	2362	00	010	6813	LDQ	TQTM /* NOT SPECIFIED - STANDARD
		010340	6814	APNE1	EQU	*	

CLASS A PRIORITY

010340	400000	2762	03	000	6815	ORQ	AP,EXC,DU	
010341	200001	2563	11	000	6816	ORSQ	1,XPTR,P,PJT	
010342	000002	6202	00	000	6817	EAX	XTMP,2	/* ACTIVATE A-PRIORITY CELL
010343	700302	7403	00	000	6818	STX	XTMP,,CRPJT,,P,CR	
010344	006036	4716	07	000	6819	LDP	P,PDP,SD,PDP,DL	
010345	100000	2363	14	000	6820	LDQ	,XOBJ,P,PDP	
010346	200200	3162	03	000	6821	CANQ	ZAPRIO+ZAPRWT,DU	/* IF ALREADY PRIORITY GIVEN
010347	000016	6012	04	10365	6822	TNZ	APNE5,\$	IT MUST BE UPDATE OF PARAMETER
010350	777631	3762	04	10201	6823	ANQ	APFNMK,\$	/* RESET RELATED FIELD
010351	000200	2762	03	000	6824	ORQ	ZAPRWT,DU	
010352	100000	7563	14	000	6825	STQ	,XOBJ,P,PDP	
010353	000000	6362	13	000	6826	EAQ	,XAPLVL	
010354	000003	6052	04	10357	6827	TPL	APNE3,\$	
010355	000033	2362	04	10410	6828	LDQ	I,APN2,\$	/* OPERATOR REQUEST
010356	000001	7722	00	000	6829	QRL	1	SO ADJUST
		010357			6830	APNE3	EQU	*
010357	000021	7722	00	000	6831	QRL	17	
010360	100000	2563	14	000	6832	ORSQ	,XOBJ,P,PDP	/* SET PJT OFFSET
010361	200000	2363	06	000	6833	LDQ	,QL,P,PJT	
010362	000007	3762	07	000	6834	ANQ	=07,DL	
010363	000013	7362	00	000	6835	QLS	11	
010364	100000	2563	14	000	6836	ORSQ	,XOBJ,P,PDP	AND PRIORITY LEVEL CODE
		010365			6837	APNE5	EQU	*
010365	000106	7012	04	10473	6838	TSX	Z,PJTOP,\$	
		010366			6839	OPEN.	DSP	
010367	000000	6362	14	000	6840	EAQ	,XOBJ	
010370	770000	2762	07	000	6841	ORQ	=0770000,DL	/* GIVE MAX URGENCY
010371	002733	7032	00	010	6842	TSX	ENBLX,ENABL	AND ENABLE HTM
010372	000000	0112	07	000	6843	NOP	,DL	
010373	003524	7102	00	010	6844	TRA	EXIT0	
		010374			6845	APNE6	EQU	*
010374	000077	2362	07	000	6846	LDQ	=077,DL	
010375	200000	2113	11	000	6847	CMK	,XPTR,P,PJT	/* CHECK SNUMB
010376	000006	6012	04	10404	6848	TNZ	APNE62,\$	NOT MUCH DENY
010377	000003	7442	04	10402	6849	STX	XOBJ,APNE61,\$	
010400	200001	2363	11	000	6850	LDQ	1,XPTR,P,PJT	
010401	000000	6362	06	000	6851	EAQ	,QL	/* CHECK KPX
010402	000000	1162	03	000	6852	APNE61	CMPQ	** ,DU
010403	777731	6002	04	10334	6853	TZE	APNE0,\$	
		010404			6854	APNE62	EQU	*
010404	000067	7012	04	10473	6855	TSX	Z,PJTOP,\$	/* TAKE DENIAL RETURN
		010405			6856	OPEN.	DSP	
		010406			6857	APNE63	EQU	*
010406	003527	7102	00	010	6858	TRA	EXIT1	
		010407			6859	APNE7	EQU	*
010407	000001	7362	00	000	6860	QLS	1	
010410	000000	1162	03	000	6861	I,APN2	CMPQ	** ,DU
010411	777773	6002	04	10404	6862	TZE	APNE62,\$	/* IF IT IS OPERATOR'S ENTRY
010412	000000	6212	02	000	6863	EAX	XPTR,,QU	DENY REQUEST
010413	200001	2363	02	000	6864	LDQ	1,QU,P,PJT	

CLASS A PRIORITY

010414	200000	3162	03	000	6865	CANQ	AP.RVD,DU	/* IF IT IS NOT RESERVED ENTRY
010415	777711	6002	04	10326	6866	TZE	APNE2,\$	SNUMB IF FREE
010416	000077	2362	07	000	6867	LDQ	=077,DL	/* RESERVED ENTRY. SNUMB IS
010417	200000	2113	11	000	6868	CMK	,XPTR,P,PJT	SPECIFIED AT START UP
010420	777764	6012	04	10404	6869	TNZ	APNE62,\$	NOT MUCH DENY
010421	200001	4443	11	000	6870	SXL	XOBJ,1,XPTR,P,PJT	
010422	777712	7102	04	10334	6871	TRA	APNE0,\$	
010423	777777777700			000	6872	APSNR	OCT	777777777700
					6873	*		
					6874	*		
					6875	*	UPDATE CLASS A PRIORITY JOB TABLE - CHECK IF ANY ACTIVE	
					6876	*	ENTRY SHOULD BE DEACTIVATED	
					6877	*		
		000002			6878	APLSTX	SFT	2
		000000			6879	P.SNR	SFT	PO
		000000			6880	XTMP	SET	0
		000001			6881	XPJTP	SET	1
		000000			6882	XAPKPX	SET	0
		010424			6883	APLIST	EQU	*
010424	700302	7163	00	000	6884	XEC	,CRPJT,,P.CR	/* CHECK IF ANY ACTIVE
010425	000000	7102	12	000	6885	TRA	,APLSTX	NO. SKIP LIST MAINTENANCE
010426	000040	7012	04	10466	6886	TSX	Z,PJTST,\$	
		010427			6887	SHUT.	PST	
010430	006144	4706	07	000	6888	LDP	P.SNB,SD.SNB,DL	
010431	000034	4502	04	10465	6889	STZ	APLMRK,\$	/* CLEAR COUNTER OF ACTIVES
010432	000016	6212	00	000	6890	EAX	XPJTP,AP.ESZ*AP.NSZ	
		010433			6891	APLST1	EQU	*
010433	200001	2363	11	000	6892	LDQ	1,XPJTP,P,PJT	
010434	000007	6052	04	10443	6893	TPL	APLST2,\$	/* THIS ENTRY NOT ACTIVE - SKIP
010435	000000	6202	06	000	6894	EAX	XAPKPX,,QL	
010436	200000	2353	11	000	6895	LDA	,XPJTP,P,PJT	
010437	000077	2362	07	000	6896	LDQ	=077,DL	
010440	000000	2113	10	000	6897	CMK	,XAPKPX,P.SNB	
010441	000014	6012	04	10455	6898	TNZ	APLST5,\$	/* SNUMB IS NOT REGISTERED IN SYSTEM
010442	000023	0542	04	10465	6899	AOS	APLMRK,\$	/* COUNT UP ACTIVES
		010443			6900	APLST2	EQU	*
010443	777776	6212	11	000	6901	EAX	XPJTP,-AP.ESZ,XPJTP	
010444	777767	6056	04	10433	6902	TPNZ	APLST1,\$	/* GO NEXT PJT ENTRY CHECK
010445	000001	6202	00	000	6903	EAX	XTMP,1	
010446	000017	2342	04	10465	6904	SZN	APLMRK,\$	/* UPDATE .CRPJT CELL.
010447	000002	6002	04	000	6905	TZE	2,IC	NO ACTIVES. SO SET SKIP
010450	000002	6202	00	000	6906	EAX	XTMP,2	
010451	700302	7403	00	000	6907	STX	XTMP,,CRPJT,,P.CR	
		010452			6908	OPEN.	PST	
010453	000020	7012	04	10473	6909	TSX	Z,PJTOP,\$	
010454	000000	7102	12	000	6910	TRA	,APLSTX	
		010455			6911	APLST5	EQU	*
010455	200001	2363	11	000	6912	LDQ	1,XPJTP,P,PJT	
010456	300000	3762	03	000	6913	ANQ	AP.RVD+AP.OPR,DU	/* RESET KPX, AP.EXC. FLAG
010457	200001	7563	11	000	6914	STQ	1,XPJTP,P,PJT	

CLASS A PRIORITY

010460	200000	3162	03	000	6915	CANQ	AP.RVD,DU	/* IF THE ENTRY WAS RESERVED
010461	000003	6012	04	10464	6916	TNZ	API,ST6,\$	AT START UP . LEAVE SNUMB
010462	000077	2352	07	000	6917	LDA	=077,DL	
010463	200000	3553	11	000	6918	ANSA	,XPJTP,P,PJT	
		010464			6919	APLST6	EQU	*
010464	777757	7102	04	10443	6920	TRA	APLST2,\$	
		010465			6921	APLMRK	BSS	1
					6922	*		
					6923	*	SHUT/OPEN ROUTINE	
					6924	*		
		010466			6925	PJTST	EQU	*
010466	006040	4726	07	000	6926	LDP	P,PJT,SD,PJT,DL	
		010467			6927	.SHUT	.CRPJT,,P,CR	
010472	000000	7102	11	000	6928	TRA	,Z	
		010473			6929	PJTOP	EQU	*
		010473			6930	.OPEN	.CRPJT,,P,CR	
010475	006133	4726	07	000	6931	LDP	P,KL,SD,KL,DL	
010476	000000	7102	11	000	6932	TRA	,Z	
		010477			6933	.OPTE.	AP	

SYSTEM TRACE DUMP

010477 6935 .OPTS. TD,TRDUMP

6936 *
 6937 * THIS ROUTINE SUPPORTS TRACE DUMPER PROGRAM WHICH DUMPS SD,TT0
 6938 * OR SD,TT1 SEGMENT ONTO TAPE FILE AT EXCHANGE OF TRACE SEGMENT.

- 6939 *
- 6940 * 1. POST TO THE DUMPER IN TRACE-PUT ROUTINE
- 6941 * 2. IF POSTED, DISPATCH TO THE DUMPER IN SELECT
- 6942 * 3. GIVE A-PRIORITY TO THE DUMPER IN EP 63 ROUTINE
- 6943 * 4. ENABLE OR DISABLE FUNCTION 1. 2. IN EP 63 ROUTINE

6944 *
 6945 *
 6946 * EP 63 ROUTINE.
 6947 * ASSIGN OR DELTE TRACE DUMPER PRIORITY
 6948 * AND ENABLE OR DISABLE TRACE DUMP INTERFACE

6949 *
 6950 * PRFCAL AQ = PASSWORD
 6951 * X4 = 0 ASSIGN PRIORITY AND ENABLE INTERFACE
 6952 * = 1 DELETE PRIORITY AND DISABLE INTERFACE

6953 *
 6954 * .CALL .MDISP,63
 6955 * ERROR RETURN
 6956 * NORMAL RETURN

6957 *									
6958	010500				TRD63	EQU	*		
6959	010500	700264	1153	17	000	CMPA	.CRLCK,PN,P.CR	/* CHECK VALIDITY OF REQUESTER,	
6960	010501	003524	6012	00	010	TNZ	EXITO	IF NOT MATCH, DENAI. RETURN	
6961	010502	600003	1163	00	000	CMPQ	.SALT,,P.SSA		
6962	010503	003524	6012	00	010	TNZ	EXITO		
6963	010504	000001	1042	03	000	CMPX4	1,DU	/* WHAT REQUEST.	
6964	010505	000054	6002	04	10561	TZF	TDLT,\$	DELETE PRIORITY AND DISABLE	
6965	010506	000000	1042	03	000	CMPX4	,DU	ASSIGN PRIORITY AND ENABLE	
6966	010507	003524	6012	00	010	TNZ	EXITO	OTHERWISE, ERROR	

6967 *
 6968 * ASSIGN PRIORITY AND ENABLE INTERFACE

6969 *									
6970	010510	000132	2342	04	10642	SZN	TDMKPX,\$	/* CHECK IF THERE IS TRACE DUMPER	
6971	010511	003524	6012	00	010	TNZ	EXITO	WORKING ALREADY. IF SO, NO MORE.	

6972					010512	SHUT.	DSP		
6973	010513	000137	7012	04	10652	TSX	Z,TTPST,\$		
6974	010514	000127	2352	04	10643	LDA	TDTPUT,\$	/* CHANGE OP. TO ENABLE INTERFACE.	
6975	010515	007033	7552	00	010	STA	X.TPUT	X.TPUT IS TO POST EVENT	
6976	010516	000127	2352	04	10645	LDA	TDSLCT,\$	AND	
6977	010517	001430	7552	00	010	STA	X.SLCT	X.SLCT IS TO CATCH THE EVENT	

6978	010520	000136	7012	04	10656	TSX	Z,TTPDP,\$		
6979	010521	000121	7462	04	10642	STX	KPX,TDMKPX,\$	/* LOG-ON KPX	

6980	010522	006036	4716	07	000	LDP	P,PDP,SD,PDP,DL		
6981	010523	000124	2342	04	10647	SZN	TDAPI,\$	/* CHECK A-PRIORITY OPTION	

6982	010524	000005	6012	04	10531	TNZ	TDF1,\$		
6983	010525	200000	6222	00	000	EAX	XPDP,ZAPRIO	/* NO A-PRIORITY OPTION, SO GIVE IT	
6984	010526	100000	7423	16	000	STX	XPDP,,KPX,P,PDP	A-PRIORITY	

SYSTEM TRACE DUMP

				010527	6985	OPEN.	DSP		
	010530	003527	7102	00	010	6986	TRA	EXIT1	
				010531	6987	TDE1	EQU	*	
	010531	000117	2352	04	10650	6988	LDA	TDAPF,\$	/* GIVE IT INACTIVE A-PRIORITY
	010532	100000	7553	16	000	6989	STA	,KPX,P,PDP	IT WILL BE ACTIVATED IN PUTPRQ
	010533	000000	6212	00	000	6990	TDEPT	EAX	XPTR,**
	010534	006144	4706	07	000	6991	LDP	P,SNB,SD,SNB,DL	/* GET PJT ENTRY INDEX FOR DUMPER
	010535	000000	2353	16	000	6992	LDA	,KPX,P,SNB	/* GET SNUMB
	010536	006040	4726	07	000	6993	LDP	P,PJT,SD,PJT,DL	
	010537	200000	2363	11	000	6994	LDQ	,XPTR,P,PJT	
	010540	200000	7553	11	000	6995	STA	,XPTR,P,PJT	/* SET UP PJT ENTRY
	010541	000100	3352	07	000	6996	LCA	=0100,DL	/* RESET BIT 30 - 35
	010542	200000	3553	11	000	6997	ANSA	,XPTR,P,PJT	
	010543	000077	3762	07	000	6998	ANQ	=077,DL	/* SET PRIORITY LEVEL CODE
	010544	200000	2563	11	000	6999	ORSQ	,XPTR,P,PJT	
	010545	000104	2352	04	10651	7000	LDA	TDAPJ,\$	SNUMB, FLAG, KPX
	010546	001615	2752	00	010	7001	ORA	TQTM	
	010547	200001	2553	11	000	7002	ORSA	1,XPTR,P,PJT	
	010550	200001	4463	11	000	7003	SXL	KPX,1,XPTR,P,PJT	
	010551	000002	6202	00	000	7004	EAX	XTMP,2	/* ACTIVATE PJT CELL
	010552	700302	7403	00	000	7005	STX	XTMP,,CRPJT,,P,CR	
				010553	7006	OPEN.	DSP		
	010554	000000	6362	16	000	7007	EAQ	,KPX	
	010555	770000	2762	07	000	7008	ORQ	=0770000,DL	/* MAKE ENABLE WORD WITH TOP URGENCY
	010556	002733	7032	00	010	7009	TSX	ENBLX,ENABL	AND ENABLE IT
	010557	000000	0112	07	000	7010	NOP	,DL	
	010560	003527	7102	00	010	7011	TRA	EXIT1	
				7012	*				
				7013	*			DELETE PRIORITY AND DISABLE INTERFACE	
				7014	*				
				010561	7015	TDLT	EQU	*	
	010561	000061	1062	04	10642	7016	CMPX	KPX,TDMKPX,\$	/* CHECK VALIDITY BY KPX
	010562	003524	6012	00	010	7017	TNZ	EXIT0	
				010563	7018	SHUT.	DSP		
	010564	000066	7012	04	10652	7019	TSX	Z,TTPST,\$	
	010565	000057	2352	04	10644	7020	LDA	TDTPUT+1,\$	/* RESET INTERFACE LINKAGE OP.
	010566	007033	7552	00	010	7021	STA	X,TPUT	TO DISABLE INTERFACE
	010567	000057	2352	04	10646	7022	LDA	TDSLCT+1,\$	
	010570	001430	7552	00	010	7023	STA	X,SLCT	
	010571	000065	7012	04	10656	7024	TSX	Z,TIPOP,\$	
	010572	000050	4502	04	10642	7025	STZ	TDMKPX,\$	/* LOG-OFF KPX
	010573	006036	4716	07	000	7026	LDP	P,PDP,SD,PDP,DL	
	010574	000053	2342	04	10647	7027	SZN	TDAPI,\$	/* CHECK A-PRIORITY OPTION
	010575	000005	6012	04	10602	7028	TNZ	TDL1,\$	
	010576	577777	6222	00	000	7029	EAX	XPDP,-1-ZAPRIO	/* RESET A-PRIORITY BIT
	010577	100000	3423	16	000	7030	ANSX	XPDP,,KPX,P,PDP	
				010600	7031	OPEN.	DSP		
	010601	003527	7102	00	010	7032	TRA	EXIT1	
				010602	7033	TDL1	EQU	*	
	010602	777731	2362	04	10533	7034	LDQ	TDFPT,\$	

SYSTEM TRACE DUMP

010603	000000	6362	02	000	7035	FAQ	,QU		
010604	000274	7102	00	000	7036	I.TDL1 TRA	APDLTT-APBASE	/* DELETE PRIORITY	
					7037	*			
					7038	*	POST ROUTINE AT TRACE BUFFER EXCHANGE		
					7039	*			
		010605			7040	TDPOST EQU	*		
010605	700344	7573	00	000	7041	STAQ	.CRTTP+2,,P.CR		
010606	700343	0543	00	000	7042	AOS	.CRTTP+1,,P.CR	/* COUNT UP	
010607	000032	7202	04	10641	7043	LXLO	TDCNT,\$	/* SET TRACE DUMP SERIAL NUMBER	
010610	600007	7403	00	000	7044	STX0	7,,P6		
010611	000030	0542	04	10641	7045	AOS	TDCNT,\$	/* COUNT UP SEQUENCE NO.	
010612	007034	7102	00	010	7046	TRA	X.TPUT+1		
					7047	*			
					7048	*	CHECK EVENT SIGNAL BEFORE DISPATCH QUEUE SCAN		
					7049	*			
		000001			7050	P.PID SET	P1		
		010613			7051	TDCHCK EQU	*		
010613	000037	7012	04	10652	7052	TSX	Z,TTPST,\$		
010614	700343	7203	00	000	7053	LXL	XTMP,,CRTTP+1,,P.CR	/* ARE THERE POST SIGNAL	
010615	000004	6012	04	10621	7054	TNZ	TDCK2,\$	YES	
		010616			7055	TDCK1 EQU	*		
010616	000040	7012	04	10656	7056	TSX	Z,TTPOP,\$		
010617	300037	2263	16	000	7057	LDX	KPX,D,PRQ,KPX,P,PRQ	/* DO NORMAL OP.	
010620	001431	7102	00	010	7058	TRA	X.SLCT+1		
		010621			7059	TDCK2 EQU	*		
010621	700343	2203	00	000	7060	LDX	XTMP,,CRTTP+1,,P.CR	/* CHECK TRACE DUMPER STATUS	
010622	777774	6002	04	10616	7061	TZF	TDCK1,\$	NOT READY	
010623	000017	1002	04	10642	7062	CMPX	XTMP,TDMKPX,\$	/* CHECK ALSO	
010624	777772	6012	04	10616	7063	TNZ	TDCK1,\$	NOT MATCH. SOME ERROR IGNORE	
010625	000000	6262	10	000	7064	EAX	KPX,,XTMP	/* DISPATCH TO THE DUMPER	
010626	700343	6403	00	000	7065	ERSX	XTMP,,CRTTP+1,,P.CR	AND CLEAR KPX	
010627	000027	7012	04	10656	7066	TSX	Z,TTPOP,\$		
010630	000000	6352	16	000	7067	EAA	,KPX		
010631	000002	7352	00	000	7068	ALS	2		
010632	100000	7727	01	000	7069	LDWS	,AU,P,PID		
010633	100001	7727	01	000	7070	LDWS	1,AU,P,PID		
010634	100002	7737	01	000	7071	LDSS	2,AU,P,PID		
010635	400000	2363	16	000	7072	LDQ	,KPX,P,PST		
010636	100000	6762	03	000	7073	ERQ	PS.EXC,DU		
010637	400000	7563	16	000	7074	STQ	,KPX,P,PST		
010640	001510	7102	00	010	7075	TRA	SLCT20		
					7076	*			
					7077	*	DATA COMMON ETC		
					7078	*			
010641	000000	000001		000	7079	TDCNT ZERO	0,1	/* BSN OF TRACE BUFFER	
010642	000000	000000		000	7080	TDMKPX ZERO		/* KPX OF TRACE DUMPER	
		010643			7081	TDTPUT EQU	*		
010643	000106	7102	00	000	7082	I.TPUT TRA	TDPOST-TDBASE	/* INTERFACE LINKINK OP.	
010644	700344	7573	00	000	7083	STAQ	.CRTTP+2,,P.CR	NORMAL OP WHFN DISABLED	
		010645			7084	TDSLCT EQU	*		

S Y S T E M T R A C E D U M P

010645	000114	7102 00 000	7085	I.TDSL	TRA	TDCHCK-TDBASE	
010646	300037	2263 16 000	7086		LDX	KPX,D.PRO,KPX,P.PRO	
	010647		7087	TDAPJ	BSS	1	/* INDICATOR OF A-PRIORITY OPTION
			7088				NON-ZERO = SFLECTED
010650	000200	034000 000	7089	TDAPF	ZERO	ZAPRWT,ZAPCOD	/* A-PRIORITY PATTERN
			7090				LOWER IS INITIALIZED
010651	600000	000000 000	7091	TDAPJ	ZFRO	AP.EXC+AP.RVD	/* PJT ENTRY +1 WORD
			7092				
	010652		7093	TTPST	EQU	*	
	010652		7094		.SHUT	.CRTTP-1,,P.CR	
010655	000000	7102 11 000	7095		TRA	,Z	
	010656		7096	TPOPOP	EQU	*	
	010656		7097		.OPEN	.CRTTP-1,,P.CR	
010660	000000	7102 11 000	7098		TRA	,Z	
	010661		7099		.OPTE.	TD	

MODULF COUNT ROUTINE

010661 000000011207 000

010662 7101 E.OPTS. MC.MCOUNT

7102 *

7103 * THIS ROUTINE COUNT MODULE LOADING/PUSHDOWN I/O

7104 * (PHYSICAL I/O) AND COUNT MACRO CALL

7105 *

010663 7106 MCTBL1 BSS .NRMOD

011663 7107 MCTBL2 BSS .NRMOD

012663 7108 MCTBL3 BSS .NRMOD

U = M#, L = # RELOADS WHEN IN SRM 00000020

7109

013663 7110 MCLD EQU *

013663 600103 7203 00 000 7111 LXLO .SLOAD+1,,P.SSA

013664 001001 0542 10 000 7112 I.MCLD AOS MCTBL2-MCBASE,0

013665 000000 7102 11 000 7113 TRA .LOADX

7114

013666 7115 MCPD EQU *

013666 500000 7203 12 000 7116 LXLO .XPAGE,P.SRM

013667 000001 2212 03 000 7117 LDX1 I,DU

013670 001001 0412 10 000 7118 I.MCPD ASX1 MCTBL2-MCBASE,0

013671 600012 2213 51 000 7119 LDX PUSHX,,SSA,I,P.SSA /* RECOVER X1

013672 000001 7102 11 000 7120 TRA I,PUSHX

7121

013673 7122 MCAL EQU *

000000 7123 P.MDD SET P.MCRO

013673 000001 0542 01 000 7124 I.MCAL AOS MCTBL1-MCBASE,AU

013674 006134 4706 07 000 7125 LDP P.MDD,SD.MDD,DL

013675 004053 7102 00 010 7126 TRA X.FNT+1

7127 *

7128 * ENTRY POINT 62 FOR MODULE COUNT TABLE DUMPER

7129 *

013676 7130 MC62 EQU *

013676 000004 6716 04 13702 7131 LDD P1.MCVEC,\$

013677 7132 .EXIT I,P1

INHIB SAVE,ON

013677 000002 6306 04 13701 EPPRO **2,\$

013700 700006 7103 00 000 TRA .CREXT,,P.CR

013701 000200 000001 000 ZERO .RG,1

INHIB RESTORE

013702 002777710640 000 7133 MCVEC EVEC .ISR,MCTBL1-MCBASE,,NRMOD*3,R

00000020

013703 000001001762 000

013703 7134 I.MCVC EQU MCVEC+1

013704 7135 .OPTE. MC

MONITOR TRACE OPTION

013704	7137	.OPTS.	MN.MONITR		00000020
	7138 *				00000020
	7139 *	WHEN INVOKED BY CALL TO EP#61, THIS OPTION CAUSES A CALL			00000020
	7140 *	TO A MONITOR MODULE ON EVERY TRACE ENTRY MADE			00000020
	7141 *				00000020
	7142 *	PRECALL PARAMETER:			00000020
	7143 *	AR = ZERO TO INVOKE MONITOR			00000020
	7144 *	AR NOT ZERO TO CANCEL MONITOR			00000020
	7145 *				00000020
	7146 *	CALLING SEQUENCE:			00000020
	7147 *	.CALL .MDISP,61			00000020
	7148 *	ERROR RETURN, MONITOR MODULE NOT LOADED			00000020
	7149 *	GOOD RETURN			00000020
	7150 *				00000020
013705	7151	MONTR	NULL		00000020
013705	006145 4766 07 000	LDP6	SD.SSA,DL	COME HERE ON EACH TRACE	00000020
013706	000001713400 000	MNTRC	ICLIMB	**0,1 CALL MONITOR MODULE	00000020
013706	000001713400 000	VFD	18/1,09/713,1/1,1/0,1/0,6/M.		
013707	000000200000 000	VFD	1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/**		
013710	000000 7102 14 000	7154	TRA	0,4 NORMAL TRACE RETURN	00000020
	7155 *				00000020
013711	000000 1152 07 000	7156	MN61	NULL ENTER HERE TO INVOKE OR CANCEL	00000020
013711	000000 1152 07 000	7157	CMPA	0,DL CHECK THE REQUEST	00000020
013712	000017 6012 04 13731	7158	TNZ	MNOFF,\$ + CANCEL REQUEST	00000020
013713	006134 4706 07 000	7159	LDP	PO,SD,MDD,DL MUST INITIALIZE CLIMB	00000020
013714	000573 2353 00 000	7160	LDA	.MMUMM,\$,PO	00000020
013715	007777 3752 07 000	7161	ANA	=07777,DL	00000020
013716	000004 6012 04 13722	7162	TNZ	MN61A,\$	00000020
013717	000002 6306 04 13721	7163	.EXIT	+ ERROR RETURN *CUZ MODULE NOT PRESENT	00000020
			INHIB	SAVE,ON	
013717	000002 6306 04 13721		EPPRO	*+2,\$	
013720	700006 7103 00 000		TRA	.CREXT,\$,P.CR	
013721	000000 000000 000		ZERO	.RG,	
			INHIB	RESTORE	
013722	200000 2752 07 000	7164	MN61A	ORA =0200000,DL APPEND MASTER MODE BIT TO SEGID	00000020
013723	777764 7552 04 13707	7165	STA	MNTRC+1,\$ AND INITIALIZE CLIMB	00000020
013724	000012 2352 04 13736	7166	LDA	I,MNTR,\$ INITIALIZE TRACE TO COME THIS WAY	00000020
013725	007040 7552 00 010	7167	STA	TPUTEX	00000020
013726	000000 000001 000	7168	.EXIT	1 RETURN	00000020
			INHIB	SAVE,ON	
013726	000002 6306 04 13730		EPPRO	*+2,\$	
013727	700006 7103 00 000		TRA	.CREXT,\$,P.CR	
013730	000000 000001 000		ZERO	.RG,1	
			INHIB	RESTORE	
013731	777754 2352 04 13705	7169	MNOFF	LDA MONTR,\$ CANCEL REQUEST, RESTORE TRACE EXIT	00000020
013732	007040 7552 00 010	7170	STA	TPUTEX TO NOT COME THIS WAY	00000020
013733	000002 6306 04 13735	7171	.EXIT	1	00000020
			INHIB	SAVE,ON	
013733	000002 6306 04 13735		EPPRO	*+2,\$	
013734	700006 7103 00 000		TRA	.CREXT,\$,P.CR	

MONITOR TRACE OPTION

013735 000000 000001 000

ZERO .RG.1

013736 000001 7102 00 000

INHIB RESTORE

7172 I.MNTR TRA MONTR-MNBASE

00000020

013737

7173

.OPTE. MN

00000020

MEASUREMENT TOOL OPTION

013737 000000011207 000

013740

7175

E.OPTS. VF.VERIFY

7176 *

7177 *

THIS OPTION MEASURES LAP TIME IN SPECIFIC PART OF DISPATCHER

7178 *

7179 *

7180 *

MESURMENT OPTION SELECTION SYMBOL AND MACROS

7181 *

7182 *

7183 *

MACRO PROTOTYP

7184 *

7185 *

.M.S NAME START

7186 *

I -----INTERRUPT INHIBIT

7187 *

.M.E NAME,TOTAL-NAME END

7188 *

7189 *

.MP.S START

7190 *

I -----INTERRUPTION INCLUDED

7191 *

.MP.E END

7192 *

7193

.M.S MACRO

7194

I.#2 TRA *-VFBASE+1

7195

LDP P0,SD,RMS,DL

7196

RSCR SCUCLK,,P0

7197

STQ #1-VFBASE,PN

7198

V#2E NOP

7199

TRA V#2V+1

7200

ENDM .M.S

7201

7202

7203

.M.E MACRO

7204

I.#3 TRA *-VFBASE+1

7205

LDP P0,SD,RMS,DL

7206

RSCR SCUCLK,,P0

7207

SZN #1-VFBASE,PN

7208

TZE 5,IC

7209

SRQ #1-VFBASE,PN

7210

ASQ #2-VFBASE,PN

7211

AOS #2-VFBASE+,.NRPRC,PN

7212

STZ #1-VFBASE,PN

7213

V#3E NOP

7214

TRA V#3V+1

7215

ENDM .M.E

7216

7217

7218

.M.C MACRO

7219

I.#2 TRA *-VFBASE+1

7220

STZ #1-VFBASE,PN

7221

V#2E NOP

7222

TRA V#2V+1

7223

ENDM .M.C

MEASUREMENT TOOL OPTION

	7224				
	7225				
000335	7226	.SMES1 EQU	.SSAWK-3	*WORK AREA	
000336	7227	.SMES2 EQU	.SSAWK-2	*TOTAL TIME	
000337	7228	.SMES3 EQU	.SSAWK-1	*TOTAL COUNT	
	7229				
	7230				
	7231	.MP.S MACRO			
	7232	I.#2 TRA	*-VFBASE+1		
	7233	LDP	P6.SD.RMS,DL		
	7234	RSCR	SCUCLK,,P6		
	7235	LDP	P6.SD.SSA,DL		
	7236	STQ	#1.,P.SSA		
	7237	V#2E NOP			
	7238	TRA	V#2V+1		
	7239	ENDM	.MP.S		
	7240				
	7241				
	7242	.MP.F MACRO			
	7243	I.#3 TRA	*-VFBASE+1		
	7244	LDP	P6.SD.RMS,DL		
	7245	RSCR	SCUCLK,,P6		
	7246	LDP	P6.SD.SSA,DL		
	7247	SZN	#1.,P.SSA		
	7248	TZF	5,IC		
	7249	SRQ	#1.,P.SSA		
	7250	ASQ	#2-VFBASE,PN		
	7251	AOS	#2-VFBASE+.,NRPRC,PN		
	7252	STZ	#1.,P.SSA		
	7253	V#3E NOP			
	7254	TRA	V#3V+1		
	7255	ENDM	.MP.E		
	7256				
	7257				
	7258	.MP.C MACRO			
	7259	I.#2 TRA	*-VFBASE+1		
	7260	STZ	#1.,P.SSA		
	7261	V#2E NOP			
	7262	TRA	V#2V+1		
	7263	ENDM	.MP.C		
	7264	*			
	7265	*	TIME TO TAKE OUT OF EXECUTION		
	7266	*			
013741	7267	.M.S	VFDCN,DCN1	/* START GEROAD	
013747	7268	.M.C	VFDCN,DCN2	/* GEROAD REJECT	
013753	7269	.M.S	VFDCN,DCN3	/* START RELINC	
013761	7270	.M.E	VFDCN,VFDCNT,DCN4		
	7271	*			
	7272	*			
	7273	*	TIME OF THIS MEASUREMENT		

M E A S U R M E N T T O O L O P T I O N

			7274 *				
	013774		7275	.M.S	VFOVH,OVH1		
	014002		7276	.M.E	VFOVH,VFOVHT,OVH2		
			7277 *				
			7278 *		TIME OF SELECT A PROCESS		
			7279 *				
	014015		7280	.M.C	VFSLC,SLC1		
	014021		7281	.M.S	VFSLC,SLC2		
	014027		7282	.M.E	VFSLC,VFSLCM,SLC3	/* RETURN TO MAIN	
	014042		7283	.M.E	VFSLC,VFSLCC,SLC4	/* SYSTEM C.C. START	
	014055		7284	.M.C	VFSLC,SLC5		
			7285 *				
			7286 *		AVERAGE TIME TO CALL A SSA MODULE		
			7287 *				
	000335		7288	VFAVF EQU	.SSAWK=3	/* TOTAL AVERAGE IN SSA MANAGER	
	014061		7289	.MP.S	VFAVE,CAL1		
	014070		7290	.MP.E	VFAVE,VFAVET,CAL2		
	000332		7291	VFDIO EQU	.SSAWK=6		
	014104		7292	.MP.S	VFDIO,CAL3		
	014113		7293	.MP.E	VFDIO,VFDMIO,CAL4		
			7294 *				
			7295 *		HIT RATE		
			7296 *				
	014127	000000011207	000				
	014130	000320 0542 00 000	7297	VPUSH FAOS	VFPUSH-VFBASE		
	014131	600012 7413 56 000	7298	STX	PUSHX,.SSA,ID,P.SSA		
	014132	000321 0542 00 000	7299	VTPSH AOS	VFTPSH-VFBASE		
	014133	001777 3762 03 000	7300	ANQ	MDMSK,DU		
	014134	000322 0542 00 000	7301	VLOAD AOS	VFi OAD-VFBASE		
	014135	777774 6202 00 000	7302	EAX	XO,-4		
	014136	000323 0542 00 000	7303	VTLD AOS	VFTLD-VFBASE		
	014137	600104 2363 00 000	7304	LDQ	.SLOAD+2,.P.SSA		
			7305 *				
			7306 *		DATA COLLECTION AREA		
			7307 *				
	014140	777777777777 000	7308	8DEC	-1,-1,-1,-1,-1,-1,-1,-1		
	014141	777777777777 000					
	014142	777777777777 000					
	014143	777777777777 000					
	014144	777777777777 000					
	014145	777777777777 000					
	014146	777777777777 000					
	014147	777777777777 000					
		014150	7309	VFDCNT BSS	.NRPRC*2	/* TIME TO TAKE OUT OF EXEC	
		014160	7310	VFOVHT BSS	.NRPRC*2	/* TIME OVERHEAD OF MEASUREMENT	
		014170	7311	VFSLCM BSS	.NRPRC*2	/* TIME TO RE-DISPATCH	
		014200	7312	VFSLCC BSS	.NRPRC*2	/* TIME TO START C.C.	
		014210	7313	VFAVFT BSS	.NRPRC*4	/* TIME TO ASSIN SSA MODULE	
		014230	7314	VFDMIO BSS	.NRPRC*4	/* TIME TO DO I/O	
	014250	777777777777 000	7315	8DEC	-1,-1,-1,-1,-1,-1,-1,-1		

M E A S U R M E N T T O O L O P T I O N

014251 7777777777 000
 014252 7777777777 000
 014253 7777777777 000
 014254 7777777777 000
 014255 7777777777 000
 014256 7777777777 000
 014257 7777777777 000

014260 7316 VFPUSH BSS 1 /* PUSH DOWN INTO DISC
 014261 7317 VFTPSH BSS 1 /* TOTAL PUSH DOWN
 014262 7318 VFLOAD BSS 1 /* LOADING FROM DISC
 014263 7319 VFTLD BSS 1 /* TOTAL LOADING

014264 000004710204 000
 014270 7777777777 000
 014271 7777777777 000
 014272 7777777777 000
 014273 7777777777 000
 014274 7777777777 000
 014275 7777777777 000
 014276 7777777777 000
 014277 7777777777 000

7320 8DEC -1,-1,-1,-1,-1,-1,-1,-1

014300 7321 VFDCN BSS .NRPRC /* WORK AREA
 014304 7322 VFOVH BSS .NRPRC
 014310 7323 VFSLC BSS .NRPRC
 014314 7324 .OPTE. VF

MEASUREMENT TOOL OPTION

					014314	7326	.OPTS.	TT.TIMTRC				
						7327 *						
						7328 *		THIS OPTION LEAVES SCU CLOCK TIME IN TRACE ENTRY +3				
						7329 *						
					014315	7330	TTIME	EQU	*			
						000007	7331	P.RMS	SET	P.CR		
	014315	600000	0113	53	000	7332		NOP	,AD,P6		/* DO THE OP OF X.TPUT	
	014316	006063	4776	07	000	7333		LDP	P.RMS,SD,RMS,DL			
	014317	700040	4133	00	000	7334		RSCR	SCUCLK,,P.RMS			
	014320	600003	7563	12	000	7335		STQ	3,2,P6		/* PUT TIME IN ENTRY	
	014321	006130	4776	07	000	7336		LDP	P.CR,SD.CR,DL			
	014322	007026	7102	00	010	7337		TRA	X.TTT+1		/* RETURN	
						7339 *						
						7340 *		PATCH AREA FOR TRAP IN TRACE				
						7341 *						
					014323	7342		DUP	2,10			
						7343						
	014323	000000	000000		000	7344		OCTAL	/ / /		/	
						7345						
	014324	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014325	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014326	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014327	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014330	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014331	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014332	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014333	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
	014334	000000	000000		000	7345		OCTAL	/ / /		/	
						7345						
						7347						
					014335	7348		.OPTE.	TT			
						7349 *						
						7350 *		DATA TO COMPRESS MODULE AND OPTION LIST				
						7351 *		MUST BE PLACED AFTER ALL OPTION ROUTINE				
						7352 *						
					014335	7353	OPLIST	BSS	.NOPT.		*OPTION LIST IN MODULE	
					014352	7354	OPSZLS	BSS	.NOPT.		*OPTION SIZE MAY ME OUT OF MODULE	
	014367	000000	000000		000	7355	OPCNT	ZFRO			*SELECTED OPTON COUNT	

INITIALIZE SECTION DEFINITION

7357 *
 7358 * THIS SECTION INITIALIZE .MDISP BODY AND EXTERNAL SEGMENT
 7359 * AND CREATES SEGMENTS
 7360 *
 7361 * .MDISP BASIC DIVISION INITIALIZE
 7362 * .MDISP MACRO DIVISION INITIALIZE
 7363 * .MDISP TRACE DIVISION INITIALIZE
 7364 * .MDISP OPTION DIVISION INITIALIZE
 7365 * CREAT DESCRIPTER
 7366 * CR KL SEGMENT SET UP
 7367 * MOVE ROUTINE AND FILL UP SEGMENT
 7368 * REGISTER INTERFACE WITH .MINIT
 7369 * P7 = P.CR
 7370 * P6 = SYSTEM LINKAGE SEGMENT
 7371 * P5 = WHOLE MEMORY
 7372 * P4 = .MDISP BODY T = 0
 7373 * P3 = .MDISP BODY T = 1
 7374 * X1 = RETURN ADDRESS TO .MINIT
 7375 * WSRO = 0
 7376 * RETURN QL LAST OF .MDISP SEGMENT IN EXEC
 7377 * QU NEXT MODULE LOADING ADDRESS
 7378 * REGISTER ASSIGNMENT
 000001 7379 PI SET P1
 000006 7380 PS SET P6
 000002 7381 IX SET 2
 000003 7382 IY SET 3
 7383 INHIB OFF

7384 * * * * *

7385 * PATCH AREA FOR INITIALIZE DIVISION

014370 7386 PTCHI EQU *
 7387 * * * * P A T C H L I S T * * * *

7388 COMMENT CODING ISSUED
 7389 LOC. CONTENTS 1 8 16 MDDYY

LOC.	CONTENTS	1	8	16	ISSUED MDDYY
014370	DUP	2	32		
014371	OCTAL	/	/	/	/
014372	OCTAL	/	/	/	/
014373	OCTAL	/	/	/	/
014374	OCTAL	/	/	/	/
014375	OCTAL	/	/	/	/
014376	OCTAL	/	/	/	/
014377	OCTAL	/	/	/	/

INITIALIZF SECTIO DEFINITION

7392									
014400	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014401	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014402	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014403	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014404	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014405	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014406	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014407	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014410	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014411	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014412	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014413	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014414	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014415	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014416	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014417	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014420	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014421	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014422	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014423	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014424	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014425	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014426	000000	000000	000	7392	OCTAL	/	/	/	/
				7392					
014427	000000	000000	000	7392	OCTAL	/	/	/	/

7393 *

7394 * OPTION SELECT MACRO

INITIALIZF SECTION DEFINITION

```

7395 *
7396 .ISLCT MACRO
7397 LXL IX,OPCNT *CURRENT POINTER IN LIST
7398 EAA #IBASE *OPTION BASE ADDRESS OF LISTING
7399 ARL 18
7400 ORA DSPEND *CURRENT END - OPTION REAL BASE
7401 STA OPLIST,IX *PUT ENTRY
7402 EAA #ISIZE *OPTION CODE SIZE
7403 STA OPSZLS,IX *SET OPTION SIZE LIST
7404 ASA DSPEND *EXTEND MODULE SIZE
7405 AOS OPCNT *COUNT UP NO. OF OPTION
7406 ENDM .ISLCT
7407 *
7408 * SET BASE TO EVEN LOCATION
7409 *
7410 .ISETE MACRO
7411 LDA DSPEND
7412 ADLA 1,DU
7413 ANA =0777776,DU
7414 STA DSPEND
7415 ENDM .ISETE
7416 *
7417 * LINKAGE MACRO - CHANGE OP. TO LINK OPTION
7418 *
7419 .ICHNG MACRO
7420 ASX IX,#1 *ADD BASE
7421 LDA #1 *GET OPERATION WORD
7422 STA #2 *SET UP LINKAGE OP.
7423 ENDM .ICHNG
7424 *
7425 * BASE ADD MACRO TO RELOCATE ROUTINE
7426 * ADD DSPEND INTO UPPER HALF
7427 *
7428 .IBASE MACRO
7429 LDX IX,DSPEND *CURRENT BASE ADDRESS
7430 IDRP #1
7431 ASX IX,I.#1 *ADD OFFSET BASE
7432 IDRP
7433 ENDM .IBASE
7434 *
7435 * RESET OP CODE MACRO
7436 *
7437 .IOP MACRO
7438 EAX IY,#1 *GET OP CODE
7439 IDRP #2
7440 SXL IY,#2 *RESET OP
7441 IDRP
7442 ENDM .IOP
011207 7443 NOPDL BOOL 011207 *NOP 0,DL OP. CODE
7444 *

```

INITIALIZF SECTIO DEFINITION

7445 * RESET Y-PART MACRO

7446 *

7447 .IYPRT MACRO

7448 CRSM SAVE,OFF

7449 IFF '1#3','1'

7450 EAX IY,#2

7451 INF '1#3','1'

7452 EAX IY,#2-#3BASE,IX

7453 STX IY,#1

7454 CRSM RESTORE

7455 ENDM .IYPRT

7456 *

7457 * CONVENION TO CHANGE WORD FOR LINKING AN OPTION IN INIT

7458 * I.XXXX -- THIS TYPE OF SYMBOL ARE USED FOR THE WORD

7459 * WHICH WILL BE PARTLY INITIALIZED

7460 * X.XXXX -- THIS TYPE , THE WORD WILL BE REPLACED ENTIRELY

7461 *

7462

7463 *

7464 * PRODUCTION MODE SUPPORT MACRO

7465 *

7466 .PRDC MACRO DISPVI.0

7467 PRD SET #2

7468 DUP 1,#1-#2

7469 .PRD1 #3

7470 ENDM .PRDC

7471 .PRD1 MACRO

7472 ORGCSM PRD

7473 .PRD2 #1

7474 PRD SET PRD+1

7475 ENDM .PRD1

7476 .PRD2 MACRO

7477 #1 #2

7478 ENDM .PRD2

INITIALIZE BASIC DISPATCHER

```

7480 * * * * *
7481 * INITIALIZE ENTRY POINT
014430 7482 IDISP EQU *
014430 017745 7410 00 010 7483 STX1 INITX SAVE RETURN ADDRESS TO .MINIT
014431 000000 6220 00 000 7484 EAX IX,0
014432 200240 5202 01 000 7485 RPT PTCH2S,1,TNZ
014433 006515 2340 12 010 7486 SZN PTCH2,IX
014434 000002 6000 04 000 7487 TZF 2,IC
014435 017755 0540 00 010 7488 AOS IPTCH2

```

```

7489 * * * * *
7490 *
7491 * THIS SECTION INITIALIZE BASIC DISPATCHER DIVISION
7492 *
7493 * INITIALIZE SYSCCE DATA IN CC PAY ROUTINE
014436 006000 4714 07 000 7494 LDP PI,SD,SLS,DL
014437 017750 0514 00 010 7495 STD PI,IDSCW
014440 017750 2350 00 010 7496 LDA IDSCW
014441 777776 3750 03 000 7497 ANA =077776,DU *CLEAR LEAST SIG. BIT 3
014442 000007 7350 00 000 7498 ALS 7
014443 017751 2750 00 010 7499 ORA IDSCW+1 *GOTTEN LSIZE LINK BASE
014444 017750 2360 00 010 7500 LDQ IDSCW
014445 000160 3760 07 000 7501 ANQ =0160,DL *ISOLATE WSR #
014446 002077 7550 00 010 7502 STA SYSCCE+1 *INITIALIZE SYSCCE
014447 002076 2560 00 010 7503 ORSQ SYSCCE
7504 * DO THE SAME AT A TIME FOR INITIALIZE ITSELF

```

```

7505 *
014450 016625 7550 00 010 7506 STA SVC,SD+1
014451 016624 2560 00 010 7507 ORSQ SVC,SD
014452 016627 7550 00 010 7508 STA SVX,SD+1
014453 016626 2560 00 010 7509 ORSQ SVX,SD
014454 016631 7550 00 010 7510 STA SVY,SD+1
014455 016630 2560 00 010 7511 ORSQ SVY,SD
014456 016633 7550 00 010 7512 STA TDS,SD+1
014457 016632 2560 00 010 7513 ORSQ TDS,SD
014460 016635 7550 00 010 7514 STA SVP,SD+1
014461 016634 2560 00 010 7515 ORSQ SVP,SD

```

PMME5860
PMME5870

```

7516 * INITIALIZE TIME QUANTUM
014462 700271 2361 00 000 7517 ITQTM EQU *
014462 700271 2361 00 000 7518 LDQ .CRNPC,,P.CR PROCESSOR NUMBER
014463 000002 0360 03 000 7519 ADLQ 2,DU
014464 000005 7360 00 000 7520 QLS 5
014465 000000 6360 02 000 7521 EAQ ,QU
014466 001615 7560 00 010 7522 STQ TQTM
7523 TIME QUANTUM BY CONFIGURATED PROCESSORS
7524 96MS FOR 1 PROCESSOR
7525 128MS FOR 2 PROCESSORS
7526 160MS FOR 3 PROCESSORS
7527 192MS FOR 4 PROCESSORS
014467 7528 * INITIALIZE SRTLRLM ROUTINE
7529 ISRTLRL EQU *

```

INITIALIZ BASIC DISPATCHER

014467	700270	2351	00	000	7530	LDA	.CRMKP,,P.CR	* # OF PROCESS	
014470	000002	6350	01	000	7531	EAA	2,AU	*ENTRY FOR SWAP, INTERCOM	
014471	000012	7750	00	000	7532	ALR	10	AU = #(MOD 256), AL = MULT OF 256	DISPOPGS
014472	777777	3150	03	000	7533	CANA	-1,DU		DISPOPGS
014473	000002	6010	04	000	7534	TNZ	2,IC	IF COUNT IS EXACT MULTIPLE OF 256,	DISPOPGS
014474	000001	1350	07	000	7535	SBLA	1,DL	REDUCE MULTIPLE OF 256 BY ONE	DISPOPGS
014475	000100	2750	03	000	7536	ORA	=0000100,DU	*TZE CONDITION OF RPTX	
014476	003452	7550	00	010	7537	STA	SLRPTX		

INITIALIZF MACRO PROCESSOR

					7539 *							
					7540 *	INITIALIZE	IOCB FOR	MODULE	LOAD/PUSH/POP	I/O		
					7541 *							
014477	000050	6220	00	000	7542	EAX	IX,,PSAPT					
014500	005320	4420	00	010	7543	SXL	IX,LDIOCB+.IWCMD					
014501	000047	6220	00	000	7544	EAX	IX,,PPDPT					
014502	005327	4420	00	010	7545	SXL	IX,PDIOCB+.IWCMD					
014503	005336	4420	00	010	7546	SXL	IX,PPIOCB+.IWCMD					
					7547 *							
					7548 *	INITIALIZE	SSA POOL	SIZE AND	THRESHOULD			
					7549 *							
	000004				7550	SSAMIN	SET	4		*MINIMUM	POOL	SIZE
	000177				7551	SSAMAX	SET	127				
014504	700270	7221	00	000	7552	LXL	IX,,CRMKP,,P.CR			*SSA	PAGE	POOL
014505	000004	1020	03	000	7553	CMPX	IX,SSAMIN,DU			*SIZE	IS	LARGER
014506	014511	6030	00	010	7554	TRC	IS1			*REQUIRED		
014507	000004	6220	00	000	7555	EAX	IX,SSAMIN			*NO.	SO	RESET
014510	700270	4421	00	000	7556	SXL	IX,,CRMKP,,P.CR					
	014511				7557	IS1	EQU	*				
014511	000177	1020	03	000	7558	CMPX	IX,SSAMAX,DU			*IF	POOL	IS
014512	014514	6020	00	010	7559	TNC	IS2			*ONE	SEGMENT	(
014513	000177	6220	00	000	7560	EAX	IX,SSAMAX			*LIMIT	TO	ONE
	014514				7561	IS2	EQU	*				
014514	006133	4714	07	000	7562	LDP	PI,SD,KL,DL					
014515	100137	2351	00	000	7563	LDA	.KLMSZ,,PI			*IF	POOL	SIZE
014516	000017	7350	00	000	7564	ALS	18-3			*1/8	OF	CONGIGURED
014517	014551	7550	00	010	7565	STA	ISMAX			*LIMIT	THE	SIZE
014520	014551	1020	00	010	7566	CMPX	IX,ISMAX					
014521	014524	6020	00	010	7567	TNC	IS3					
014522	014551	2220	00	010	7568	LDX	IX,ISMAX					
014523	700270	4421	00	000	7569	SXL	IX,,CRMKP,,P.CR					
	014524				7570	IS3	EQU	*				
014524	000000	6350	12	000	7571	EAA	.IX					
014525	000001	7710	00	000	7572	ARL	1			*SET	.SSPRO	LENH
014526	000000	6350	01	000	7573	EAA	.AU			*I.E.	MAX	PAGES
014527	004420	2550	00	010	7574	ORSA	X.SRML					
014530	000000	6350	12	000	7575	EAA	0,IX			INIT	CELLS	TO
014531	000012	7350	00	000	7576	ALS	10			BORROW	ADDRESSES	
014532	000006	2750	03	000	7577	ORA	6,DU					
014533	006166	7550	00	010	7578	STA	SSAV					
014534	000000	6350	12	000	7579	EAA	0,IX			INITIALIZE	FOR	SEGMENT
014535	000013	7350	00	000	7580	ALS	11			THE	SIZE	OF
014536	006167	7550	00	010	7581	STA	SSAVM					
					7582 *							
					7583 *	INITIALIZE	CHECKSUM	ROUTINE	BY	OPTION		
					7584 *							
	000400				7585	CKSOPT	BOOL	000400				
014537	700650	2351	00	000	7586	LDA	.CROPT,,P.CR			LOAD	OPTION	WORD
014540	000400	3150	03	000	7587	CANA	CKSOPT,DU			CHECK	CHECKSUM	OPTION
014541	014552	6010	00	010	7588	TNZ	IOVHS			CHECKSUM	REQUITED	

00000020

INITIALIZF MACRO PROCESSOR

014542	017762	2350	00	010	7589	LDA	=MTRA ICKS1X	CHANGE LOAD SSA PART		
017762	005074	7100	00	010						
014543	005056	7550	00	010	7590	STA	ICKS1			
014544	017763	2350	00	010	7591	LDA	=MTRA ICKS2X	CHANGE PUSH SSA PART		
017763	005165	7100	00	010						
014545	005161	7550	00	010	7592	STA	ICKS2			
014546	017764	2350	00	010	7593	LDA	=MTRA POP7	CHANGE POP SSA PART		
017764	005226	7100	00	010						
014547	005215	7550	00	010	7594	STA	ICKS3			
014550	014552	7100	00	010	7595	TRA	IOVHS		00000020	
	014551				7596	ISMAX	BSS	1		
	002000				7597	SPACNT	BOOL	002000	SPECIAL ACCOUNTING OPTION (BIT 7)	00000020
	014552				7598	IOVHS	NULL		00000020	
014552	700650	2351	00	000	7599	LDA	.CROPT,P.CR	RELOAD OPTION	00000020	
014553	002000	3150	03	000	7600	CANA	SPACNT,DU	SPECIAL ACCOUNT OPTION	00000020	
014554	014562	6010	00	010	7601	TNZ	IOVHE	YES, REQUIRED	00000020	
014555	017757	2350	00	010	7602	LDA	INOP		00000020	
014556	000260	7550	00	010	7603	STA	IOVHO		00000020	
014557	001662	7550	00	010	7604	STA	IOVH1		00000020	
014560	002042	7550	00	010	7605	STA	IOVH2		00000020	
014561	004214	7550	00	010	7606	STA	IOVH3		00000020	
	014562				7607	IOVHF	NULL		00000020	

INITIALIZE TRACE DIVISION

7609 *
7610 * THIS SECTION INITIALIZES TRACE DIVISION. IF NO TRACE OPTION
7611 * TRACE DEVISION IS REMOVED AND TRACE LINKAGE TRA OP IS TURNED
7612 * TO NOP IN DISPATCHER/MACRO DIVISION

7614 * * * * *
7615 * CHECK IF TRACE OPTION IS SELECTED

7617 * TEST TRACE ON / OFF CONDITION

014562 7619 ITR EQU *
014562 017760 2350 00 010 7620 LDA =077777777777
014563 700304 1151 00 000 7621 CMPA .CRTCT,,P.CR
014564 014605 6010 00 010 7622 TNZ ITR010
014565 700305 1151 00 000 7623 CMPA .CRTCT+1,,P.CR
014566 014605 6010 00 010 7624 TNZ ITR010
014567 700306 1151 00 000 7625 CMPA .CRTCT+2,,P.CR
014570 014605 6010 00 010 7626 TNZ ITR010
014571 177777 2360 07 000 7627 LDQ =0177777,DL
014572 700307 2111 00 000 7628 CMK .CRTCT+3,,P.CR
014573 014605 6010 00 010 7629 TNZ ITR010

7630 *
7631 * ALL TRACE OFF

014574 017756 2350 00 010 7633 LDA ITRAI *SET NO TRACE FOR .TROPN MACRO
014575 700042 7551 00 000 7634 STA .CRTRV,,P.CR
014576 700044 7551 00 000 7635 STA .CRTRV+2,,P.CR
014577 700046 7551 00 000 7636 STA .CRTRV+4,,P.CR
014600 700050 7551 00 000 7637 STA .CRTRV+6,,P.CR
014601 014604 2350 00 010 7638 LDA ITRTRA
014602 700052 7551 00 000 7639 STA .CRTRV+8,,P.CR
014603 015142 7100 00 010 7640 TRA ITRNO
014604 000000 7101 00 000 7641 ITRTRA TRA 0,,PO

7642 *
7643 * TRACE ON, TEST PARTIAL TRACE

014605 7645 ITR010 NULL
014605 700304 2371 00 000 7646 LDAQ .CRTCT,,P.CR
014606 014646 6010 00 010 7647 TNZ ITR020
014607 700306 2371 00 000 7648 LDAQ .CRTCT+2,,P.CR
014610 014646 6010 00 010 7649 TNZ ITR020

7650 *
7651 * ALL TRACE ON, NOP CALLING TRACE SELECT ROUTINE

014611 017757 2350 00 010 7653 LDA INOP
014612 007012 7550 00 010 7654 STA TXTS01 NOP TSXI TSELECT
7655 LINK TRACE OPTION TO MAIN PROCEDURE
014613 7656 .IOP TRA,(IYCALL,IYCALX,IYEXIT,IYEXTX,IYGOTO)
014621 7657 .IYPRT IYCALL,Y.CALL
014623 7658 .IYPRT IYCALX,Y.CALX

INITIALIZF TRACE DIVISION

				014625	7659	.IYPRT	IYEXIT,Y.EXIT
				014627	7660	.IYPRT	IYEXTX,Y.EXTX
				014631	7661	.IYPRT	IYGOTO,Y.GOTO
	014633	000110	2360 00	010	7662	LDO	DVOPT
	014634	000002	3160 07	000	7663	CANQ	ODTL,DL
	014635	014645	6000 00	010	7664	TZF	ITR012 GO NORMAL
				014636	7665	.IOP	TRA,(IYCALH,IYEXTH)
				014641	7666	.IYPRT	IYCALH,Y.CALH
				014643	7667	.IYPRT	IYEXTH,Y.EXTH
				014645	7668	ITR012	EQU *
	014645	014775	7100 00	010	7669	TRA	ITR025
					7670	*	
					7671	*	
					7672	*	PARTIAL TRACE - CHECK TRACE OF MACRO SFLECTION
					7673	**	
					7674	.ITP	MACRO
					7675	.F	SET 0
					7676		IFG .Y#1,71
					7677	.F	SET 2
					7678		FLD =0001000,DU
					7679		LRL .Y#1
					7680	CANAQ	ITRTMP+.F
					7681	TZE	#2
					7682	ERSA	ITRTMP+.F
					7683	ERSQ	ITRTMP+1+.F
					7684	TRA	#3
					7685	#2	EQU *
					7686	.IOP	TRA,IY#1
					7687	.IYPRT	IY#1,Y.#1
					7688	#3	EQU *
					7689	.CRSM.	SET .CRSM.+2
					7690	ENDM	.ITP
				014646	7691	ITR020	EQU *
	014646	700304	2371 00	000	7692	LDAQ	.CRTCT,,P.CR
	014647	015136	7570 00	010	7693	STAQ	ITRTMP
	014650	700306	2371 00	000	7694	LDAQ	.CRTCT+2,,P.CR
	014651	015140	7570 00	010	7695	STAQ	ITRTMP+2
				014652	7696	.ITP	CAI H
				014665	7697	.ITP	CALL
				014700	7698	.ITP	CAI X
				014713	7699	.ITP	EXTH
				014726	7700	.ITP	EXTT
				014741	7701	.ITP	EXTX
				014754	7702	.ITP	GOTO
	014767	015136	2370 00	010	7703	LDAQ	ITRTMP
	014770	014775	6010 00	010	7704	TNZ	ITR025
	014771	015140	2370 00	010	7705	LDAQ	ITRTMP+2
	014772	014775	6010 00	010	7706	TNZ	ITR025
					7707		OTHER TRACEES SELECTED - SET TO SKIP PARTIAL TRACE ENTRY
	014773	017757	2350 00	010	7708	LDA	INOP

INITIALIZF TRACE DIVISION

014774	007012	7550	00	010	7709	STA	TXIS01		
		014775			7710	EQU	*		
014775	000316	6200	00	000	7711	EAXO	.CRTEP+4		
014776	700312	7401	00	000	7712	STXO	.CRTEP,,P.CR	SET TRACE ENTRY POINTER FOR PROCESSOR 0	
014777	000322	6200	00	000	7713	EAXO	.CRTEP+8		
015000	700313	7401	00	000	7714	STXO	.CRTEP+1,,P.CR	SET TRACE ENTRY POINTER FOR PROCESSOR 1	
015001	000326	6200	00	000	7715	EAXO	.CRTEP+12		
015002	700314	7401	00	000	7716	STXO	.CRTEP+2,,P.CR	SET TRACE ENTRY POINTER FOR PROCESSOR 2	
015003	000332	6200	00	000	7717	EAXO	.CRTEP+16		
015004	700315	7401	00	000	7718	STXO	.CRTEP+3,,P.CR	SET TRACE ENTRY POINTER FOR PROCESSOR 3	
015005	017760	2350	00	010	7719	LDA	=077777777777		
015006	700342	7551	00	000	7720	STA	.CRTTP,,P.CR	OPEN TRACE GATE	
015007	006134	4704	07	000	7721	LDP0	SD.MDD,DL		
015010	000057	7211	00	000	7722	LXL1	.MDISP,,PO	GET SD LOCATION OF DISP	
015011	015120	7410	00	010	7723	STX1	TRVC01	SET SD VALUE OF DISP	
015012	000000	6350	11	000	7724	EAA	0,1		
015013	000022	7710	00	000	7725	ARL	18		
015014	015125	2550	00	010	7726	ORSA	TRVC03+1	SET SD VALUE OF DISP	
015015	000100	1004	00	000	7727	MLR	,(1)	MOVE .CRTRV CELL	
015016	015110	0001	10	010	7728	ADSC9	TRVCEL,,18*4		
015017	700042	0001	10	000	7729	ADSC9	.CRTRV,,18*4,P.CR		
015020	700271	2201	00	000	7730	LDX0	.CRNPC,,P.CR	GET NUMBER OF CONFIGURED PROCESSORS	
015021	000001	1000	03	000	7731	CMPX0	1,DU	TEST SINGLE PROCESSOR	
015022	015031	6010	00	010	7732	TNZ	ITR030	NO.	
015023	017757	2350	00	010	7733	LDA	INOP	NOP ,DL	00000020
015024	007014	7550	00	010	7734	STA	TXIS02		
015025	007015	7550	00	010	7735	STA	TXIS02+1		00000020
015026	007037	7550	00	010	7736	STA	TXIS03		
015027	007040	6200	00	010	7737	EAXO	TPUTEX		
015030	007026	7400	00	010	7738	STXO	TXIS04		
					7739	*			
					7740	*	SET ENTRY DESCRIPTORS		
					7741	*			
		015031			7742	ITR030	NULL		
015031	000000	6350	11	000	7743	EAA	0,1		
015032	001777	3750	03	000	7744	ANA	=0001777,DU		
015033	000013	7710	00	000	7745	ARL	11		
015034	015132	2550	00	010	7746	ORSA	SDOTE	SET SD VALUE OF DISP	
015035	015134	2550	00	010	7747	ORSA	SDPTE	SET SD VALUE OF DISP	
015036	006125	6360	00	000	7748	EAQ	SD.OTE		
015037	001777	3760	03	000	7749	ANQ	=0001777,DU		
015040	000001	7360	00	000	7750	QLS	1		
015041	000000	6200	02	000	7751	FAXO	0,QU		
015042	015132	2370	00	010	7752	LDAQ	SDOTE		
015043	600000	7571	10	000	7753	STAQ	0,0,P6	SET SD.OTE ENTRY DESCRIPTOR	
015044	006126	6360	00	000	7754	EAQ	SD.PTE		
015045	001777	3760	03	000	7755	ANQ	=0001777,DU		
015046	000001	7360	00	000	7756	QLS	1		
015047	000000	6200	02	000	7757	EAXO	0,QU		
015050	015134	2370	00	010	7758	LDAQ	SDPTE		

INITIALIZE TRACE DIVISION

015051	600000	7571	10	000	7759	STAQ	0,0,P6	SET SD,PTE ENTRY DESCRIPTOR
		015052			7760	ITRMS	EQU	*
		015052			7761	.ISLCT	TR	*SELECT TRACE OPTION

INITIALIZE TRACE MONITOR

```

7763 * 00000020
7764 * INITIALIZE FOR TRACE MONITOR ONLY IF SOMF TRACE 00000020
7765 * 00000020
015063 000107 7220 00 010 7766 LXL IX,SPCL CHECK FOR MONITOR OPTION 00000020
015064 000001 3020 03 000 7767 CANX IX,1,DU 00000020
015065 015150 6000 00 010 7768 TZE ITR.E * NOT REQUESTED 00000020
015066 7769 .ISETE 00000020
015072 7770 .IBASE MNTR 00000020
015074 7771 .IYPRT EP61,MN61,MN 00000020
015076 7772 .ISLCT MN 00000020
015107 015150 7100 00 010 7773 TRA ITR.E
7774 *****
7775 * TRACE ENTRY VECTOR (.CRTRV) *
7776 *****
7777 INHIB ON
015110 7778 TRVCEL NULL
015110 000002 7102 04 000 7779 TRA 2,IC
015111 000000 0112 07 000 7780 NOP ,DL
015112 000001 6306 04 000 7781 EPPRO 1,IC .TROPN GREG (SYSTEM DOMAIN ONLY)
015113 700056 7103 00 000 7782 TRA ,CRTRV+12,,P,CR
015114 000001 6306 04 000 7783 EPPRO 1,IC .TROPN NONE (SYSTEM DOMAIN ONLY)
015115 000002 7102 04 000 7784 TRA 2,IC
015116 000001 6306 04 000 7785 EPPRO 1,IC .TROPN ALL (SLAVE DOMAIN)
015117 700060 7103 00 000 7786 TRA ,CRTRV+14,,P,CR
015120 000000 4776 07 000 7787 TRVC01 LDP7 **,DL .TRPUT (SYSTEM DOMAIN)
015121 706740 7103 00 000 7788 TRA TPUTSY-.,DISP,,P7 00000020
015122 000000 0112 07 000 7789 NOP ,DL *.TROPN ALI MACRO WAS REMOVED
015123 000000 0112 07 000 7790 NOP ,DL
015124 7791 TRVC03 GCLIMB **,TOPNG .TROPN GREG EXTENTION
015124 006664713400 010 VFD 18/TOPNG,09/713,1/1,1/0,1/0,6/M.
015125 000000220000 000 VFD 1/0,9/0,8/0,1/.N,1/.0,2/0,2/2,12/**
015126 500010 6767 00 000 7792 LDD6 DP,OTE,,P,SSL .TROPN ALL FOR SLAVE DOMAIN EXTENTION
015127 7793 ICLIMB ,DR6
015127 000000713400 000 VFD 18/,09/713,1/1,1/0,1/0,6/M.
015130 000000201776 000 VFD 1/0,9/0,8/0,1/.N,1/.0,2/0,2/0,12/.DR6
015131 000000 7103 00 000 7794 TRA 0,,PO
015132 7795 SDOTF FE11DSC 0,0,480,**,TSAVED
015132 006616000013 010 VFD 18/TSAVED,1/0,10/**,3/0,4/11
015133 167400000000 000 VFD 10/480/2-1,24/0,2/0
015134 7796 SDPTE EE8DSC 0,0,480,**,TPUTSL PTCH5290
015134 006762000010 010 VFD 18/TPUTSL,1/0,10/**,3/0,4/8
015135 167400000000 000 VFD 10/480/2-1,24/0,2/0
7797 INHIB OFF
015136 7798 ITRTMPEBSS 4
7799 * * * * *
7800 * NO TRACE OPTION. SET UP MACRO CELL
015142 7801 ITRNO EQU *
7802 * * * * *
7803 * SET NOP IN .MDISP
015142 7804 .IOP NOPDL,(IYSEVT,IYDISP,IYENBL,IYIDLE,IYSCC)

```

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

INITIALIZE TRACE MONITOR

015150 7805 ITR.F EQU *

INITIALIZE MULTI-PROCESSOR

					7807 *				
					7808 *	INITIALIZE MULTIPROCESSOR ROUTINE			
					7809 *				
			015150		7810	IMP	EQU	*	
15	015150	700171	2341 00 000		7811		SZN	.CRACC+9,,P.CR	00000020
05	015151	000003	6010 04 000		7812		TNZ	3,IC	00000020
67	015152	011207	6220 00 000		7813		EAX	IX,NOPDL INITIALIZE .CRACC+9 TO "NOP" IF	00000020
87	015153	700171	4421 00 000		7814		SXL	IX,.CRACC+9,,P.CR NOT PREV. INIT'D TO PROTECT US	00000020
47	015154	700271	2221 00 000		7815		LDX	IX,.CRNPC,,P.CR	
97	015155	000001	1020 03 000		7816		CMPX	IX,I,DU	
57	015156	015252	6000 00 010		7817		TZE	IMPNF	
			015157		7818		.IBASE	(LDSH,RLSH,GTOP,EPP,CLE4,CLE7)	
			015166		7819		.IBASE	(CLE8,CLE9)	SUBD3740
			015171		7820		.IBASE	(RDO,DCNO,CLDD)	00000020
			701200		7821	TSXMP	BOOL	701200	
			015175		7822		.TOP	TSXMP,(I,LDSH,I,RLSH,I,GTOP,I,EPP,I,CLE4,I,CLE7)	
			015204		7823		.TOP	TSXMP,(I,CLE8,I,CLE9)	SUBD2750
			015207		7824		.TOP	TRA(I,RDO,I,DCNO,I,CLDD)	00000020
4E	015213	015244	2350 00 010		7825		LDA	IMPSBD	00000020
9E	015214	002244	7550 00 010		7826		STA	SBD.MP	00000020
			015215		7827		.ICHNG	IMPPP3,X,PP3	
			015220		7828		.ICHNG	IMPOR,X,RED	
			015223		7829		.ICHNG	IMPPIO,X,DMIO	00000020
2E	015226	015250	2370 00 010		7830		LDAQ	LWSQ	00000020
1E	015227	001446	7550 00 010		7831		STA	I.SLCO	00000020
0E	015230	001447	7560 00 010		7832		STQ	I.SLCO+1	00000020
			015231		7833		.ISLCT	MP *SELECT MULTI-PROCESSOR	
					7834		INHIB	ON	
2Z	015242	015532	7102 00 010		7835		TRA	IMPEND	
9Z	015243	000001	7102 00 000		7836	IMPPP3	TRA	MPENB-MPBASE	
5Z	015244	000005	7102 04 000		7837	IMPSBD	TRA	5,IC	SUBD2780
4Z	015245	000021	7102 00 000		7838	IMPOR	TRA	MPOR-MPBASE	
3Z	015246	000053	7102 00 000		7839	IMPPIO	TRA	MPCRT-MPBASE	00000020
2Z	015247	000000011207	000						
1Z	015250	600110	2363 00 000		7840	LWSQ	ELDQ	.SLWSQ,,P.SSA	00000020
0Z	015251	200200	7563 17 000		7841		STQ	.KLWSQ,PN,P.KL	00000020
					7842		INHIB	OFF	
					7843 *				
					7844 *	CHECK PRODUCTION MODE GATING			
					7845 *				
			015252		7846	IMPNF	EQU	*	
01	015252	000110	2360 00 010		7847		LDQ	DVOPT	
81	015253	000001	3160 07 000		7848		CANQ	OPRD,DL	
21	015254	015532	6010 00 010		7849		TNZ	IMPEND	
			015255		7850		.IYPR	I.DACN,.CRNSG+P.CR*32768	
01	015257	011207	6230 00 000		7851		EAX3	NOPDL	
			015260		7852		.PRDC	.DSPA,9100,SXL3	
			015332		7853		.PRDC	.DSPA,9300,SXL3	
			015421		7854		.PRDC	.PSTO,9600,SXL3	
			015451		7855		.PRDC	.QGTS,9700,SXL3	

INITIALIZF MULTI-PROCESSOR

		015454	7856	.PRDC	.QGTO,9750,SXL3
		015461	7857	.PRDC	.GTMO,9850,SXL3
015465	003475	2350 00 010	7858	LDA	PSTST
		015466	7859	.PRDC	.PSTS,9500,STA
015513	003464	2350 00 010	7860	LDA	LRMST
		015514	7861	.PRDC	.LRMS,9900,STA
015520	003473	2350 00 010	7862	LDA	LRMOP2
		015521	7863	.PRDC	.LRMO,9950,STA
015526	003514	2350 00 010	7864	LDA	GTMST
		015527	7865	.PRDC	.GTMS,9800,STA
		7866	ORGCSM	.CRSM,+100	
		015532	7867	IMPEND EQU	*

INITIALIZE PRIORITY I/O,URG

```

7869 *
7870 * INITIALIZE I/O RATE AND URGENCY CONTROL
7871 *
015532 7872 IPRIU EQU *
015532 000100 2360 00 010 7873 LDQ OPTION
015533 600000 3760 03 000 7874 ANQ OIO+OUR,DU *ANY OPTION
015534 015667 6000 00 010 7875 TZE IPRE *NO. NOT SELECTED
7876 *
7877 * ADD COMMON ROUTINE FOR I/O OR FOR URG
7878 *
015535 017746 2220 00 010 7879 LDX IX,DSPEND /* LOAD CURRENT BASE
015536 7880 .ICHNG IPRCM2,X.DCN1
015541 7881 .ICHNG IPRCM3,X.EB8
015544 7882 .IYPR X.FB8A,PRCM4,CM
015546 7883 .IYPR X.APEE,PRCM3,CM
015550 7884 .IYPR X.APEB,PRCM4,CM
015552 7885 .IYPR X.APE2,PRCM4,CM
015554 7886 .ISLCT CM *SELECT COMMON ROUTINE
015565 600000 1160 03 000 7887 CMPQ OIO+OUR,DU
015566 015620 6010 00 010 7888 TNZ IPRI0 *NOT BOTH SELECTED
7889 *
7890 * ADD BOTH OPTION ROUTINE -- IU
7891 *
015567 017746 2220 00 010 7892 LDX IX,DSPEND
015570 7893 .ICHNG IPRIU1,X.ED5
015573 7894 .ICHNG IPRIU2,X.DCN2
015576 7895 .ICHNG IPRIU3,X.EL10
015601 7896 .ISLCT IU *SELECT I/O URG OPTION
015612 015667 7100 00 010 7897 TRA IPRE *GO NEXT
7898
7899 LINKAGE OPERATION WORD
7900
7901 INHIB ON
015613 000001 7102 00 000 7902 IPRCM2 TRA PRCM2-CMBASE
015614 000011 7102 00 000 7903 IPRCM3 TRA PRCM3-CMBASE
015615 000001 7012 00 000 7904 IPRIU1 TSX CKFVTX,PRIU1-IUBASE
015616 000005 7102 00 000 7905 IPRIU2 TRA PRIU2-IUBASE
015617 000001 7012 00 000 7906 IPRIU3 TSX CKFVTX,PRIU1-IUBASE
7907 INHIB OFF
7908 *
7909 * I/O THROUGH PUT OPTION SELECT
7910 *
015620 7911 IPRI0 EQU *
015620 400000 1160 03 000 7912 CMPQ OIO,DU *I/O OPTION
015621 015651 6010 00 010 7913 TNZ IPRUR *NO. MUST BE URGENCY OPTION
7914
015622 017746 2220 00 010 7915 LDX IX,DSPEND
015623 7916 .ICHNG IPRI01,X.ED5
015626 7917 .ICHNG IPRI02,X.EL10
015631 7918 .ICHNG IPRI03,X.DCN2
    
```

INITIALIZE PRIORITY I/O,URG

		015634	7919	.ISLCT	IO	
015645	015667	7100 00 010	7920	TRA	IPRE	
			7921			
			7922		OPTION LINKAGE WORDS	
			7923			
			7924	INHIB	ON	
015646	000001	7012 00 000	7925	IPRI01	TSX	CKFVTX,PRI01-IOBASE
015647	000001	7012 00 000	7926	IPRI02	TSX	CKFVTX,PRI01-IOBASE
015650	000005	7102 00 000	7927	IPRI03	TRA	PRI02-IOBASE
			7928	INHIB	OFF	
			7929	*		
			7930	*	URGENCY THROUPTUT OPTION	
			7931	*		
		015651	7932	IPRUR	EQU	*
015651	017746	2220 00 010	7933	LDX	IX,DSPEND	
		015652	7934	.ICHNG	IPRURI,X,DCN2	
		015655	7935	.ISLCT	UR	
			7936			
			7937	INHIB	ON	
015666	000013	7102 00 000	7938	IPRUR1	TRA	PRIU1-URBASE
			7939	INHIB	OFF	
			7940			
		015667	7941	IPRE	EQU	*

INITIALIZE B PRIORITY

					7943 *				
					7944 *	INITIALIZE CLASS B PRIORITY OPTION			
					7945 *				
26	015667	000100	2360	00	010	7946	LDQ	OPTION	
25	015670	400000	3160	07	000	7947	CANQ	OB,DL	
24	015671	015767	6000	00	010	7948	TZF	IBPRE	*NOT SELECTED SKIP
23	015672	000000	6230	00	000	7949	EAX	IY,0	
22	015673	000000	6220	00	000	7950	EAX	IX,0	
21			015674			7951	IBPR1	EQU	*
20	015674	000101	2360	12	010	7952	LDQ	BPRIOR,IX	*GET OPTION PATCH
19	015675	015712	6000	00	010	7953	TZF	IBPR4	*NOT SPECIFIED GO NEXT
18	015676	007553	7560	13	010	7954	STQ	BP,SNB,IY	
17	015677	000007	3760	07	000	7955	ANQ	OBT,DL	*TIME QUANTUM
16	015700	000027	7360	00	000	7956	QLS	18+5	*POSITION TO 32 MS UNIT
15	015701	015703	6010	00	010	7957	TNZ	IBPR2	
14	015702	001615	2360	00	010	7958	LDQ	TQTM	*NOT SPECIFIED SO STANDARD
13			015703			7959	IBPR2	EQU	*
12	015703	007562	7560	13	010	7960	STQ	BP,TQT,IY	*SET TIME QUANTUM
11	015704	000101	2360	12	010	7961	LDQ	BPRIOR,IX	
10	015705	000070	3760	07	000	7962	ANQ	OBR,DL	
9	015706	000003	7720	00	000	7963	QRL	3	
8	015707	015711	6000	00	010	7964	TZF	IBPR3	*NOT SPECIFIED SO INITIAL VALUE
7	015710	007544	7560	13	010	7965	STQ	BP,TAL,IY	
6			015711			7966	IBPR3	EQU	*
5	015711	000001	6230	13	000	7967	EAX	IY,1,IY	*POINT TO NEXT ENTRY
4			015712			7968	IBPR4	EQU	*
3	015712	000001	6220	12	000	7969	EAX	IX,1,IX	*POINT TO NEXT OPTION PATCH
2	015713	000003	1020	03	000	7970	CMPX	IX,3,DU	*IS IT END
1	015714	015674	6010	00	010	7971	TNZ	IBPR1	*NO. NEXT
			015715			7972	.IBASE	(BPRD,BPPI,BPUI,BPU2,BPU3,BPE1,BPE2)	
			015725			7973	.IBASE	BPF3	00000020
			015727			7974	.IYPR	X,FNBP,BPUI,BP	
			015731			7975	.ICHNG	IBPEN2,X,ENEW	
			015734			7976	.ICHNG	IBRED,X,RDIA	
			015737			7977	.ICHNG	IBPP1,X,PP1	
			015742			7978	.ICHNG	IBPRD1,X,APRD	
			015745			7979	.IYPR	X,APP1,BPP,BP	
			015747			7980	.IYPR	X,APEN,BPEN,BP	
			015751			7981	.ISLCT	BP	
	015762	015767	7100	00	010	7982	TRA	IBPRE	
						7983	INHIB	ON	
	015763	000026	7102	00	000	7984	IBRED	TRA	BPRD1-BPBASE
	015764	000036	7102	00	000	7985	IBPP1	TRA	BPP-BPBASE
	015765	000112	7102	00	000	7986	IBPEN2	TRA	BPFN-BPBASE
	015766	000026	7102	00	000	7987	IBPRD1	TRA	BPRD1-BPBASE
						7988	INHIB	OFF	
		015767				7989	IBPRF	EQU	*

INITIALIZE A PRIORITY

```

7991 *
7992 * INITIALIZE CLASS A PRIORITY OPTION ROUTINE
7993 *
015767 000100 2360 00 010 7994 LDQ OPTION
015770 200000 3160 07 000 7995 CANQ OA,DL
015771 016124 6000 00 010 7996 TZE IAPRE *NOT SELECTED SKIP
015772 700271 2351 00 000 7997 LDA .CRNPC,,P.CR /* SET CONTINUOUS DISPATCH COUNT
015773 000021 7710 00 000 7998 ARL 18-1 FOR A-PRIORITY PROGRAM
015774 007723 7550 00 010 7999 STA AP.DSP CPUNO * 2
015775 000020 6360 00 000 8000 EAQ AP.TSZ *SET PJT TABLE SIZE
015776 016637 7560 00 010 8001 STQ PJTSZ TO SET SD.PJT
015777 700303 5541 00 000 8002 STC1 .CRPJT+1,,P.CR OPEN GATE OF PJT
8003 *
8004 * SET PJT ENTRY FROM OPTION PATCH
8005 *
016000 000000 6220 00 000 8006 FAX IX,0
016001 000104 2360 12 010 8008 LDQ APRIOR,IX
016002 016015 6000 00 010 8009 TZE IAP2 *NOT SPECIFIED THIS WORD
016003 000007 3760 07 000 8010 ANQ OAL,DL
016004 016015 6000 00 010 8011 TZE IAP2
016005 000001 7360 00 000 8012 QLS 1 /* GET INDEX IN PJT TABLE
016006 000104 2350 12 010 8013 LDA APRIOR,IX
016007 000006 7710 00 000 8014 ARL 6
016010 000006 7350 00 000 8015 ALS 6
016011 017712 2550 06 010 8016 ORSA PJTSK,QL /* SET SNUMB BUT LEFT BIT 30-35
016012 001615 2230 00 010 8017 LDX IY,TQTM *SET STANDARD TIME QUANTUM
016013 200000 2630 03 000 8018 ORX IY,AP,RVD,DU AND SET THIS ENTRY RESERVED
016014 017713 7430 06 010 8019 STX IY,PJTSK+1,QL
016015 000001 6220 12 000 8021 FAX IX.1,IX
016016 000003 1020 03 000 8022 CMPX IX.3,DU *CHECK END OF OPTION PATCH
016017 016001 6020 00 010 8023 TNC IAP1
016020 000100 2360 00 010 8025 LDQ OPTION *CHECK IF AN ENTRY IS RESERVED FOR
016021 000007 3760 07 000 8026 ANQ OAOP,DL OPERATOR VERB
016022 016026 6000 00 010 8027 TZF IAP4 *NO
016023 000001 7360 00 000 8028 QLS 1 /* GET ENTRY INDEX
016024 100000 2350 03 000 8029 LDA AP.OPR,DU *SET THIS ENTRY RESERVED
016025 017713 2550 06 010 8030 ORSA PJTSK+1,QL
016026 8031 IAP4 EQU *
8032 *
8033 * SFT UP A PRIORITY ROUTINE
8034 *
016026 8035 .IRASE (APP1,APP2,APT1,APT2)
016033 8036 .IRASE (APD1,APD2,APD3)
016037 8037 .IRASE (APB1,APB2)
016042 8038 .IRASE (APE,APE1,APE2)
016046 8039 .IRASE (APL1,APL2)
016051 8040 .IRASE TDI.1
    
```

INITIALIZ F A PRIORITY

	710200		8041	TRA	BOOL	710200		
	016053		8042		.IOP	TRA,(X.PP1,X.DSCN,X.EB8A,X.EB8,X.RD1A,X.FNEW)		
	016062		8043		.IYPRT	EPJT1,APJT,AP		
	016064		8044		.IYPRT	I.SLCT,APLPCK,AP		
	016066		8045		.IYPRT	X.PP1,APP1,AP		
	016070		8046		.IYPRT	X.DSCN,APDCN,AP		
	016072		8047		.IYPRT	X.EB8A,APEB,AP		
	016074		8048		.IYPRT	X.EB8,APEE,AP		
	016076		8049		.IYPRT	X.RD1A,APRD1,AP		
			016100		8050	.IYPRT	X.FNEW,APENB,AP	
	016102	700270	2361	00 000	8051	LDQ	.CRMKP,.P.CR	
	016103	000000	6360	02 000	8052	EAQ	,QU	*ENTRY COUNT
	016104	000010	7720	00 000	8053	QRL	8	
	016105	000100	2760	07 000	8054	ORQ	=0000100,DL	/* TZE CONDITION
	016106	007772	7560	00 010	8055	STQ	APRPTX	
	016107	000100	2360	00 010	8056	LDQ	OPTION	
	016110	000007	3760	07 000	8057	ANQ	OAOP,DL	
	016111	000023	7360	00 000	8058	QLS	18+1	
	016112	010410	2560	00 010	8059	ORSQ	I.APN2	
			016113		8060	.ISLCT	AP	
			016124		8061	IAPRF	EQU	*

INITIALIZE TRACE DUMP

					8063 *			
					8064 *	INITIALIZE TRACE DUMPER INTERFACE		
					8065 *	MUST BE INITIALIZED AFTER A-PRIORITY INITIALIZE		
					8066 *			
15	016124	000110	2360	00 010	8067	LDQ	DVOPT	
05	016125	400000	3160	03 000	8068	CANQ	OTRD,DU	/* OPTION SELECTED..
69	016126	016176	6000	00 010	8069	TZE	ITRDE	NO.
			016127		8070	.IBASE	(TPUT,TDSL)	
47	016132	700303	2341	00 000	8071	SZN	.CRPJT+1,,P.CR	/* IF A-PRIORITY NOT SELECTED
46	016133	016163	6000	00 010	8072	TZE	ITRD5	SKIP A-PRIOR INTERFACE
45	016134	017715	6230	00 010	8073	EAX	IY,PJTSK+AP.ESZ+1	
44	016135	000000	6350	00 000	8074	EAA	0	
43	016136	000001	3360	07 000	8075	LCQ	1,DL	/* SEARCH FOR AN ENTRY NOT RESERVED
42	016137	700000	6760	03 000	8076	ERQ	AP.EXC+AP.RVD+AP.OPR,DU	
41	016140	016300	5202	02 000	8077	RPT	AP.NSZ,AP.ESZ,TZE	
40	016141	000000	2110	13 000	8078	CMK	,IY	
39	016142	016176	6010	00 010	8079	TNZ	ITRDE	/* NOT FOUND. IGNORE OPTION
38	016143	777776	2350	13 000	8080	LDA	-AP.ESZ,IY	
37	016144	001615	2750	00 010	8081	ORA	TQTM	
36	016145	200000	2750	03 000	8082	ORA	AP.RVD,DU	
35	016146	777776	7550	13 000	8083	STA	-AP.ESZ,IY	
34	016147	010651	2550	00 010	8084	ORSA	TDAPJ	/* INITIALIZE TRD ROUTINE DATA
33	016150	777775	2350	13 000	8085	LDA	-AP.ESZ-1,IY	
32	016151	000013	7350	00 000	8086	ALS	11	
31	016152	777777	3750	07 000	8087	ANA	-1,DL	
30	016153	000200	2750	03 000	8088	ORA	ZAPRWT,DU	
29	016154	010650	7550	00 010	8089	STA	TDAPJ	
28	016155	777775	6350	13 000	8090	EAA	-AP.ESZ-1,IY	/* INITIALIZE PJT POINTER WHICH HERE RFSERVED
27	016156	017712	1350	03 010	8091	SBLA	PJTSK,DU	
26	016157	010533	2550	00 010	8092	ORSA	TDFPT	
25	016160	000022	7710	00 000	8093	ARL	18	
24	016161	010650	2550	00 010	8094	ORSA	TDAPJ	
23	016162	010647	5540	00 010	8095	STC1	TDAPJ	/* SHOW A-PRIORITY SELECTED
22		016163			8096	ITRD5	EQU *	
21		016163			8097	.IYPRT	EP63,TRD63,TD	
20		016165			8098	.ISLCT	TD	
19		016176			8099	ITRDF	EQU *	

INITIALIZF MODULE COUNT

					8101 *				
					8102 *	INITIALIZE	MODULE COUNT	ROUTINE AND	LINK IT
					8103 *				
016176	000107	7220 00	010		8104	LXL	IX,SPCL	*CHECK IF	MODULE COUNT
016177	000002	3020 03	000		8105	CANX	IX,2,DU	*SPECIFIED	
016200	016205	6010 00	010		8106	TNZ	IMCNTF		00000020
		016201			8107	.IOP	NOPDL,(I.CAPA,I.CAPB)		00000020
016204	016251	7100 00	010		8108	TRA	IMCNTE		00000020
		016205			8109	IMCNTF	NULL		00000020
					8110				
		016205			8111	.ISFTE			
		016211			8112	.IRASE	(MCLD,MCPD,MCAL,MCVC)		
		016216			8113	.IRASE	(CAPA,CAPB)		00000020
		016221			8114	.IYPR	EP62,MC62,MC		
		016223			8115	.ICHNG	IMCLD,X,LOAD		
		016226			8116	.ICHNG	IMCAL,X,ENT		
		016231			8117	.ICHNG	IMCPD,X,PUSH		
		016234			8118	.ISLCT	MC		
016245	016251	7100 00	010		8119	TRA	IMCNTE		
					8120	INHIB	ON		
016246	003011	7102 00	000		8121	IMCAI	TRA	MCAL-MCBASE	
016247	003001	7102 00	000		8122	IMCLD	TRA	MCLD-MCBASE	
016250	003004	7102 00	000		8123	IMCPD	TRA	MCPD-MCBASE	
					8124	INHIB	OFF		
		016251			8125	IMCNTF	EQU	*	

INITIALIZE MEASUREMENT OPTION

				8127	.IX	MACRO	
				8128		LDA	V#1V
				8129		STA	V#1E
				8130		LDA	I.#1
				8131		STA	V#1V
				8132		ENDM	.IX
				8133	.I.S	MACRO	
				8134		.IBASE	(#1,#1+3)
				8135		.IX	#1
				8136		ENDM	.I.S
				8137	.I.E	MACRO	
				8138		.IBASE	(#1,#1+3,#1+5,#1+6,#1+7,#1+8)
				8139		.IX	#1
				8140		ENDM	.I.E
				8141	.I.C	MACRO	
				8142		.IBASE	(#1,#1+1)
				8143		.IX	#1
				8144		ENDM	.I.C
			016251	8145	IVF	EQU	*
	016251	000110	2350 00 010	8146		LDA	DVOPT /* CHECK OPTION
	016252	200000	3150 03 000	8147		CANA	OVF,DU
	016253	016501	6000 00 010	8148		TZE	IVFE
			016254	8149		.ISETE	
			016260	8150		.I.S	DCN1
			016267	8151		.I.S	DCN3
			016276	8152		.I.C	DCN2
			016305	8153		.I.E	DCN4
			016320	8154		.I.S	OVH1
			016327	8155		.I.E	OVH2
			016342	8156		.I.C	SLC1
			016351	8157		.I.S	SLC2
			016360	8158		.I.E	SLC3
			016373	8159		.I.E	SLC4
			016406	8160		.I.C	SLC5
			016415	8161		.IBASE	(CAL1,CAL2,CAL3,CAL4)
			016422	8162		.IX	CAL1
			016426	8163		.IX	CAL2
			016432	8164		.IX	CAL3
			016436	8165		.IX	CAL4
			016442	8166		.IBASE	(CAL2+7,CAL2+8,CAL4+7,CAL4+8)
			016447	8167		.IYPR	VPUSHV,VPUSH,VF
			016451	8168		.IYPR	VTPSHV,VTPSH,VF
			016453	8169		.IYPR	VLOADV,VLOAD,VF
			016455	8170		.IYPR	VTLDV,VTLD,VF
	016457	014130	0420 00 010	8171		ASX	IX,VPUSH
	016460	014132	0420 00 010	8172		ASX	IX,VTPSH
	016461	014134	0420 00 010	8173		ASX	IX,VLOAD
	016462	014136	0420 00 010	8174		ASX	IX,VTLD
		717200		8175	XEDOP	BOOL	717200
		016463		8176		.IOP	XEDOP,(VPUSHV,VTPSHV,VLOADV,VTLDV)

INITIALIZE MEASUREMENT OPTION

					8177					
	016470				8178	.ISLCT	VF			
	016501				8179	IVFE	EQU	*		
					8180	*				
					8181	*	INITIALIZE TIME TRACE OPTION			
					8182	*				
	016501	000107	7220	00	010	8183	LXL	IX.SPCL		
	016502	016522	6050	00	010	8184	TPL	ITTE	NO OPTION SKIP	
	016503	017746	2220	00	010	8185	LDX	IX.DSPEND		
		016504				8186	.ICHNG	ITTRA,X.TTT	/* LINK OP	
		016507				8187	.ISLCT	TT		
	016520	016522	7100	00	010	8188	TRA	ITTE		
						8189	INHIB	SAVE,ON		
	016521	000001	7102	00	000	8190	ITTRA	TRA	TTIME-TTBASE	
						8191	INHIB	RESTORE		
		016522				8192	ITTE	EQU	*	

MODULE COMPACTION

8194 *										
8195 *										FOLLOWING OPTION LIST(OPLIST), RECOMPACT MODULE
8196 *										
	016522	014367	2340	00	010	8197	ICMP	EQU	*	
016522	014367	2340	00	010	8198		SZN	OPCNT		*ANY OPTION SFELECTED
016523	016531	6010	00	010	8199		TNZ	ICMP1		*YES
016524	017755	2340	00	010	8200		SZN	IPCH2		*NO. THEN ANY PATCH
016525	016566	6010	00	010	8201		TNZ	ICMPE		YES. NO OPTION AND SOME PATCH = GO
016526	006515	6220	00	010	8202		EAX	IX,PTCH2		*NO PATCH APPLIED HERE
016527	017746	7420	00	010	8203		STX	IX,DSPEND		*DELETE PATCH AREA
016530	016566	7100	00	010	8204		TRA	ICMPE		*GO
	016531					8205	ICMP1	EQU	*	
016531	014367	7220	00	010	8206		LXL	IX,OPCNT		*NO. OF OPTION SELECTED
016532	000000	6350	00	000	8207		EAA	0		*PTR.
016533	001762	4704	07	000	8208		LDP	P0.,ISR,DL		
016534	001762	4714	07	000	8209		LDP	P1.,ISR,DL		
	016535					8210	ICMP2	EQU	*	
016535	014335	7230	01	010	8211		LXL	IY,OPLIST,AU		*ORIGINAL ADDRESS
016536	014335	1030	01	010	8212		CMPX	IY,OPLIST,AU		ASSIGNED ADDRFS
016537	016550	6000	00	010	8213		TZF	ICMP3		*SAME. NO NEED TO MOVE. SKIP
016540	000000	5074	13	000	8214		AWDX	,IY,P0		*SENDER
016541	014335	2230	01	010	8215		LDX	IY,OPLIST,AU		
016542	100000	5074	13	000	8216		AWDX	,IY,P1		*RECIEVER
016543	014352	2360	01	010	8217		LDQ	OPSZLS,AU		*SIZE OF ROUTINE
016544	000002	7360	00	000	8218		QLS	2		
016545	000140	1005	40	000	8219		MLR	(1,1),(1,1)		*MOVE
016546	000000	0000	02	000	8220		ADSC9	,,QU,P0		
016547	100000	0000	02	000	8221		ADSC9	,,QU,P1		
	016550					8222	ICMP3	EQU	*	
016550	000001	6350	01	000	8223		EAA	1,AU		*NEXT ENTRY
016551	777777	6220	12	000	8224		EAX	IX,-1,IX		
016552	016535	6010	00	010	8225		TNZ	ICMP2		*GO MOVE NEXT
						8226				*NOW MOVE OPTION LIST
016553	017746	2360	00	010	8227		LDQ	DSPEND		*ADDRESS TO MOVE OPTION LIST
016554	000107	2560	00	010	8228		ORSQ	SPCL		*SET SPCL PTR.
016555	014335	1160	03	010	8229		CMPQ	OPLIST,DU		*IF SAME NO NEED TO MOVE
016556	016564	6000	00	010	8230		TZF	ICMP5		
016557	014335	6304	00	010	8231		EPPR	P0,OPLIST		
016560	000000	6314	02	000	8232		EPPR	P1,,QU		
016561	000100	1005	00	000	8233		MLR	(1),(1)		
016562	000000	0000	64	000	8234		ADSC9	,,,NOPT,*4,P0		
016563	100000	0000	64	000	8235		ADSC9	,,,NOPT,*4,P1		
	016564					8236	ICMP5	EQU	*	
016564	014367	7220	00	010	8237		LXL	IX,OPCNT		*ADD LIST SIZE TO .MDISP SIZE
016565	017746	0420	00	010	8238		ASX	IX,DSPEND		
	016566					8239	ICMPF	EQU	*	

INITIALIZE DESCRIPTORS

8241 *								
8242 *				THIS SECTION CREATES DESCRIPTORS AND PUT IT INTO SYSTEM				
8243 *				LINKAGE SEGMENT				
8244 *								
8245 *				SD.GTM	SIZE	GTMN+4+2		
8246 *				SD.LRM	SIZE	(.CRMKP)+5		
8247 *				SD.PDP	SIZE	(.CRMKP)+1		
8248 *				SD.PID	SIZE	(.CRMKP)+1)*4	MOD 2	
8249 *				SD.PJT	SIZE	(PJTSZ)		
8250 *				SD.PRQ	SIZE	(.CRMKP)+17		
8251 *				SD.SS0	SIZE	320		
8252 *				SD.SS1	SIZE	256 OR 0		
8253 *				SD.SS2	SIZE	256 OR 0		
8254 *				SD.SS3	SIZE	256 OR 0		
8255 *				SD.TDS	SIZE	(.CRNPC)*16		
8256 *				SD.OSS	SIZE	256		SUBD2860
8257 *				SD.1SS	SIZE	256 OR 0		SUBD2870
8258 *				SD.2SS	SIZE	256 OR 0		SUBD2880
8259 *				SD.3SS	SIZE	256 OR 0		SUBD2890
8260 *				SD.SDP	SIZE	20		SUBD2900
8261 *				SD.SVC	SD.SVX	SD.PTE		
016566	016640	7100	00 010	8262	TRA	IDSC		
016567	000000011007		000	8263 *	DATA SKELTON OF DESCRIPTER			
	016570			8264	GTM.SDFSTDSC	0,**,**,(R,W)		MODULE GATE TABLE
016570	000000150600		000		VFD	18/**,2/0,9/.FD,3/0,4/0		
016571	000000000000		000		VFD	34/**,2/0		
	016572			8265	LRM.SD STDSC	0,**,**,(R,W)		ALARM TABLE
016572	000000150600		000		VFD	18/**,2/0,9/.FD,3/0,4/0		
016573	000000000000		000		VFD	34/**,2/0		
	016574			8266	PDP.SD STDSC	0,**,**,(R,W)		PROCESS DISPATCH PRIORITY
016574	000000150600		000		VFD	18/**,2/0,9/.FD,3/0,4/0		
016575	000000000000		000		VFD	34/**,2/0		
	016576			8267	PJT.SD STDSC	0,**,**,(R,W)		PRIORITY JOB TABLE
016576	000000150600		000		VFD	18/**,2/0,9/.FD,3/0,4/0		
016577	000000000000		000		VFD	34/**,2/0		
	016600			8268	PRQ.SD STDSC	0,**,**,(R,W)		PROCESS QUEUE SEGMENT
016600	000000150600		000		VFD	18/**,2/0,9/.FD,3/0,4/0		
016601	000000000000		000		VFD	34/**,2/0		
	016602			8269	SS0.SD DSDSC	0,**,320,(R,W)		S/S STACK MOD 8
016602	000477750601		000		VFD	18/320-1,2/3,9/.FD,3/0,4/1		
016603	000000000000		000		VFD	34/**,2/0		
	016604			8270	SS1.SD DSDSC	0,**,**,(R,W)		IF CPU NO.1 CONFIGED
016604	000000150601		000		VFD	18/0,2/0,9/.FD,3/0,4/1		
016605	000000000000		000		VFD	34/**,2/0		
	016606			8271	SS2.SD DSDSC	0,**,**,(R,W)		
016606	000000150601		000		VFD	18/0,2/0,9/.FD,3/0,4/1		
016607	000000000000		000		VFD	34/**,2/0		
	016610			8272	SS3.SD DSDSC	0,**,**,(R,W)		
016610	000000150601		000		VFD	18/0,2/0,9/.FD,3/0,4/1		

INITIALIZF DESCRIPTOR'S

016611	000000000000	000		VFD	34/**,2/0		
		016612	8273	OSS.SD	DSDSC	0,**,256,(R,W)	SUB-DISP S/S FOR PROC'R 0
016612	000377750601	000		VFD	18/256-1,2/3,9/.FD,3/0,4/1		SUBD2800
016613	000000000000	000		VFD	34/**,2/0		
		016614	8274	ISS.SD	DSDSC	0,**,**,(R,W)	AND OTHER PROC'RS IF REQD
016614	000000150601	000		VFD	18/0,2/0,9/.FD,3/0,4/1		SUBD2810
016615	000000000000	000		VFD	34/**,2/0		
		016616	8275	2SS.SD	DSDSC	0,**,**,(R,W)	SUBD2820
016616	000000150601	000		VFD	18/0,2/0,9/.FD,3/0,4/1		
016617	000000000000	000		VFD	34/**,2/0		
		016620	8276	3SS.SD	DSDSC	0,**,**,(R,W)	SUBD2830
016620	000000150601	000		VFD	18/0,2/0,9/.FD,3/0,4/1		
016621	000000000000	000		VFD	34/**,2/0		
		016622	8277	SDP.SD	DSDSC	0,**,20,(R,W)	SUB-DISPATCH LINKAGE
016622	000023750601	000		VFD	18/20-1,2/3,9/.FD,3/0,4/1		SUBD2840
016623	000000000000	000		VFD	34/**,2/0		
		016624	8278	SVC.SD	E8DSC	0,0,480,**,CALLS,S	
016624	004032400010	010		VFD	18/CALLS,1/1,10/**,3/0,4/8		
016625	167400000000	000		VFD	10/480/2-1,24/0,2/0		
		016626	8279	SVX.SD	E11DSC	0,0,480,**,CALLX,S	
016626	004025400013	010		VFD	18/CALLX,1/1,10/**,3/0,4/11		
016627	167400000000	000		VFD	10/480/2-1,24/0,2/0		
		016630	8280	SVY.SD	E11DSC	0,0,480,**,CALLY,S	
016630	004013400013	010		VFD	18/CALLY,1/1,10/**,3/0,4/11		
016631	167400000000	000		VFD	10/480/2-1,24/0,2/0		
		016632	8281	TDS.SD	E11DSC	0,0,480,**,TDS	
016632	004361000013	010		VFD	18/TDS,1/0,10/**,3/0,4/11		
016633	167400000000	000		VFD	10/480/2-1,24/0,2/0		
		016634	8282	SVP.SD	E8DSC	0,0,480,**,CALLP,S	PMME5890
016634	004036400010	010		VFD	18/CALLP,1/1,10/**,3/0,4/8		
016635	167400000000	000		VFD	10/480/2-1,24/0,2/0		
016636	000040 000000	000	8283	GTMNO.	ZERO	32	*NO. OF GATED MODULE
016637	000000 000000	000	8284	PJTS7	ZERO	**	*NO. FOR PRIORITY JOB
			8285				*ZERO FOR PHASE ONE

INITIALIZF DESCRIPTORS

```

016640      8287 IDSC  EQU  *
8288 * * * * *
8289 *      GET END OF .MDISP BODY
016640 017746 2350 00 010 8290      LDA      DSPEND
016641 000007 0350 03 000 8291      ADLA    7,DU
016642 777770 3750 03 000 8292      ANA    -8,DU
016643 017746 7550 00 010 8293      STA    DSPEND
8294 * * * * *
8295 *      ABSOLUTIZE LAST ADDRESS OF .MDISP IN WSQ OFFSET
016644 017750 0544 00 010 8296      STD    P4,IDSCW
016645 017751 2350 00 010 8297      LDA    IDSCW+1
016646 000020 7350 00 000 8298      ALS    16
016647 017746 0350 00 010 8299      ADLA    DSPEND
016650 017753 7550 00 010 8300      STA    LAST
8301 * * * * *
8302 *      GET NEXT AVAILABLE ADDRESS TO CREATE SEGMENTS IN MOD 8
016651 017753 2350 00 010 8303      LDA    LAST
016652 017754 7550 00 010 8304      STA    NEXT
8305 * * * * *
8306 *      INITIALIZE STANDARD DESCRIPTERS
8307 *
8308 STBAS. MACRO
8309      LDA    NEXT
8310      ARL    16
8311      STA    #1          *STORE BASE FIELD INTO DESCRIPTER
8312      ENDM  STBAS.
8313 STSIZ. MACRO
8314      CRSM  SAVE,OFF
8315      INE   'A#2','A',1
8316      EAQ   #2,QU
8317      ASQ   NEXT
8318      SBLQ  =0200000,DL
8319      ORSQ  #1
8320      CRSM  RESTORE
8321      ENDM  STSIZ.
8322 *      INITIALIZE SS0 - SS3 BY CONFIGURATED PROCESSORS
016653 700271 2221 00 000 8323      LDX   IX,,CRNPC,,P.CR
           016654 8324      STBAS.  SS0,SD+1
016657 001000 6360 00 000 8325      EAQ   512
           016660 8326      STSIZ.  SS0,SD
016663 000000 6230 00 000 8327      EAX   IY,0
           016664 8328 IDSC1 EQU    *
016664 777777 6220 12 000 8329      EAX   IX,-1,IX          *IF ALL CONFIGURES PROCESSOR,SS/S
016665 016677 6000 00 010 8330      TZE   IDSC2          *IS MADE GO NEXT
           016666 8331      STBAS.  (SS1,SD+1,IY)
016671 001000 6360 00 000 8332      EAQ   512
           016672 8333      STSIZ.  (SS1,SD,IY)
016675 000002 6230 13 000 8334      EAX   IY,2,IY          *POINT TO NEXT SSN.SD
016676 016664 7100 00 010 8335      TRA   IDSC1
           016677 8336 IDSC2 EQU    *

```

MPRC5590

INITIALIZE DESCRIPTORS

				8337 *	INITIALIZE SUB-DISPATCH SAFE-STORE STACKS		SUBD2920	
016677	700271	2221 00 000	8338	LDX	IX,,CRNPC,,P.CR		SUBD2930	
		016700	8339	STRAS.	OSS.SD+1		SUBD2940	
016703	001000	6360 00 000	8340	EAQ	512		SUBD2950	
		016704	8341	STSIZ.	OSS.SD		SUBD2960	
016707	000000	6230 00 000	8342	EAX	IY.0		SUBD2970	
016710	777777	6220 12 000	8343	IDSSI	EAX IX,-1,IX		SUBD2980	
016711	016723	6000 00 010	8344	TZE	IDSS2		SUBD2990	
		016712	8345	STRAS.	(1SS.SD+1,IY)		SUBD3000	
016715	001000	6360 00 000	8346	EAQ	512		00000020	
		016716	8347	STSIZ.	(1SS.SD,IY)		SUBD3020	
016721	000002	6230 13 000	8348	EAX	IY,2,IY		SUBD3030	
016722	016710	7100 00 010	8349	TRA	IDSS1		SUBD3040	
		016723	8350	IDSS2	NULL	INIT SUB-DISP LKG DESC'S	SUBD3050	
		016723	8351	STRAS.	SDP.SD+1		SUBD3060	
		016726	8352	STRAS.	IFSDP+5		SUBD3070	
		016731	8353	STRAS.	IFSDP+9		SUBD3080	
		016734	8354	STRAS.	IFSDP+13		SUBD3090	
		016737	8355	STRAS.	IFSDP+17		SUBD3100	
016742	000024	6360 00 000	8356	EAQ	20		SUBD3110	
		016743	8357	STSIZ.	SDP.SD		SUBD3120	
		016746	8358	STRAS.	GTM.SD+1			
016751	016636	2360 00 010	8359	LDQ	GTMNO.			
		016752	8360	STSIZ.	GTM.SD			
		016755	8361	STRAS.	LRM.SD+1			
016760	700270	2361 00 000	8362	LDQ	.CRMKP,,P.CR			
		016761	8363	STSIZ.	LRM.SD,5			
		016765	8364	STRAS.	PDP.SD+1			
016770	700270	2361 00 000	8365	LDQ	.CRMKP,,P.CR			
		016771	8366	STSIZ.	PDP.SD,2	.CRMKP+2 (0 ENTRY + SUB-DISP)	SUBD0060	
		016775	8367	STRAS.	PJT.SD+1			
017000	016637	2360 00 010	8368	LDQ	PJTSZ			
017001	017005	6010 00 010	8369	TNZ	IDSC3			
017002	000600	2360 07 000	8370	LDQ	=0600,DL	*IF NO PJT OPTION		
017003	016576	6560 00 010	8371	ERSQ	PJT.SD	*PJT SEGMENT IS NULL SEGMENT		
017004	017011	7100 00 010	8372	TRA	IDSC4			
		017005	8373	IDSC3	EQU *			
		017005	8374	STSIZ.	PJT.SD,0			
		017011	8375	IDSC4	EQU *			
		017011	8376	STRAS.	PRQ.SD+1			
017014	700270	2361 00 000	8377	LDQ	.CRMKP,,P.CR			
		017015	8378	STSIZ.	PRQ.SD,17+16	.CRMKP +17(TABLE) +16(SUB-DISP)	SUBD0080	
		8379	*****					
		8380	*	INITIALIZE ENTRY DESCRIPTERS				
		8381	*					
017021	006134	4714 07 000	8382	LDP	PI,SD,MDD,DL			
017022	000057	6220 00 000	8383	EAX	IX,,MDISP			
017023	100000	2351 12 000	8384	LDA	,IX,PI			
017024	001777	3750 07 000	8385	ANA	=01777,DL	*GET ISEG.NO. IN LS		
017025	000007	7350 00 000	8386	ALS	7	*SHIFT TO ISEGNO. FIELD		

INITIALIZF DESCRIPTOR'S

017026	016624	2550	00	010	8387	ORSA	SVC.SD
017027	016626	2550	00	010	8388	ORSA	SVX.SD
017030	016630	2550	00	010	8389	ORSA	SVY.SD
017031	016632	2550	00	010	8390	ORSA	TDS.SD
017032	016634	2550	00	010	8391	ORSA	SVP.SD

PMME5910

8392 * * * * *
 8393 * STORE DESVRIPTER INTO SYSTEM LINKAGE

8394 *
 8395 IDSC. MACRO

8396 IDRPF #1
 8397 EAX IX.#1.SD
 8398 LDD PI.,IX,P3
 8399 .STDSL PI.SD.#1

8400 IDRPF
 8401 ENDM IDSC.

017033 8402 IDSC. (GTM,LRM,PDP,PJT,PRQ,SS0,SS1,SS2,SS3)

017035	006027	6350	00	000		EAA	SD.GTM
017036	001777	3750	03	000		ANA	=0001777,DU
017037	000001	7350	00	000		ALS	1
017040	600000	0515	01	000		STD	PI,0,AU,P6
017043	006031	6350	00	000		EAA	SD.LRM
017044	001777	3750	03	000		ANA	=0001777,DU
017045	000001	7350	00	000		ALS	1
017046	600000	0515	01	000		STD	PI,0,AU,P6
017051	006036	6350	00	000		EAA	SD.PDP
017052	001777	3750	03	000		ANA	=0001777,DU
017053	000001	7350	00	000		ALS	1
017054	600000	0515	01	000		STD	PI,0,AU,P6
017057	006040	6350	00	000		EAA	SD.PJT
017060	001777	3750	03	000		ANA	=0001777,DU
017061	000001	7350	00	000		ALS	1
017062	600000	0515	01	000		STD	PI,0,AU,P6
017065	006042	6350	00	000		EAA	SD.PRQ
017066	001777	3750	03	000		ANA	=0001777,DU
017067	000001	7350	00	000		ALS	1
017070	600000	0515	01	000		STD	PI,0,AU,P6
017073	006003	6350	00	000		EAA	SD.SS0
017074	001777	3750	03	000		ANA	=0001777,DU
017075	000001	7350	00	000		ALS	1
017076	600000	0515	01	000		STD	PI,0,AU,P6
017101	006004	6350	00	000		EAA	SD.SS1
017102	001777	3750	03	000		ANA	=0001777,DU
017103	000001	7350	00	000		ALS	1
017104	600000	0515	01	000		STD	PI,0,AU,P6
017107	006005	6350	00	000		EAA	SD.SS2
017110	001777	3750	03	000		ANA	=0001777,DU
017111	000001	7350	00	000		ALS	1
017112	600000	0515	01	000		STD	PI,0,AU,P6
017115	006006	6350	00	000		EAA	SD.SS3
017116	001777	3750	03	000		ANA	=0001777,DU

INITIALIZE DESCRIPTORS

017117	000001	7350	00	000	ALS	1		
017120	600000	0515	01	000	STD	PI,0,AU,P6		
	017121	8403			IDSC.	(0SS,1SS,2SS,3SS,SDP)		SUBD3140
017123	006064	6350	00	000	EAA	SD.0SS		
017124	001777	3750	03	000	ANA	=0001777,DU		
017125	000001	7350	00	000	ALS	1		
017126	600000	0515	01	000	STD	PI,0,AU,P6		
017131	006065	6350	00	000	EAA	SD.1SS		
017132	001777	3750	03	000	ANA	=0001777,DU		
017133	000001	7350	00	000	ALS	1		
017134	600000	0515	01	000	STD	PI,0,AU,P6		
017137	006066	6350	00	000	EAA	SD.2SS		
017140	001777	3750	03	000	ANA	=0001777,DU		
017141	000001	7350	00	000	ALS	1		
017142	600000	0515	01	000	STD	PI,0,AU,P6		
017145	006067	6350	00	000	EAA	SD.3SS		
017146	001777	3750	03	000	ANA	=0001777,DU		
017147	000001	7350	00	000	ALS	1		
017150	600000	0515	01	000	STD	PI,0,AU,P6		
017153	006070	6350	00	000	EAA	SD.SDP		
017154	001777	3750	03	000	ANA	=0001777,DU		
017155	000001	7350	00	000	ALS	1		
017156	600000	0515	01	000	STD	PI,0,AU,P6		
	017157	8404			IDSC.	(SVC,SVX,SVY,TDS)		
017161	006124	6350	00	000	EAA	SD.SVC		
017162	001777	3750	03	000	ANA	=0001777,DU		
017163	000001	7350	00	000	ALS	1		
017164	600000	0515	01	000	STD	PI,0,AU,P6		
017167	006122	6350	00	000	EAA	SD.SVX		
017170	001777	3750	03	000	ANA	=0001777,DU		
017171	000001	7350	00	000	ALS	1		
017172	600000	0515	01	000	STD	PI,0,AU,P6		
017175	006123	6350	00	000	EAA	SD.SVY		
017176	001777	3750	03	000	ANA	=0001777,DU		
017177	000001	7350	00	000	ALS	1		
017200	600000	0515	01	000	STD	PI,0,AU,P6		
017203	006023	6350	00	000	EAA	SD.TDS		
017204	001777	3750	03	000	ANA	=0001777,DU		
017205	000001	7350	00	000	ALS	1		
017206	600000	0515	01	000	STD	PI,0,AU,P6		
	017207	8405			IDSC.	(SVP)		PMME5930
017211	006157	6350	00	000	EAA	SD.SVP		
017212	001777	3750	03	000	ANA	=0001777,DU		
017213	000001	7350	00	000	ALS	1		
017214	600000	0515	01	000	STD	PI,0,AU,P6		

INITIALIZFCR KLSEGMENT

8407 *										
8408 *										
8409 *										
8410 *										
8411 *										
8412 *										
8413 *										
8414 *										
8415 *										
8416 *										
8417 *										
8418 *										
8419 *										
8420 *										
8421 *										
8422 *										
8423	017215	006134	4714	07	000					
8424	017216	000057	6220	00	000					
8425	017217	100000	7221	12	000					
8426	017220	017246	7420	00	010					
8427		030000				SCR3				
8428	017221	030000	2620	03	000					
8429	017222	017505	4420	00	010					
8430	017223	017246	2350	00	010					
8431	017224	017241	2360	00	010					
8432	017225	700002	7571	00	000					
8433	017226	017242	2360	00	010					
8434	017227	700004	7571	00	000					
8435	017230	017243	2360	00	010					
8436	017231	700006	7571	00	000					
8437	017232	017244	2360	00	010					
8438	017233	700010	7571	00	000					
8439	017234	017245	2360	00	010					00000020
8440	017235	700030	7571	00	000					00000020
8441	017236	017247	2350	00	010					
8442	017237	700302	7551	00	000					
8443										
8444	017240	017250	7100	00	010					
8445										
8446	017241	704046	7103	00	000					00000020
8447	017242	704044	7103	00	000					00000020
8448	017243	704123	7103	00	000					00000020
8449	017244	704344	7103	00	000					00000020
8450	017245	704356	7103	00	000					00000020
8451	017246	000000	4776	07	000					
8452	017247	000001	7102	04	000					
8453										
8454 *										
8455	017250	700077	5541	00	000					
8456	017251	700723	5541	00	000					

A-PRIORITY DISABLED

INITIALIZFCR KLSEGMENT

017331	016620	2370	00	010	8507	LDAQ	3SS.SD		SUBD3310
017332	100067	7571	20	000	8508	STAQ	.KLSDS+3,*,PI		SUBD3320
					8509	*****			
					8510	*	INITIALIZE PID ENTRY FOR POPM ROLL CALL		
017333	006024	4714	07	000	8511	LDP	PI,SD,PID,DL		
017334	000030	2350	07	000	8512	LDA	24,DL		
017335	100005	7551	00	000	8513	STA	.PNPOP*4+1,*,PI	*WSR7 = 24 FOR ROLL CALL	
					8514	*	ALSO OPEN PST		
017336	006136	4714	07	000	8515	LDP	PI,SD,PST,DL		
017337	100000	5541	00	000	8516	STCI	*,PI		

INITIALIZF SEGMENTS

8518 *											
8519 *									THIS SECTION MOVES THE ROUTINE ITSELF IF NECCESARY		
8520 *									IFSEG ROUTINE FILLS UP CREATED SEGMENTS		
8521 *											
8522 *									*****		
8523 *									MOVE THE FILL UP ROUTINE HIGHER THAN NEXT AVAIL AREA		
8524 *	017340								IMOVF EQU *		
8525	017340	017754	2350	00	010				LDA NEXT		
8526	017341	000007	0350	03	000				ADLA 7,DU		
8527	017342	777770	3750	03	000				ANA -8,DU		
8528	017343	017754	7550	00	010				STA NEXT	*SET TO MOD 8	
8529	017344	000000	4500	04	000				STZ ,IC		
8530	017345	017751	2350	00	010				LDA IDSCW+1		
8531	017346	000020	7350	00	000				ALS 16		
8532	017347	017370	0350	03	010				ADLA IFSEG,DU	*ABSOLUTIZE IFSEG ROUTINE ADDRESS	
8533	017350	017754	1150	00	010				CMPA NEXT	*IF IFSEG IS HIGHER OR EQUAL TO	
8534	017351	500000	6031	01	000				TRC ,AU,P5	*NEXT AVAIL ADDRESS, NO NEED TO MOVE	
8535	017352	017754	2220	00	010				LDX IX,NEXT		
8536	017353	001764	6230	00	000				EAX IY,XXX*4	MOVE SIZE IN BYTES	00000020
8537	017354	500000	6315	12	000				EPPR PI,,IX,P5	*POINT TO MOVE ADDRESS	
8538	017355	000140	1014	40	000				MRL (,),(,1)	*MOVE THE ROUTINE	
8539	017356	017370	0000	13	010				ADSC9 IFSEG,,X3		
8540	017357	100000	0000	13	000				ADSC9 ,,X3,PI		
8541	017360	500000	7101	12	000				TRA ,IX,P5	ENTER INTO MOVED ROUTINE	
8542 *											
8543 *									IFSEGRoutine MAY OR MAY NOT MOVED. IT MUST BE CODED FLOATABLE		
8544 *											
8545 *									*****		
8546 *									CLEAR ALL THE SEGMENT SPACE		
8547	017361	000007710004		000					IFSEG 8EQU *		
8548	017370	000000	4500	04	000				STZ ,IC		
8549	017371	000363	2360	04	17754				LDQ NEXT,\$		
8550	017372	000361	1360	04	17753				SBLQ LAST,\$	GET CLEAR SPACE SIZE	
8551	017373	000010	7720	00	000				QRL 8	*SHIFT TO XX0 POSITION	
8552	017374	000357	2220	04	17753				LDX IX,LAST,\$	*SET START ADDRESS	
8553	017375	000000	6200	06	000				EAXO ,QL		
8554	017376	000000	5202	01	000				IF1 EQU *		
8555	017376	000000	5202	01	000				RPTX ,1		
8556	017377	500000	4501	12	000				STZ ,IX,P5		
8557	017400	000001	1360	03	000				SBLQ 1,DU		
8558	017401	777775	6054	04	17376				TPNZ IF1,\$		
8559 *									*****		
8560 *									INITIALIZE LRM SEGMENT		
8561	017402								IFLRM EQU *		
8562	017402	006031	4714	07	000				LDP PI,SD.LRM,DL		
8563	017403	100000	5541	00	000				STC1 ,,PI	OPEN GATE	
8564	017404	000355	2350	04	17761				LDA =077777777700,\$	*EMPTY ENTRY DATA	
8565	017405	700270	2361	00	000				LDQ ,CRMKP,,P.CR	*PROCESS NUMBER	
8566	017406	000002	6360	02	000				EAQ 2,QU	*ADD 2 FOR INTERCOM AND SWAP	

INITIALIZ SEGMENTS

017407	000010	7720	00	000	8567	QRL	8	*SHIFT FOR REPEAT
017410	000000	6200	06	000	8568	EAXO	,QL	
017411	000003	6220	00	000	8569	EAX	IX,3	*START POINT
		017412			8570	IFLRM1	EQU	*
017412	000000	5202	01	000	8571	RPTX	,1	
017413	100000	7551	12	000	8572	STA	,IX,PI	*FILL UP SEGMENT WITH EMPTY ENTRY
017414	000001	1360	03	000	8573	SBLQ	1,DU	
017415	777775	6054	04	17412	8574	TPNZ	IFIRM1,\$	DISPOPCV
					8575	*****		
					8576	* INITIALIZE PDP SEGMENT		
		017416			8577	IFPDP	EQU	*
017416	006036	4714	07	000	8578	LDP	PI,SD,PDP,DL	
017417	100000	5541	00	000	8579	STC1	,,PI	*OPEN GATE
017420	000020	2350	03	000	8580	LDA	ZSMAN,DU	/* GIVE POP MAIN LEVEL
017421	100001	2551	00	000	8581	ORSA	.PNPOP,,PI	HIGH ENOUGH PRIORITY
017422	000041	7100	04	17463	8582	TRA	IFPRQ,\$	

INITIALIZE SEGMENTS

017464	577737	6305	04	000	8626	EPPR	PO,IPRQSK-*,IC,P5	
017465	000100	1005	00	000	8627	MLR	(1),(1)	
017466	000000	0002	00	000	8628	ADSC9	,,XXXX*4,P0	00000020
017467	100000	0002	00	000	8629	ADSC9	,,XXXX*4,PI	00000020
017470	700271	2351	00	000	8630	LDA	.CRNPC,,P.CR	
017471	000014	7310	00	000	8631	ARS	12	
017472	100036	7551	00	000	8632	STA	D.DSP,,PI	
017473	700270	2351	00	000	8633	LDA	.CRMKP,,P.CR	
017474	000022	7350	00	000	8634	ALS	18	
017475	100001	7551	00	000	8635	STA	D.SSAP,,PI	
017476	000062	7100	04	17560	8636	TRA	IFSS,\$	
					8637	*	*	*
					8638	*	PROCESSOR PROCESS BASE S/S FRAME SKELTON	
017477	000000011007			000				
		017500			8639	ISSSK	EEQU *	
		017500			8640	BSS	.WICI	
017504	000111	004200		010	8641	ZERO	DSP,SYSIR	*IC AND IR
017505	000000030000			000	8642	VFD	22/0,2/3,12/**	/* SCR AND SEGID
		017506			8643	BSS	.WISR-.WDSAR	
		017510			8644	STDSC	**,**,**	*.WISR
017510	000000010600			000		VFD	18/**,2/0,9/.FD,3/**,4/0	
017511	000000000000			000		VFD	34/**,2/0	
		017512			8645	DSDSC	0,64*1024*1024,2,N	
017512	000001610201			000		VFD	18/2-1,2/3,9/.FD,3/0,4/1	
017513	002000000000			000		VFD	34/64*1024*1024,2/0	
		017514			8646	DSDSC	**,**,**	
017514	000000010601			000		VFD	18/0,2/0,9/.FD,3/**,4/1	
017515	000000000000			000		VFD	34/**,2/0	
		017516			8647	DSDSC	0,1024*1024*1024,,(N,M)	
017516	000000010001			000		VFD	18/0,2/0,9/.FD,3/0,4/1	
017517	040000000000			000		VFD	34/1024*1024*1024,2/0	
017520	000000001770			000	8648	PTR	.DR0	
017521	000000001771			000	8649	PTR	.DR1	
017522	000000006133			000	8650	PTR	SD.KL	
017523	000000006042			000	8651	PTR	SD.PRQ	
017524	000000006136			000	8652	PTR	SD.PST	
017525	000000001775			000	8653	PTR	.DR5	
017526	000000006145			000	8654	PTR	SD.SSA	
017527	000000006130			000	8655	PTR	SD.CR	
		017530			8656	DSDSC	**,**,**	*DR0
017530	000000010601			000		VFD	18/0,2/0,9/.FD,3/**,4/1	
017531	000000000000			000		VFD	34/**,2/0	
		017532			8657	DSDSC	**,**,**	*DR1
017532	000000010601			000		VFD	18/0,2/0,9/.FD,3/**,4/1	
017533	000000000000			000		VFD	34/**,2/0	
		017534			8658	DSDSC	**,**,**	*DR2 - P.KI
017534	000000010601			000		VFD	18/0,2/0,9/.FD,3/**,4/1	
017535	000000000000			000		VFD	34/**,2/0	
		017536			8659	DSDSC	**,**,**	*DR3 - P.PRQ
017536	000000010601			000		VFD	18/0,2/0,9/.FD,3/**,4/1	

INITIALIZE SEGMENTS

017537	000000000000	000	VFD	34/**,2/0			
	017540	8660	DSDSC	**,**,**	*DR4 - P.PST		
017540	000000010601	000	VFD	18/0,2/0,9/.FD,3/**,4/1			
017541	000000000000	000	VFD	34/**,2/0			
	017542	8661	DSDSC	**,**,**	*DR5		
017542	000000010601	000	VFD	18/0,2/0,9/.FD,3/**,4/1			
017543	000000000000	000	VFD	34/**,2/0			
	017544	8662	DSDSC	**,**,**	*DR6 - P.SSA		
017544	000000010601	000	VFD	18/0,2/0,9/.FD,3/**,4/1			
017545	000000000000	000	VFD	34/**,2/0			
	017546	8663	DSDSC	**,**,**	*DR7 - P.CR		
017546	000000010601	000	VFD	18/0,2/0,9/.FD,3/**,4/1			
017547	000000000000	000	VFD	34/**,2/0			
	017550	8664	BSS	8	*INDEX AQ		
	8665	*****					
	8666	* FILL UP S/S FRAME SKELTON					
	017560	8667	IFSS	EQU	*		
017560	777730	0544	04	17510	8668	STD	P4,.WISR+ISSSK,\$
017561	177777	2360	07	000	8669	LDQ	=017777,DL
017562	777726	3560	04	17510	8670	ANSQ	.WISR+ISSSK,\$
017563	000163	2350	04	17746	8671	LDA	DSPEND,\$
017564	200000	1350	07	000	8672	SBLA	=020000,DL
017565	777723	2550	04	17510	8673	ORSA	.WISR+ISSSK,\$
017566	001765	4714	07	000	8674	LDP	PI,.LSR,DL
017567	777725	0514	04	17514	8675	STD	PI,.WLSR+ISSSK,\$
017570	777720	2370	04	17510	8676	LDAQ	.WISR+ISSSK,\$
017571	777737	7570	04	17530	8677	STAQ	.WDR0+ISSSK,\$
017572	777740	7570	04	17532	8678	STAQ	.WDR1+ISSSK,\$
017573	777747	7570	04	17542	8679	STAQ	.WDR5+ISSSK,\$
017574	006133	4714	07	000	8680	LDP	PI,SD,KL,DL
017575	777737	0514	04	17534	8681	STD	PI,.WDR2+ISSSK,\$
017576	006042	4714	07	000	8682	LDP	PI,SD,PRQ,DL
017577	777737	0514	04	17536	8683	STD	PI,.WDR3+ISSSK,\$
017600	006136	4714	07	000	8684	LDP	PI,SD,PST,DL
017601	777737	0514	04	17540	8685	STD	PI,.WDR4+ISSSK,\$
017602	006145	4714	07	000	8686	LDP	PI,SD,SSA,DL
017603	777741	0514	04	17544	8687	STD	PI,.WDR6+ISSSK,\$
017604	777742	0574	04	17546	8688	STD	P.CR,.WDR7+ISSSK,\$
	8689	*****					
	8690	* MOVE S/S STACK FRAME TO SD.S50-3					
017605	700271	2221	00	000	8691	LDX	IX,.CRNPC,.P.CR
017606	577672	6305	04	000	8692	EPPR	P0,ISSSK-*,IC,P5
	017607	8693	IFSS10	EQU	*		
017607	000032	6230	04	17641	8694	FAX	IY,IFSSLP,\$
017610	000001	7420	04	000	8695	STX	IX,1,IC
017611	000000	6230	13	000	8696	EAX	IY,**,IY
017612	000000	7160	13	000	8697	XEC	,IY *GET S/S DESCRIPTER
017613	001761	4714	07	000	8698	LDP	PI,.CTYP,DL
017614	000100	1005	00	000	8699	MLR	(1),(1)
017615	000000	0003	00	000	8700	ADSC9	,,48*4,P0

INITIALIZE SEGMENTS

017616	100000	0003	00	000	8701	ADSC9	,,48*4,PI		
017617	000001	1220	03	000	8702	SBLX	IX.1,DU		
017620	100053	4421	00	000	8703	SXL	IX.,WREGS+3,,PI	*SET INDEX 7 TO PROCESSOR NO.	
017621	777766	6054	04	17607	8704	TPNZ	IFSS10,\$		
					8705	*	INITIALIZE SUB-DISPATCH LINKAGE SEGMENT		SUBD3340
017622	000030	2350	07	000	8706	LDA	24,DL	INITIALIZE BASE OF LINKAGE	SUBD3350
017623	000030	0550	04	17653	8707	ASA	IFSDP+5,\$	IN ENTRY DFSCRIPTORS	SUBD3360
017624	000020	0350	07	000	8708	ADLA	16,DL		SUBD3370
017625	000032	0550	04	17657	8709	ASA	IFSDP+9,\$		SUBD3380
017626	000020	0350	07	000	8710	ADLA	16,DL		SUBD3390
017627	000034	0550	04	17663	8711	ASA	IFSDP+13,\$		SUBD3400
017630	000020	0350	07	000	8712	ADLA	16,DL		SUBD3410
017631	000036	0550	04	17667	8713	ASA	IFSDP+17,\$		SUBD3420
017632	006070	4714	07	000	8714	LDP	PI,SD,SDP,DL		SUBD3430
017633	001761	4714	07	000	8715	LDP	PI.,CTYP,DL		SUBD3440
017634	000012	6304	04	17646	8716	EPPR	PO,IFSDP,\$		SUBD3450
017635	000100	1005	00	000	8717	MLR	(1),(1)		SUBD3460
017636	000000	0001	20	000	8718	ADSC9	,,80,PO		SUBD3470
017637	100000	0001	20	000	8719	ADSC9	,,80,PI		SUBD3480
017640	000032	7100	04	17672	8720	TRA	IFGAT,\$		
		017641			8721	IFSSI P	BSS	1	
017642	006003	4714	07	000	8722	LDP	PI,SD,SS0,DL		
017643	006004	4714	07	000	8723	LDP	PI,SD,SS1,DL		
017644	006005	4714	07	000	8724	LDP	PI,SD,SS2,DL		
017645	006006	4714	07	000	8725	LDP	PI,SD,SS3,DL		
		017646			8726	IFSDP	FNULL		SUBD3500
		000000			8727	S.APR	EQU	*-IFSDP	A/P REGISTER VALUES
		017646			8728	DSDSC	7,400000,10,(R,W)		SUBD3520
017646	000011750761			000		VFD	18/10-1,2/3,9/,FD,3/7,4/1		
017647	000006065000			000		VFD	34/400000,2/0		
		000002			8729	S.DSR	EQU	*-IFSDP	DSAR VALUE
		017650			8730	STDSC	7,400000,10,(R,W)		SUBD3530
017650	000011750760			000		VFD	18/10-1,2/3,9/,FD,3/7,4/0		
017651	000006065000			000		VFD	34/400000,2/0		
		000004			8731	S.FNT	EQU	*-IFSDP	SUB-DISP ENTRY FOR PROC'R 0
		017652			8732	E11DSC	0,**,2,0,**		SUBD3560
017652	000000000013			000		VFD	18/**,1/0,10/0,3/0,4/11		
017653	000000000000			000		VFD	10/2/2-1,24/**,2/0		
		000006			8733	S.ISR	EQU	*-IFSDP	SUB-DISP ISR FOR PROC'R 0
		017654			8734	STDSC	7,**,8,(R,W,E,S)		SUBD3580
017654	000007772760			000		VFD	18/8-1,2/3,9/,FD,3/7,4/0		
017655	000000000000			000		VFD	34/**,2/0		
		017656			8735	E11DSC	0,**,2,0,**	ENTRY FOR PROC'R 1	SUBD3590
017656	000000000013			000		VFD	18/**,1/0,10/0,3/0,4/11		
017657	000000000000			000		VFD	10/2/2-1,24/**,2/0		
		017660			8736	STDSC	7,**,8,(R,W,E,S)	ISR FOR PROC'R 1	SUBD3600
017660	000007772760			000		VFD	18/8-1,2/3,9/,FD,3/7,4/0		
017661	000000000000			000		VFD	34/**,2/0		
		017662			8737	E11DSC	0,**,2,0,**		SUBD3610
017662	000000000013			000		VFD	18/**,1/0,10/0,3/0,4/11		

INITIALIZ SEGMENTS

017663	000000000000	000		VFD	10/2/2-1,24/**,2/0	
		017664	8738	STDSC	7,**,8,(R,W,E,S)	SUBD3620
017664	000007772760	000		VFD	18/8-1,2/3,9/.FD,3/7,4/0	
017665	000000000000	000		VFD	34/**,2/0	
		017666	8739	E11DSC	0,**,2,0,**	SUBD3630
017666	000000000013	000		VFD	18/**,1/0,10/0,3/0,4/11	
017667	000000000000	000		VFD	10/2/2-1,24/**,2/0	
		017670	8740	STDSC	7,**,8,(R,W,E,S)	SUBD3640
017670	000007772760	000		VFD	18/8-1,2/3,9/.FD,3/7,4/0	
017671	000000000000	000		VFD	34/**,2/0	
		8741	*****			
		8742	* GTM SEGMENT FILL UP			
		017672	8743	IFGAT	EQU	*
017672	006027 4714 07	000	8744	LDP	PI,SD,GTM,DL	
017673	100000 5541 00	000	8745	STC1	,PI	*SHUT GATE OF SD.GTM
017674	002100 2220 03	000	8746	LDX2	=0002100,DU	*ONE DUMMY ENTRY - FOR RPTX
017675	100001 4421 00	000	8747	SXL2	1,PI	*SET RPTX XO DATA
		8748	*****			
		8749	* MOVF PJT DATA TO SEGMENT			
		017676	8750	IFPJT	EQU	*
017676	776741 2340 04	16637	8751	SZN	PJTSZ,\$	*CHECK GATE WORD
017677	000033 6000 04	17732	8752	TZF	IRFT,\$	SHUT - SO OPTION IS NOT SPECIFIED
017700	006036 4714 07	000	8753	LDP	PI,SD,PDP,DL	/* WHEN A-PRIORITY SELECTED.
017701	100000 2350 07	000	8754	LDA	ZSYSPR,DL	GIVE SYSTEMPRIORITY COMPETENCE
017702	100001 2551 00	000	8755	ORSA	.PNPOP,,PI	TO GEPOP AND.
017703	100003 2551 00	000	8756	ORSA	.PNSYT,,PI	TO SYSOUT
017704	006040 4714 07	000	8757	LDP	PI,SD,PJT,DL	
017705	000005 6304 04	17712	8758	EPPR	PO,PJT,\$	
017706	000100 1005 00	000	8759	MLR	(1),(1)	*MOVE TABLE INTO THE SEGMENT
017707	000000 0001 00	000	8760	ADSC9	,,AP.TSZ*4,PO	
017710	100000 0001 00	000	8761	ADSC9	,,AP.TSZ*4,PI	
017711	000021 7100 04	17732	8762	TRA	IRFT,\$	
		000010	8763	AP.F	SFT	AP.NSZ+1
		017712	8764	PJT\$K	EQU	*
		017712	8765	DUP	3,AP.NSZ+1	
017712	000000 000010	000	8766	ZERO	,AP.F	/* SNUMB , ZAPCOD
017713	000000 000000	000	8767	ZERO		/* FLAG , TIME SLICE , KPX
		000007	8768			
			8769	AP.F	SET	AP.F-1
017714	000000 000007	000		ZERO	,AP.F	/* SNUMB , ZAPCOD
017715	000000 000000	000		ZERO		/* FLAG , TIME SLICE , KPX
		000006	AP.F	SFT	AP.F-1	
017716	000000 000006	000		ZERO	,AP.F	/* SNUMB , ZAPCOD
017717	000000 000000	000		ZERO		/* FLAG , TIME SLICE , KPX
		000005	AP.F	SFT	AP.F-1	
017720	000000 000005	000		ZERO	,AP.F	/* SNUMB , ZAPCOD
017721	000000 000000	000		ZERO		/* FLAG , TIME SLICE , KPX
		000004	AP.F	SET	AP.F-1	
017722	000000 000004	000		ZERO	,AP.F	/* SNUMB , ZAPCOD
017723	000000 000000	000		ZERO		/* FLAG , TIME SLICE , KPX

INITIALIZ SEGMENTS

		000003		AP.F	SFT	AP.F-1			
	017724	000000	000003	000	ZFR0	,AP.F		/* SNUMB , ZAPCOD	
	017725	000000	000000	000	ZERO			/* FLAG , TIME SLICE , KPX	
		000002		AP.F	SET	AP.F-1			
	017726	000000	000002	000	ZFR0	,AP.F		/* SNUMB , ZAPCOD	
	017727	000000	000000	000	ZERO			/* FLAG , TIME SLICE , KPX	
		000001		AP.F	SET	AP.F-1			
	017730	000000	000001	000	ZFR0	,AP.F		/* SNUMB , ZAPCOD	
	017731	000000	000000	000	ZFR0			/* FLAG , TIME SLICE , KPX	
		000000		AP.F	SET	AP.F-1			
				8770	***	*****			
				8771	*	RETURN TO .MINIT			
		017732		8772	IRET	EQU	*		
	017732	000017	3360	04	17751	8773	LCQ	IDSCW+1,\$	
	017733	000020	7360	00	000	8774	QLS	16	
	017734	000020	0360	04	17754	8775	ADLQ	NEXT,\$	
	017735	000015	7560	04	17752	8776	STQ	ITMP,\$	
	017736	000010	2360	04	17746	8777	LDQ	DSPEND,\$	
	017737	000001	1360	03	000	8778	SBLQ	1,DU	
	017740	000022	7720	00	000	8779	QRL	18	
	017741	000011	2760	04	17752	8780	ORQ	ITMP,\$	
	017742	000000	6350	00	000	8781	EAA	0	
	017743	000002	2210	04	17745	8782	LDX1	INITX,\$	
	017744	500000	7101	11	000	8783	TRA	,1,P5	*GO INTO .MINIT

INITIALIZE SEGMENTS

				8785 *				
				8786 *	COMMON DATA FOR INITIALIZE DIVISION			
				8787 *	MAY MOVED IN LAST INITIALIZE DIVISION			
				8788 *				
		017745		8789	INITX BSS	1		
	017746	006615 000000	010	8790	DSPEND ZFRO	XENDX		
	017747	000000011007	000					
		017750		8791	IDSCW EBSS	2		
		017752		8792	ITMP BSS	1		
		017753		8793	LAST BSS	1		
		017754		8794	NEXT BSS	1		
	017755	000000 000000	000	8795	IPTCH2 ZERO			
				8796	INHIB	ON		
	017756	000001 7102 04	000	8797	ITRA1 TRA	1,IC		
	017757	000000 0112 07	000	8798	INOP NOP	,DL		
				8799	INHIB	OFF		
				8800	LIT			
	017760	777777777777	000					
	017761	777777777700	000					
				8801			*MODULE TEST ROUTINE WAS DELETED	
		017765		8802	IEND EQU	*		
		000375		8803	XXX SET	IEND-IFSEG		00000020

ERROR LINKAGE

	017765	000000000000	000					
	017766	333324316247	000					

8804 END

GMAP VERSION/ASSEMBLY DATES JMPA 790514/052579 JMPB 791026/102679 JMPC 790511/052579

17767 IS THE NEXT AVAILABLE LOCATION.
THERE WERE NO WARNING FLAGS IN THE ABOVE ASSEMBLY

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
0	AP.F	8769 8763 8766 8769
7721	AP.FLG	6395 6395 6438 6586 6595
7	AP.NSZ	6374 6374 6378 6691 6756 6890 8077 8763 8765
100000	AP.OPR	6410 6410 6605 6701 6703 6913 8029 8076
200000	AP.RVD	6411 6411 6605 6701 6705 6865 6913 6915 7091 8018 8076 8082
7717	AP.TAL	6382 6382 6433 6477 6496 6637 6717
20	AP.TSZ	6378 6378 8000 8760 8761
10202	APJT	6680 6680 8043
10424	APLIST	6883 6619 6730 6750 6785 6883
10465	APLMRK	6921 6889 6899 6904 6921
10075	APLPCK	6569 6569 8044
10433	APLST1	6891 6891 6902
10443	APLST2	6900 6893 6900 6920
10455	APLST5	6911 6898 6911
10464	APLST6	6919 6916 6919
2	APLSTX	6878 6619 6730 6750 6785 6878 6885 6910
10334	APNE0	6809 6809 6853 6871
10340	APNE1	6814 6812 6814
10326	APNE2	6802 6802 6866
10357	APNE3	6830 6827 6830
10365	APNE5	6837 6822 6837
10402	APNE61	6852 6849 6852
10404	APNE62	6854 6801 6848 6854 6862 6869
10406	APNE63	6857 6794 6857
10374	APNE6	6845 6804 6845
10407	APNE7	6859 6799 6859
10304	APNEW	6783 6683 6783
7724	APP1	6420 6420 8045
7727	APP2	6424 6422 6424
7741	APP3	6435 6426 6435 6461
7747	APP4	6442 6434 6442
7754	APP5	6448 6448 6454 6457
7762	APP6	6455 6451 6455
7770	APPSV	6462 6443 6458 6462
10102	APRD1	6582 6582 8049
10110	APRD2	6589 6585 6589
10116	APRD3	6596 6593 6596
10122	APRD4	6601 6598 6601
10255	APREF	6747 6682 6747
10302	APREFE	6767 6758 6767
104	APRIOR	318 318 8008 8013
7772	APRPTX	6464 6444 6464 6791 8055
561	APSIZE	6933 6933 8060
10423	APSNB	6872 6789 6872
7771	APSYS	6463 6447 6463
7543	BPBASE	6223 6223 6253 6269 6304 6320 6323 6337 6341 6353 6366 7974 7979 7980 7981 7984
		7985 7986 7987
7655	BPFN	6331 6331 7980 7986
7672	BPFNA	6346 6338 6346
7664	BPFNB	6339 6339 6362

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

7	BP.NSZ	6229	6229	6232	6235	6238	6336	6352			
7553	BP.SNB	6235	6235	6304	6337	6341	6353	7954			
7544	BP.TAL	6231	6231	6269	6323	7965					
7562	BP.TQT	6237	6237	6253	6320	7960					
7713	BPMASK	6363	6346	6363							
7613	BPP1	6271	6271	6275	6277						
7601	BPP	6259	6259	7979	7985						
7571	BPRD1	6245	6245	7984	7987						
7576	BPRD2	6251	6248	6251							
101	BPRIOR	315	315	7952	7961						
153	BPSIZE	6366	6366	7981							
7715	BPTSS	6365	6349	6365							
7714	BPTSSC	6364	6347	6364							
7623	BPUP1	6296	6296	7974							
7645	BPUP4	6316	6307	6316							
3625	BRT1.3	3026	404	469	915	3026					
1401	BYPAS	1442	1371	1442	1465	1532					
4044	CALAH	3302	3302	8447							
4106	CALG	3352	3340	3352							
4034	CALL1	3289	3280	3289							
4052	CALL2	3312	3297	3312	3471	3483	3569				
4055	CALL3	3320	3320	3364							
4050	CALL	3308	3304	3308							
4063	CALLG	3327	3322	3327							
4046	CALLH	3305	3305	8446							
4036	CALLP	3291	3291	8282							
4032	CALLS	3285	3285	8278							
4025	CALLX	3274	3274	8279							
4013	CALLY	3255	3255	8280							
4070	CALOG	3338	3319	3338							
6456	CAPCNT	5187	5142	5187							
6431	CAPLOC	5180	5133	5137	5141	5179	5180				
6470	CAPLOD	5198	5150	5163	5167	5175	5198				
24	CAPNPG	5132	5132	5148	5157	5162	5198				
6427	CAPRET	5177	5149	5151	5154	5158	5169	5177			
6435	CAPSAQ	5181	5136	5178	5181						
6442	CAPSXQ	5185	5181	5182	5183	5184	5185				
6340	CAPT	5118	15	5118							
6457	CAPTCT	5189	5122	5123	5125	5126	5139	5189			
6514	CAPTNE	5199	5128	5174	5199						
6356	CAPTOR	5131	3874	4025	4170	4239	4753	4792	4908	4919	5131
6360	CAPTUR	5135	5134	5135							
6412	CAPXAA	5163	5163	5166							
6452	CAPXAB	5186	5161	5168	5176	5186					
6421	CAPXAC	5170	5164	5170							
6400	CAPXAD	5152	5145	5152							
1677	CCO	1694	1691	1694							
1716	CC1	1708	1708	1714							
1721	CC1NXT	1712	1712	1725							
1724	CC2	1716	1711	1716							

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
4524	CLDD1	3863 3860 3863
4525	CLDD2	3865 3862 3865
4531	CLDD3	3870 3867 3870
4532	CLDD4	3871 3869 3871
444	CLDDS	782 15 782
4516	CLDED	3851 3783 3851
6033	CLDP1	4857 4849 4851 4857
6042	CLDP1E	4866 4860 4866
6045	CLDP2	4871 4862 4871
6053	CLDP3	4878 4740 4875 4878
6022	CLDPG	4845 4836 4839 4845
454	CLF1	792 785 792
475	CLF2	810 810 822
506	CLF3	820 816 820
510	CLF4	823 814 823
516	CLF5	834 800 826 834
522	CLF5A	842 837 842
532	CLF5B	853 844 846 853
546	CLF6	866 860 866
547	CLF7	868 865 868
563	CLF8	885 855 878 885
4440	CLOAD	3787 3767 3775 3787
4551	CLSHLD	3883 3760 3883
4375	CLSS1	3735 3735 3914
4371	CLSSA	3727 3344 3727 4932 4934 4949
7426	CMBASE	6075 6075 6112 7882 7883 7884 7885 7886 7902 7903
20	CMSIZE	6112 6112 7886
1672	CONT10	1677 1674 1677
1625	CONT1	1628 1624 1626 1628
1633	CONT1A	1635 1631 1635
1642	CONT2	1643 1641 1643
1662	CONT8	1667 1663 1667
1663	CONT8A	1669 1666 1669
1665	CONT9	1671 1656 1671
1616	CONT	1620 1601 1620 1820
7074	CPU	5759 5759 5788 5789 5808 5809
3	CPYSAX	3618 3618 3815 3994 4106 4110 4823
5766	CPYSSA	4806 3815 3994 4106 4110 4806
17241	CRCAL	8446 8431 8446
17242	CRCLA	8447 8433 8447
17243	CRFXT	8448 8435 8448
17245	CRGTA	8450 8439 8450
17244	CRGTO	8449 8437 8449
17247	CRPJT	8452 8441 8452
2422	DACN	2134 406 609 718 981 2134
2430	DACNB	2144 573 2144
2555	DACNC	2243 1632 1877 2243
2424	DACND	2137 438 1137 2137
2	DACNX	172 172 406 438 573 609 718 981 1137 1632 1877 2237 2253
2567	DACQ	2258 2151 2258

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
4163	EXT21	3419 3419 3433
4200	EXT23	3434 3417 3434
4207	EXT24	3441 3437 3441
4217	EXT25	3449 3445 3449
4150	EXT2	3406 3396 3406
4123	EXT	3378 3378 8448
4236	EXTG	3472 3462 3472
4221	EXTOG	3458 3408 3458
4252	EXTPP	3490 3474 3490
4340	EXTWK	3550 3424 3425 3550
4126	EXTYP	3385 3385 3469 3481 3507
6013	GETPG1	4833 3774 4096 4833
6173	GETPG2	4963 3785 4098 4745 4963
1	GETPGX	3619 3619 3774 3785 4096 4098 4738 4739 4742 4745 4844 4847 4854 4855 4863 4864 4869 4870 4876 4928 4929 4964 5005 5006
7055	GNTCHA	5709 294 5709
6016	GP0	4837 4837 4877
6204	GP3	4973 4969 4973
6206	GP4	4976 4966 4976
6216	GP4.5	4985 4981 4985
6231	GP5	5000 4972 4975 4984 4987 5000
6220	GP6	4988 4978 4988
6223	GP6A	4992 4992 4996
6230	GP6B	4998 4994 4998
2121	GPR	1862 1607 1862
132	GR1	405 401 405
151	GR3	421 411 416 421
123	GRD	397 15 397
4356	GTA	3573 3573 8450
5523	GTMASK	4579 4532 4579 4602
16570	GTM.SD	8264 8264 8358 8360 8402
16636	GTMNO.	8283 8283 8359
3521	GTMOP	2898 824 979 2898 4546 4626
3514	GTMST	2894 805 2894 4531 4601 7864
5474	GTNEW	4553 4537 4553
4354	GT01	3570 3568 3570
4344	GTO	3560 3560 8449
4222	GTOOG	3460 3460 3572
5542	GTOP01	4600 4595 4600
5565	GTOP1	4625 4618 4625
5524	GTOP	4584 3477 4584
5527	GTOPS	4588 3969 4588
5462	GTST2	4542 4542 4560
5444	GTST	4526 3358 4526
5446	GTSTS	4529 3828 4529 4574 4578
5573	GTWK	4632 4586 4589 4628 4632
5503	GTWT	4564 4540 4564
346	GW1	649 646 649
352	GWIA	654 652 654
354	GW2	657 640 657 745

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
331	GWAKE	635 15 635 681
16001	IAP1	8007 8007 8023
16015	IAP2	8020 8009 8011 8020
16026	IAP4	8031 8027 8031
16124	IAPRE	8061 7996 8061
15765	IAPEN2	7986 7975 7986
15764	IAPP1	7985 7977 7985
15674	IAPR1	7951 7951 7971
15703	IAPR2	7959 7957 7959
15711	IAPR3	7966 7964 7966
15712	IAPR4	7968 7953 7968
15766	IAPRD1	7987 7978 7987
15767	IAPRE	7989 7948 7982 7989
15763	IARED	7984 7976 7984
5056	ICKS1	4196 4196 7590
5074	ICKS1X	4211 4211 7589
5161	ICKS2	4292 4292 7592
5165	ICKS2X	4296 4296 7591
5215	ICKS3	4343 4343 7594
16531	ICMP1	8205 8199 8205
16535	ICMP2	8210 8210 8225
16550	ICMP3	8222 8213 8222
16564	ICMP5	8236 8230 8236
16566	ICMPE	8239 8201 8204 8239
14430	IDISP	7482 1611 7482
16664	IDSC1	8328 8328 8335
16677	IDSC2	8336 8330 8336
17005	IDSC3	8373 8369 8373
17011	IDSC4	8375 8372 8375
16640	IDSC	8287 8262 8287
17750	IDSCW	8791 7495 7496 7499 7500 8296 8297 8530 8773 8791
16710	IDSS1	8343 8343 8349
16723	IDSS2	8350 8344 8350
17765	IFND	8802 8802 8803
17376	IF1	8554 8554 8558
17672	IFGAT	8743 8720 8743
17412	IFLRM1	8570 8570 8574
17463	IFPRQ	8624 8582 8624
17646	IFSDP	8726 8352 8353 8354 8355 8707 8709 8711 8713 8716 8726 8727 8729 8731 8733
17370	IFSEG	8547 8532 8539 8547 8803
17607	IFSS10	8693 8693 8704
17560	IFSS	8667 8636 8667
17641	IFSSLP	8721 8694 8721
17250	IGATE	8455 8444 8455
10150	I.APB1	6637 6637 8037
10151	I.APB2	6638 6638 8037
10014	I.APD1	6495 6495 8036
10015	I.APD2	6496 6496 8036
10020	I.APD3	6500 6500 8036
10064	I.APE1	6553 6553 8038

TOTAL SYMBOL REFERENCES BY SEQUENCE NO.

10072	I.APE2	6560	6560	8038		
10040	I.APE	6524	6524	8038		
10233	I.APL1	6716	6716	8039		
10234	I.APL2	6717	6717	8039		
10410	I.APN2	6861	6800	6828	6861	8059
7736	I.APP1	6432	6432	8035		
7737	I.APP2	6433	6433	8035		
10001	I.APT1	6477	6477	8035		
10002	I.APT2	6478	6478	8035		
7662	I.BPE1	6337	6337	7972		
7665	I.BPE2	6341	6341	7972		
7701	I.BPE3	6353	6353	7973		
7611	I.BPP1	6269	6269	7972		
7577	I.BPRD	6253	6253	7972		
7632	I.BPU1	6304	6304	7972		
7650	I.BPU2	6320	6320	7972		
7653	I.BPU3	6323	6323	7972		
14061	I.CAL1	7289	7289	8161	8162	
14070	I.CAL2	7290	7290	8161	8163	8166
14104	I.CAL3	7292	7292	8161	8164	
14113	I.CAL4	7293	7293	8161	8165	8166
6421	I.CAPA	5171	5171	8107	8113	
6423	I.CAPB	5173	5173	8107	8113	
4516	I.CLDD	3857	3857	6051	6053	7820 7824
515	I.CLE4	829	829	7818	7822	
562	I.CLE7	881	881	7818	7822	
2330	I.CLE8	2057	2057	7819	7823	
1040	I.CLE9	1120	1120	7819	7823	
2425	I.DACN	2139	2139	7850		
2526	I.DCNO	2212	2212	6046	7820	7824
13741	I.DCN1	7267	7267	8150		
13747	I.DCN2	7268	7268	8152		
13753	I.DCN3	7269	7269	8151		
13761	I.DCN4	7270	7270	8153		
4756	I.EPP	4070	4070	7818	7822	
5564	I.GTOP	4621	4621	7818	7822	
5744	I.LDSH	4775	4775	7818	7822	
13673	I.MCAL	7124	7124	8112		
13664	I.MCLD	7112	7112	8112		
13670	I.MCPD	7118	7118	8112		
13703	I.MCVC	7134	7134	8112		
13736	I.MNTR	7172	7166	7172	7770	
13774	I.OVH1	7275	7275	8154		
14002	I.OVH2	7276	7276	8155		
1535	I.RDO	1563	1563	6038	7820	7824
5617	I.RLSH	4669	4669	7818	7822	
1446	I.SLCO	1489	1489	7831	7832	
14015	I.SLC1	7280	7280	8156		
14021	I.SLC2	7281	7281	8157		
14027	I.SLC3	7282	7282	8158		

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

14042	I.SLC4	7283	7283	8159				
14055	I.SLC5	7284	7284	8160				
1463	I.SLCT	1500	1500	8044				
10604	I.TDL1	7036	7036	8040				
10645	I.TDSL	7085	7085	8070				
10643	I.TPUT	7082	7082	8070				
16246	IMCAL	8121	8116	8121				
16247	IMCLD	8122	8115	8122				
16251	IMCNTE	8125	8108	8119	8125			
16205	IMCNTF	8109	8106	8109				
16250	IMCPD	8123	8117	8123				
15532	IMPEND	7867	7835	7849	7867			
15246	IMPPIO	7839	7829	7839				
15252	IMPNF	7846	7817	7846				
15245	IMPOR	7838	7828	7838				
15243	IMPPP3	7836	7827	7836				
15244	IMPSBD	7837	7825	7837				
17745	INITX	8789	7483	8782	8789			
17757	INOP	8798	7602	7653	7708	7733	8798	
7446	INBASE	6114	6114	6152	7919	7925	7926	7927
5346	INOVEC	4447	4405	4447				
5350	INOVEC	4448	4400	4448				
305	INRET	596	552	594	596			
26	INSIZE	6152	6152	7919				
271	INTMO	581	578	581				
260	INTM1	568	565	568				
277	INTMX	589	589	2354				
237	INTRM	550	15	550				
260	INVHO	570	570	7603				
1662	INVH1	1668	1668	7604				
2042	INVH2	1811	1811	7605				
4214	INVH3	3447	3447	7606				
14562	INVHE	7607	7601	7607				
14552	INVHS	7598	7588	7595	7598			
15613	IPRCM2	7902	7880	7902				
15614	IPRCM3	7903	7881	7903				
15667	IPRE	7941	7875	7897	7920	7941		
15646	IPRIO1	7925	7916	7925				
15647	IPRIO2	7926	7917	7926				
15650	IPRIO3	7927	7918	7927				
15620	IPRIO	7911	7888	7911				
15615	IPRIU1	7904	7893	7904				
15616	IPRIU2	7905	7894	7905				
15617	IPRIU3	7906	7895	7906				
17462	IPRQBS	8590	8590	8593	8595	8597		
17463	IPRQE	8620	8620	8623				
17423	IPRQSK	8589	8589	8590	8623	8626		
15666	IPRUR1	7938	7934	7938				
15651	IPRUR	7932	7913	7932				
17755	IPTCH2	8795	7488	8200	8795			

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.						
4347	IYGOTO	3564	3564	3575	5891	7656	7661	7702
1344	IYIDLE	1395	1395	5968	7804			
2011	IYSCC	1781	1781	5977	7804			
3631	IYSEVT	3043	3043	5926	7804			
123	.9101	398	398	7852				
161	.9102	437	437	7852				
205	.9103	463	463	7852				
311	.9104	607	607	7852				
367	.9105	690	690	7852				
412	.9106	717	717	7852				
455	.9107	794	794	7852				
744	.9108	1052	1052	7852				
1021	.9109	1095	1095	7852				
1042	.9110	1135	1135	7852				
1361	.9111	1411	1411	7852				
1423	.9112	1463	1463	7852				
2066	.9113	1833	1833	7852				
2753	.9114	2399	2399	7852				
3126	.9115	2549	2549	7852				
4210	.9116	3443	3443	7852				
4410	.9117	3749	3749	7852				
4425	.9118	3773	3773	7852				
4724	.9119	4042	4042	7852				
4766	.9120	4094	4094	7852				
5004	.9121	4114	4114	7852				
5366	.9122	4478	4478	7852				
5405	.9123	4494	4494	7852				
5446	.9124	4530	4530	7852				
5532	.9125	4592	4592	7852				
5653	.9126	4713	4713	7852				
5721	.9127	4755	4755	7852				
5735	.9128	4768	4768	7852				
6045	.9129	4872	4872	7852				
6101	.9130	4899	4899	7852				
6121	.9131	4914	4914	7852				
6123	.9132	4917	4917	7852				
6135	.9133	4926	4926	7852				
6275	.9134	5062	5062	7852				
6315	.9135	5079	5079	7852				
6320	.9136	5088	5088	7852				
7636	.9137	6308	6308	7852				
10130	.9138	6620	6620	7852				
10211	.9139	6695	6695	7852				
10320	.9140	6796	6796	7852				
10512	.9141	6972	6972	7852				
10563	.9142	7018	7018	7852				
127	.9301	402	402	7853				
211	.9302	467	467	7853				
405	.9303	705	705	7853				
410	.9304	709	709	7853				

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

563	.9305	886	886	7853
670	.9306	982	982	7853
761	.9307	1065	1065	7853
1031	.9308	1103	1103	7853
1165	.9309	1251	1251	7853
1322	.9310	1375	1375	7853
1356	.9311	1402	1402	7853
1365	.9312	1415	1415	7853
1631	.9313	1633	1633	7853
1643	.9314	1645	1645	7853
1705	.9315	1701	1701	7853
2060	.9316	1829	1829	7853
2112	.9317	1854	1854	7853
2130	.9318	1870	1870	7853
2155	.9319	1899	1899	7853
2171	.9320	1911	1911	7853
2332	.9321	2059	2059	7853
3065	.9322	2484	2484	7853
3071	.9323	2489	2489	7853
3223	.9324	2619	2619	7853
3622	.9325	3023	3023	7853
4213	.9326	3446	3446	7853
4412	.9327	3751	3751	7853
4532	.9328	3872	3872	7853
4757	.9329	4076	4076	7853
5006	.9330	4116	4116	7853
5373	.9331	4483	4483	7853
5410	.9332	4497	4497	7853
5430	.9333	4512	4512	7853
5466	.9334	4547	4547	7853
5566	.9335	4627	4627	7853
5732	.9336	4765	4765	7853
5747	.9337	4779	4779	7853
5761	.9338	4791	4791	7853
6030	.9339	4853	4853	7853
6033	.9340	4858	4858	7853
6071	.9341	4893	4893	7853
6115	.9342	4912	4912	7853
6234	.9343	5004	5004	7853
6303	.9344	5070	5070	7853
6305	.9345	5073	5073	7853
6323	.9346	5091	5091	7853
7643	.9347	6313	6313	7853
10172	.9348	6660	6660	7853
10237	.9349	6721	6721	7853
10253	.9350	6734	6734	7853
10366	.9351	6839	6839	7853
10405	.9352	6856	6856	7853
10527	.9353	6985	6985	7853
10553	.9354	7006	7006	7853

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

10600	.9355	7031	7031	7853
231	.9501	518	518	7859
271	.9502	582	582	7859
314	.9503	611	611	7859
331	.9504	636	636	7859
370	.9505	691	691	7859
415	.9506	733	733	7859
1162	.9507	1245	1245	7859
1247	.9508	1319	1319	7859
1424	.9509	1464	1464	7859
1636	.9510	1639	1639	7859
2440	.9511	2155	2155	7859
2561	.9512	2248	2248	7859
2722	.9513	2346	2346	7859
2754	.9514	2400	2400	7859
3170	.9515	2586	2586	7859
3236	.9516	2635	2635	7859
5507	.9517	4569	4569	7859
5671	.9518	4729	4729	7859
6126	.9519	4921	4921	7859
10174	.9520	6663	6663	7859
10427	.9521	6887	6887	7859
233	.9601	520	520	7854
273	.9602	584	584	7854
346	.9603	650	650	7854
356	.9604	660	660	7854
404	.9605	704	704	7854
407	.9606	708	708	7854
436	.9607	753	753	7854
662	.9608	975	975	7854
1164	.9609	1249	1249	7854
1252	.9610	1322	1322	7854
1321	.9611	1374	1374	7854
1574	.9612	1592	1592	7854
1642	.9613	1644	1644	7854
2331	.9614	2058	2058	7854
2443	.9615	2158	2158	7854
2564	.9616	2251	2251	7854
2726	.9617	2350	2350	7854
2731	.9618	2353	2353	7854
3064	.9619	2483	2483	7854
3070	.9620	2488	2488	7854
3174	.9621	2590	2590	7854
3241	.9622	2638	2638	7854
10177	.9623	6666	6666	7854
10452	.9624	6908	6908	7854
133	.9701	407	407	7855
170	.9702	444	444	7855
1126	.9703	1196	1196	7855
152	.9751	423	423	7856

NOTAL SYMBOL REFERENCES BY SEQUENCE NO.

NOTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
200	.9752	452 452 7856
1134	.9753	1203 1203 7856
1147	.9754	1216 1216 7856
1155	.9755	1234 1234 7856
470	.9801	805 805 7865
5447	.9802	4531 4531 7865
5542	.9803	4601 4601 7865
510	.9851	824 824 7857
666	.9852	979 979 7857
5465	.9853	4546 4546 7857
5565	.9854	4626 4626 7857
1215	.9901	1290 1290 7861
2742	.9902	2388 2388 7861
3127	.9903	2550 2550 7861
3225	.9904	2625 2625 7861
1254	.9951	1324 1324 7863
1303	.9952	1354 1354 7863
2752	.9953	2397 2397 7863
3222	.9954	2617 2617 7863
3246	.9955	2645 2645 7863
1	.AC001	4418
2	.AC002	4422
3	.AC003	4425
5	.AC005	3024
6	.AC006	403
7	.AC007	468
234	.AC234	914
4000	.AFXTM	1516
400000	.A.EMM	3003
200000	.A.EMS	1793
400	.ASYSP	153 153 6651
40000	.ATDSE	415
0	.R	8740 8264 8265 8266 8267 8268 8269 8270 8271 8272 8273 8274 8275 8276 8277 8644 8645 8646 8647 8656 8657 8658 8659 8660 8661 8662 8663 8728 8730 8734 8736 8738 8740
160	.CRACC	1567 6052 7811 7814
361	.CRACF	8464
70	.CRACK	8460
2	.CRCAL	937 1771 1815 1830 1838 1857 1871 1900 1912 2111 4406 4509 8432
72	.CRCCK	571 2927 2928 2943 2948 5107
4	.CRCLA	8434
100	.CRCMC	1453 6009 6014
405	.CRCOM	8461
546	.CRCSH	1562
104	.CRDAT	1283 2098 2099 2287 2288 5618
76	.CRDSP	1398 2854 2857 8455
6	.CREXT	8436
722	.CRFSG	8456
724	.CRFSP	8457
425	.CRGPG	8462

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
		4116 4483 4497 4512 4547 4627 4765 4779 4791 4853 4858 4893 4912 5004 5070
21666	.DSPS	7018 5073 5091 6313 6660 6721 6734 6839 6856 6985 7006 7031 7853 252 398 437 463 607 690 717 794 1052 1095 1135 1411 1463 1833 2399
		2549 3443 3749 3773 4042 4094 4114 4478 4494 4530 4592 4713 4755 4768 4872 4899 4914 4917 4926 5062 5079 5088 6308 6620 6695 6796 6972 7018 7852
6	.FX	2334 480 2038 2334
0	.F	7702 7696 7697 7698 7699 7700 7701 7702
40000	.FBT3	6011
4	.FCCMM	1796
753	.FD	8740 8264 8265 8266 8267 8268 8269 8270 8271 8272 8273 8274 8275 8276 8277 8644 8645 8646 8647 8656 8657 8658 8659 8660 8661 8662 8663 8728 8730 8734 8736 8738 8740
20	.FFXTC	1730 1730 1731
10	.FEXTM	1729 1729 1733 1735
100000	.FFTYP	1724
200	.FNABT	1721
20	.FSYOT	1721
23176	.GTMO	4626 259 824 979 4546 4626 7857
23113	.GTMS	4601 258 805 4531 4601 7865
1762	.ISR	7133 8208 8209
0	.IWCMD	4442 4442 7543 7545 7546
6	.IWSEK	4442 4158 4286 4321 4442
4	.IWST1	4442 4411 4442 4476 4501
0	..DISP	267 7788 8446 8447 8448 8449 8450
0	.KLCAC	1567 6033 6052
147	.KLCAM	1491 4822
240	.KLCCT	1567 6050 6052
154	.KLCSW	2450 2451
60	.KLIDI	1378 1419 1421
114	.KLIOS	1460
16	.KCLKPS	388 2236 2252 2262 8476 8477 8479 8481 8483 8485 8487 8489 8491
175	.KLLOG	1287
162	.KLMMG	4023 4882 8468
137	.KLMSZ	7563
44	.KLPRG	386 1527 1710 2090 2091 2149 2150 2245 2408 2443 2482 2487 6540
50	.KLSCC	1703 1704 1765 8466
64	.KLSDS	2089 8493 8494 8496 8498 8500 8502 8504 8506 8508
52	.KLSLV	479 1800 2037 2327
54	.KLSRM	859 864 867 3777 3864 3870 4044 4693 4697 4700 4715 4757 4760 4764 4900 4904 4906 4965 4968 4974 4977 4980 4986 4989 5020 5025 8467
61	.KLSRP	3938 4809 4820 4935
200	.KLWSQ	7841
23343	.LRMO	2645 261 1324 1354 2397 2617 2645 7863
23260	.LRMS	2625 260 1290 2388 2550 2625 7861
1765	.LSR	8674
36	.MBRTI	1815 1857 2111 3027 4509
57	.MDISP	4408 4490 4498 4513 4571 4731 4923 5075 7722 8383 8424
60	.MDMM1	4034 4897 4913 4944
65	.MFALT	937 1455 1912
212	.MGEPR	1871 1900

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
20000	.TLOAD	3011 5065 5089
1000	.TNTSW	3140
20	.TRANG	1588 2584
200000	.TRDBK	424 1191 1194 1630 2475 3088
400000	.TRELK	443 1630 2475 3088
100000	.TSOVF	151
20	.TSWP	151 1640
400	.TSYCC	400 465 1693 1751
200	.TSYOT	2771 3011
4000	.TUSWP	151 4480
100000	.TWAKE	616 1191 1219 1636 3088
2	.TWRAP	917
12	.WASR	2192 3097
30	.WDR0	2197 5415 8677
32	.WDR1	3257 3532 8678
34	.WDR2	3258 3534 8681
36	.WDR3	3259 3536 8683
40	.WDR4	3260 3538 8685
42	.WDR5	3540 8679
44	.WDR6	3542 5408 8687
46	.WDR7	3544 8688
6	.WDSAR	3096 8643
20	.WEDRF	1740 1746 1749 1750
16	.WEDRI	1741
22	.WEIOE	1761
7	.WEOFF	1758
3	.WEPID	1709
60	.WEPL	2280
1	.WEPRV	1723 1728 1736
4	.WESCT	1718
0	.WEST	1713
5	.WFTYP	554 2292
4	.WICI	1661 2185 2188 2272 3403 3415 3435 5419 5904 5917 8640
10	.WISR	911 2194 2260 5416 5900 5915 8643 8668 8670 8673 8676
14	.WLSR	2190 8675
16	.WPSR	2206 2207 3098
20	.WPTR0	2277 5417
21	.WPTR1	3262 3533
22	.WPTR2	3263 3535
23	.WPTR3	3264 3537
24	.WPTR4	3265 3539
25	.WPTR5	3541
26	.WPTR6	3543
27	.WPTR7	3545
50	.WREGS	1664 1665 2182 2285 3438 3439 3514 3516 3518 3520 3522 3524 3526 3529 3531
		8703
5	.WSCR	5420 5422
5	.WSGIS	8429
0	.WSS	5413 5414
70	.WTEMP	2268

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

5103	LOAD10	4221	4221	4229																
5107	LOAD15	4226	4223	4226																
5112	LOAD20	4230	4217	4230	4254															
5035	LOAD2	4169	4166	4169																
5117	LOAD40	4238	4149	4238																
5131	LOAD42	4249	4244	4249																
5134	LOAD45	4253	4248	4253																
5064	LOAD7	4202	4202	4208																
5012	LOAD	4145	3793	4145																
5010	LOADS	4141	4141	4767																
1	LOADX	3617	3617	3793	4146	4233	4235	4767	7113											
1377	LOPCK	1441	1373	1441	1496	1497	1499	1502	1503	1531										
16572	LRM.SD	8265	8265	8361	8363	8402														
3473	LRMOP2	2868	2868	7862																
3471	LRMOP	2866	1324	1354	2397	2617	2645	2866												
3464	LRMST	2862	1290	2388	2550	2625	2862	7860												
15250	LWSQ	7840	7830	7840																
1173	MAIN	1266	390	983	1252	1266	1634													
13676	MC62	7130	7130	8114																
13673	MCAL	7122	7122	8121																
10662	MCRBASE	7101	5171	5173	7101	7112	7118	7124	7133	7135	8114	8118	8121	8122	8123					
13663	MCLD	7110	7110	8122																
13666	MCPD	7115	7115	8123																
3022	MCSIZE	7135	7135	8118																
10663	MCTBL1	7106	7106	7124	7133															
11663	MCTBL2	7107	7107	7112	7118															
12663	MCTBL3	7108	5171	5173	7108															
13702	MCTVEC	7133	7131	7133	7134															
1777	MDMSK	158	158	3742	3976	4192	4555	4590	7300											
1	M.	8740	480	932	1805	1812	2038	2110	2334	3344	3358	3465	3477	4034	4897	4913	4944			
			7153	7791	7793															
13711	MN61	7156	7156	7771																
13722	MN61A	7164	7162	7164																
13704	MNBASE	7137	7137	7172	7173	7771	7772													
13731	MNOFF	7169	7158	7169																
33	MNSIZE	7173	7173	7772																
13706	MNTRC	7153	7153	7165																
13705	MONTR	7151	7151	7169	7172															
7347	MPBASE	5987	829	881	1120	1563	2057	2212	3857	4070	4621	4669	4775	5987	6060	7833	7836			
			7838	7839																
7411	MPCAC	6048	3857	6048																
7376	MPCCAC	6032	1563	6032																
7404	MPCCRT	6041	2212	6041																
7422	MPCRT	6055	6055	7839																
7354	MPF1	6002	6002	6006	6008	6012	6015													
7366	MPF2	6013	6010	6013																
7350	MPFNB	5997	829	881	1120	2057	4070	4621	4669	4775	5997	7836								
7370	MPOR	6022	6022	7838																
57	MPSIZEF	6060	6060	7833																
17754	NEXT	8794	8304	8324	8326	8331	8333	8339	8341	8345	8347	8351	8352	8353	8354	8355	8357			

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	7443	7443	7804	7813	7851	8107	8358	8360	8361	8363	8364	8366	8367	8374	8376	8378	8525	8528	8533	8535	8549
11207	NONPDL	7443	7443	7804	7813	7851	8107	8358	8360	8361	8363	8364	8366	8367	8374	8376	8378	8525	8528	8533	8535	8549
200000	OA	334	334	7995				8775	8794													
7	OAL	350	350	8010																		
7	OANP	336	336	8026	8057																	
400000	OR	335	335	7947																		
70	ORR	345	345	7962																		
7	ORT	344	344	7955																		
2	ODTL	369	369	7663																		
400000	OTO	332	332	7874	7887	7912																
14367	OPCNT	7355	7355	7761	7772	7833	7886	7896	7919	7935	7981	8060	8098	8118	8178	8187	8198					
			8206	8237																		
14335	OPLIST	7353	7353	7761	7772	7833	7886	7896	7919	7935	7981	8060	8098	8118	8178	8187	8211					
			8212	8215	8229	8231																
1	OPRD	370	370	7848																		
14352	OPSZLS	7354	7354	7761	7772	7833	7886	7896	7919	7935	7981	8060	8098	8118	8178	8187	8217					
100	OPTION	313	313	7873	7946	7994	8025	8056														
4000	ORNCH	6021	6021	6026																		
400000	OTRD	367	367	8068																		
200000	OUR	333	333	7874	7887																	
200000	OVF	368	368	8147																		
6331	OVHT	5106	570	5106																		
6325	OVHW	5097	1668	1811	3447	5097																
2	OVHX	569	569	570	1668	1811	3447	5101	5113													
0	P0		191	546	548	715	748	751	778	840	841	1129	1131	1132	1164	1166	1174					
			1232	1459	1460	1461	1519	1520	1521	1538	1556	1557	1576	1577	1578	1647	1753					
			1756	1804	2010	2011	2033	2079	2080	2081	2082	2130	2131	2132	2259	2260	2261					
			2268	2272	2277	2280	2285	2292	2325	2341	2466	3040	3041	3094	3095	3096	3097					
			3098	3509	3713	3806	3808	3889	3939	3980	3999	4002	4134	4135	4136	4137	4161					
			4164	4583	4805	4821	5463	5569	5575	5996	6040	6086	6101	6123	6183	6294	6568					
			6581	6615	6616	6689	6879	7159	7160	7267	7269	7270	7275	7276	7281	7282	7283					
			7641	7722	7794	8208	8214	8220	8231	8234	8626	8628	8692	8700	8716	8718	8758					
			8760																			
1	P1		202	575	776	777	779	780	839	847	851	852	998	1130	1265	1440	1558					
			1559	1560	1918	2084	2107	2108	2109	2128	2129	2260	2273	2275	2283	2325	2341					
			2378	2379	2501	2669	2965	3257	3805	3809	4000	4003	4132	4133	4218	4225	4242					
			4247	4252	4647	4686	4689	6244	6293	6419	6469	6485	6535	6580	6617	7050	7131					
			7379	8209	8216	8221	8232	8235														
2	P2		194	195	196	203	204	1803	2092	3258	3605	3606	5121	5124	5127	5129	6030					
			6614																			
3	P3		193	1658	1799	2062	2084	2092	2265	2266	2267	2269	2270	2271	2274	2282	2291					
			2296	2297	2299	2303	2304	2307	2308	2310	2311	2313	2314	2315	2317	2319	2320					
			2322	2323	2324	2328	2330	2331	3259	3603	8402	8403	8404	8405								
4	P4		192	554	1802	2063	2064	2068	2071	2083	2085	2086	2087	3260	3604	4882	4886					
			4892	8296	8668																	
5	P5		547	847	848	851	2033	2034	2326	2338	3607	4686	4689	4702	8470	8534	8537					
			8541	8556	8626	8692	8783															
6	P6		2011	2012	2014	2016	2018	2021	2023	2029	2030	2035	2042	2044	2048	2050	2051					
			2052	2054	2055	2061	2067	2069	2072	2094	2097	2102	2103	2106	2275	2278	2281					

NOTAL SYMBOL REFERENCES BY SEQUENCE NO.

NOTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
		2283 2286 2326 2338 5616 5663 5665 5667 5668 5674 5675 5691 7044 7289 7290
		7292 7293 7332 7335 7380 7753 7759 8402 8403 8404 8405
7	P7	3487 3488 5408 5413 5414 5415 5416 5417 5419 5420 5422 7788
5356	PH.CW	4453 4290 4453 4456 4457
5327	PH.DIOCB	4443 4279 4443 7545
16574	PH.P.SD	8266 8266 8364 8366 8402
36	PH.ADS	1578
30	PH.AP	921
26	PH.DDS	1148 3047 3493 3894
2	PH.PAT	4176
52	PH.RWS	2033
6	PH.SPX	797 2180
14	PH.SS	927
12	PH.USL	2011 2080 2266
1	PI	7379 7379 7494 7495 7562 7563 8382 8384 8402 8403 8404 8405 8423 8425 8465 8466
		8467 8468 8477 8479 8481 8483 8485 8487 8489 8491 8494 8496 8498 8500 8502
		8504 8506 8508 8511 8513 8515 8516 8537 8540 8562 8563 8572 8578 8579 8581
		8625 8629 8632 8635 8674 8675 8680 8681 8682 8683 8684 8685 8686 8687 8698
		8701 8703 8714 8715 8719 8722 8723 8724 8725 8744 8745 8747 8753 8755 8756
		8757 8761
7	P.CR	551 556 571 937 1033 1045 1047 1076 1091 1096 1271 1283 1377 1384 1398
		1400 1418 1422 1424 1453 1455 1457 1472 1562 1567 1580 1652 1703 1765 1771
		1777 1783 1815 1830 1838 1856 1857 1871 1900 1912 1997 2096 2098 2099 2111
		2139 2168 2287 2288 2340 2345 2854 2857 2864 2867 2877 2880 2886 2889 2896
		2899 2927 2928 2943 2945 2948 2949 2972 2987 3027 3276 3310 3380 3506 3562
		3574 3705 4234 4301 4406 4421 4509 5107 5561 5603 5607 5618 5619 5620 5626
		5630 5657 5659 5661 5662 5664 5666 5676 5678 5680 5682 5685 5733 5741 5768
		5769 5772 5773 5774 5776 5777 5792 5797 5812 5817 5825 5828 5829 5830 5832
		5834 5836 5846 5851 5861 5866 5876 5879 5880 5881 5882 5884 5886 5898 5899
		5901 5903 5909 5910 5912 5916 5918 5923 5926 5929 5930 5933 5936 5937 5939
		5940 5943 5945 5947 5948 5950 5968 5969 5972 5973 5974 5977 5981 5982 5983
		6001 6009 6014 6024 6025 6027 6052 6818 6884 6907 6927 6930 6959 7005 7041
		7042 7053 7060 7065 7083 7094 7097 7331 7336 7518 7530 7552 7556 7569 7586
		7599 7621 7623 7625 7628 7634 7635 7636 7637 7639 7646 7648 7692 7694 7712
		7714 7716 7718 7720 7729 7730 7782 7786 7811 7814 7815 7850 7997 8002 8051
		8071 8323 8338 8362 8365 8377 8432 8434 8436 8438 8440 8442 8446 8447 8448
		8449 8450 8451 8455 8456 8457 8458 8459 8460 8461 8462 8463 8464 8471 8472
		8473 8474 8565 8630 8633 8688 8691
0	P.DDS	3889 840 1130 1148 1149 1155 1159 1160 1164 1168 1176 1178 1180 1182 1647 3041
		3047 3048 3050 3053 3056 3057 3059 3061 3063 3065 3070 3074 3082 3208 3488
		3494 3495 3498 3499 3504 3889 3894 3895 3896 3897 3902 3907
1	P.DIT	4133 4133 4174 4179
1	P.FNT	1558 1558 1761 1766 1767 1779 1780 5983
2	P.GTM	3606 196 806 813 815 819 978 2895 2896 2899 3606 4533 4536 4538 4541 4556
		4557 4559 4568 4603 4606 4611 4616 4617
0	P.HCM	4137 4137 4241 4246 4251
1	P.IOC	202 202 4405
2	P.IOD	203 203 4403
1	P.IOQ	1559 1559 1706 1707 1709 1713 1718 1723 1728 1736 1740 1741 1746 1749 1750 1758
		1760 1761

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	7331	191	381	382	933	934	1279	1280	1342	1343	2570	2571	2941	2942	5098	5099
7	P.RMS																
			6040	6043	6044	7331	7333	7334									
5	P.SAVE	547	547	553	593												
0	P.SNI	6689	6689	6722	6723												
0	P.SNB	6879	6294	6297	6298	6332	6333	6360	6615	6786	6793	6879	6888	6897	6991	6992	
0	P.SPX	2131	778	797	798	2131	2179	2180	2181	2184	2186						
5	P.SRM	4702	776	848	849	852	857	862	863	3607	3707	3782	3789	3798	3803	3805	3806
			3816	3825	3858	3859	3861	3868	3949	3955	3999	4000	4043	4048	4051	4054	4058
			4062	4102	4147	4161	4168	4190	4191	4196	4205	4209	4214	4215	4218	4231	4232
			4242	4283	4291	4294	4295	4332	4334	4344	4350	4356	4371	4373	4380	4382	4409
			4433	4435	4499	4507	4514	4517	4551	4647	4652	4655	4656	4658	4690	4691	4692
			4695	4698	4702	4720	4722	4727	4732	4748	4750	4752	4758	4762	4769	4771	4783
			4789	4813	4815	4903	4924	4967	4971	4979	4983	4993	4995	5003	5015	5016	5018
			5023	5040	5042	5051	5052	5077	6049	6058	7116						
6	P.SSA	399	408	409	412	414	417	419	422	425	439	440	445	447	449	453	
			456	464	477	562	577	587	588	610	618	638	643	680	734	746	750
			796	799	801	804	836	843	845	854	870	887	888	889	890	904	905
			906	908	912	918	923	924	925	930	931	1003	1035	1138	1152	1158	1167
			1169	1175	1177	1179	1181	1185	1186	1188	1197	1200	1204	1207	1213	1221	1272
			1492	1517	1564	1568	1570	1572	1573	1575	1581	1587	1589	1622	1623	1629	1637
			1653	1675	1700	1738	1752	1767	1768	1778	1779	1780	1784	1787	1792	1819	1825
			1832	1835	1852	1853	1868	1869	1878	1888	1897	1898	1908	1909	1910	1996	2004
			2006	2008	2136	2152	2159	2160	2163	2165	2172	2173	2175	2178	2189	2191	2193
			2198	2199	2201	2203	2339	2564	2566	2569	2574	2582	2585	2648	2650	2689	2691
			3002	3005	3007	3010	3013	3016	3019	3049	3052	3054	3055	3058	3060	3062	3064
			3069	3073	3076	3078	3080	3081	3084	3120	3121	3125	3130	3135	3137	3139	3142
			3145	3148	3151	3161	3275	3277	3286	3289	3290	3294	3303	3306	3309	3325	3331
			3341	3342	3343	3345	3346	3347	3348	3350	3353	3356	3357	3359	3360	3361	3379
			3386	3389	3392	3402	3404	3413	3418	3428	3432	3450	3459	3463	3464	3466	3467
			3468	3475	3476	3478	3479	3480	3491	3497	3500	3505	3528	3530	3561	3564	3566
			3573	3706	3715	3737	3738	3739	3740	3741	3745	3746	3757	3761	3779	3788	3792
			3801	3818	3820	3827	3833	3837	3847	3892	3901	3904	3909	3912	3913	3928	3929
			3940	3943	3944	3947	3950	3952	3958	3975	3979	3986	3992	3995	3998	4009	4016
			4034	4037	4045	4063	4078	4079	4091	4095	4099	4146	4154	4158	4185	4233	4269
			4271	4275	4276	4280	4282	4284	4285	4286	4287	4289	4298	4303	4319	4320	4321
			4324	4338	4346	4354	4355	4357	4397	4398	4401	4402	4403	4408	4411	4414	4415
			4429	4431	4447	4476	4479	4486	4490	4496	4498	4501	4503	4513	4516	4527	4543
			4545	4565	4566	4571	4572	4573	4576	4585	4593	4594	4599	4651	4653	4673	4678
			4711	4718	4731	4739	4749	4751	4776	4780	4788	4794	4814	4835	4847	4854	4859
			4863	4867	4869	4876	4897	4913	4923	4928	4944	4950	4964	5005	5036	5039	5044
			5045	5048	5050	5064	5066	5074	5075	5076	5080	5090	5100	5108	5112	5159	5407
			5408	5785	5805	5831	5840	5883	5890	5902	5931	5932	6023	6036	6042	6045	6057
			6133	6135	6136	6145	6147	6148	6150	6200	6202	6203	6213	6215	6216	6218	6306
			6321	6648	6788	6810	6961	7111	7119	7289	7290	7292	7293	7298	7304	7840	
5	P.SSL		479	480	1800	2037	2038	2327	2334	7792							
0	P.SSR	5763	841	909	910	911	1658	1659	1660	1661	1664	1665	2129	2176	2177	2182	2185
			2188	2190	2192	2194	2197	2199	2207	2209	2230	2231	2232	3206	3256	3257	3258
			3259	3260	3261	3262	3263	3264	3265	3397	3401	3403	3409	3412	3415	3435	3438
			3439	3442	3514	3516	3518	3520	3522	3524	3526	3529	3531	3532	3533	3534	3535
			3536	3537	3538	3539	3540	3541	3542	3543	3544	3545	3713	5763	5855	5870	5896

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
6305	SFTLD3	5072 5069 5072
6275	SFTLD	5061 3728 3924 5061
3	SFTLDX	3624 3624 3728 3848 3924 4080 5071 5074 5076 5092
3126	SFTLRM	2548 655 670 758 2548
5	SFTLRX	174 174 655 670 758 2557 2559 2620
0	S.APR	8727 2085 2086 8727
2	S.DSR	8729 2087 8729
4	S.FNT	8731 2068 2092 8731
6	S.ISR	8733 2071 2083 2084 8733
3704	S.STAT	3088 1187 3083 3088
3405	SL1	2801 2801 2808 2811
3414	SL2	2809 2804 2809
3425	SL3	2819 2819 2826 2829
3434	SL4	2827 2822 2827
3442	SL5	2835 2813 2832 2835
3447	SL6	2841 2795 2834 2841
1444	SLCT10	1485 1483 1485
1464	SLCT15	1501 1498 1501
1466	SLCT16	1504 1504 1540 1542 6574
1430	SLCT1	1468 1468 1507 1533 1535 1543 2520
1510	SLCT20	1523 1518 1523 7075
1515	SLCT40	1530 1500 1530 6573
1520	SLCT50	1534 1495 1534
1532	SLCT55	1544 1539 1544
1533	SLCT56	1545 1541 1545
1435	SLCT5	1475 1372 1473 1475 1983
1416	SLCT6	1456 1454 1456
1423	SLCT9	1462 1458 1462
3453	SLMASK	2846 1284 2573 2593 2838 2846
3454	SLMAX	2847 2575 2847
3452	SLRPTX	2845 2797 2798 2815 2816 2845 7537
2	SLX	2790 1439 1512 1514 1515 2790 2794 2799 2803 2805 2806 2817 2821 2823 2824
3	SLY	2791 2791 2806 2824 2836 2837
4	SLZ	2792 2792 2798 2810 2816 2828
20000	SN.GAT	143 143 3824 3968
4000	SN.PRV	142 142 3838 4816
10000	SN.RUS	144 144 4046
2143	SN.GPS	1887 1608 1887
2000	SPACNT	7597 7597 7600
107	SPCL	320 320 7766 8104 8183 8228
3376	SRTLRM	2793 1318 1348 2608 2643 2793
1	SRTLTX	177 177 1318 1348 2608 2643 2840 2844
16602	SS0.SD	8269 8269 8324 8326 8402 8484
404	SS1	703 697 703
16604	SS1.SD	8270 8270 8331 8333 8402 8486
407	SS2	707 695 707
16606	SS2.SD	8271 8271 8402 8488
16610	SS3.SD	8272 8272 8402 8490
177	SSAMAX	7551 7551 7558 7560
4	SSAMIN	7550 7550 7553 7555

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	4952	4019	4027	4030	4884	4933	4936	4938	4939	4952	5119	7578
6166	SSAV	4952	4019	4027	4030	4884	4933	4936	4938	4939	4952	5119	7578
6062	SSAVA	4886	4886	4890									
6170	SSAVAD	4954	4888	4946	4954								
6070	SSAVB	4892	4887	4892									
6124	SSAVC	4918	4883	4891	4918								
6136	SSAVD	4927	4910	4915	4927								
6115	SSAVE	4911	4901	4911									
6123	SSAVF	4916	4898	4916									
6171	SSAVG	4955	4880	4902	4955								
6155	SSAVIA	4944	4944	4948									
6165	SSAVII	4950	4931	4950									
6140	SSAVIT	4931	3731	4931									
6167	SSAVM	4953	4889	4947	4953	7581							
6172	SSAVR	4956	4022	4035	4956								
2176	SSCK	1919	1863	1892	1919								
16612	SS.SD	8273	8273	8339	8341	8403	8501						
4540	SSMVSK	3878	3846	3878									
367	SSPND	689	15	689									
0	SSX	687	687	699	701	702							
1	SSY	688	688	700	701	702							
3222	STL10	2616	2563	2567	2601	2607	2609	2616					
3223	STL11	2618	2560	2618									
3141	STL3	2561	2555	2561									
3147	STL5	2568	2552	2568									
3175	STL6	2591	2578	2581	2591								
3212	STL7	2605	2605	2612									
3216	STL8	2610	2602	2610									
3220	STL9	2613	2596	2598	2604	2613							
770000	STMSK	3212	1654	3212	3387	3567							
0	STYP0	3213	1673	3213									
200000	STYP16	3218	3218	3911									
10000	STYP1	3214	586	1655	3214	3279	3407	3567					
20000	STYP2	3215	3215	3288	3395	3567							
40000	STYP4	3216	3216	3461	3744								
100000	STYP8	3217	3217	3355	3473								
16624	SVC.SD	8278	7506	7507	8278	8387	8404						
3631	SVLVL	3042	1822	1849	1865	1894	1905	3042					
3632	SVLVLN	3045	1697	3045									
1	SVLVLX	179	179	1697	1822	1849	1865	1894	1905	3086	3087		
16634	SVP.SD	8282	7514	7515	8282	8391	8405						
4553	SVSTK	3891	3734	3891									
16626	SVX.SD	8279	7508	7509	8279	8388	8404						
16630	SVY.SD	8280	7510	7511	8280	8389	8404						
2051	SWP	1818	1603	1818									
2076	SYSCCE	1841	1785	1789	1841	7502	7503						
4200	SYSIR	137	137	389	2154	2247	3421	4203	4369	4378	8641		
204000	SYSOR	138	138	1571	2153	2246							
6771	TCPUJO	5610	5606	5610	5629	5922	5971	5979					
10650	TDAPE	7089	6988	7089	8089	8094							
10647	TDAPI	7087	6981	7027	7087	8095							

OCTAL SYMBOL REFERENCES BY SEQUENCE NO.

OCTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
1430	X.SLCT	1469 1469 1999 6977 7023 7058
4420	X.SRML	3762 3762 7574
7033	X.TPUT	5678 5678 6975 7021 7046
7025	X.TTT	5668 5668 7337 8186
4	XMOD	3609 3609 3739 3741 3978 3979 3982 4095 4099 4102 4144 4190 4191 4192 4214 4222
		4749 4750
1	XNEWTL	768 768 861 864
0	XNPC	5994 5994 6001 6003 6005 6007
0	XNXTF	3855 3855 3859 3861 3868 3870
4	XOBJ	6745 769 786 793 997 1006 1009 1011 6292 6298 6301 6310 6312 6333 6342 6344
		6360 6613 6622 6632 6641 6644 6658 6665 6700 6713 6720 6723 6725 6745 6752
		6795 6808 6820 6825 6832 6836 6840 6849 6870
0	XOLDTL	767 767 859 862 863
2	XPAGE	3608 836 843 845 3608 3746 3789 3798 3803 3805 3816 3825 3858 3859 3940 3943
		3944 3949 3992 3993 4000 4009 4015 4019 4027 4028 4048 4051 4054 4056 4058
		4059 4062 4091 4102 4147 4161 4168 4190 4191 4196 4200 4209 4214 4215 4218
		4231 4232 4242 4269 4276 4281 4283 4291 4294 4295 4304 4332 4334 4344 4350
		4356 4367 4377 4398 4402 4415 4433 4435 4503 4507 4516 4517 4655 4656 4658
		4691 4692 4695 4697 4698 4699 4715 4720 4722 4727 4748 4750 4751 4752 4758
		4760 4762 4763 4766 4769 4771 4776 4777 4783 4788 4789 4790 4813 4815 5001
		7116
2	XPAGEF	3725 3725 3777 3782
2	XPDP	6484 6484 6488 6489 6491 6493 6494 6498 6501 6503 6507 6509 6983 6984 7029 7030
1	XPJTP	6881 6881 6890 6892 6895 6901 6912 6914 6918
3	XPOPQ	2969 2969 2978
0	XPST	958 958 965 966
1	XPTR	6781 549 773 809 813 815 819 1150 1152 1154 1155 1156 1159 1160 1164 1168
		1176 1178 1180 1182 2133 2195 2197 2693 2695 2697 2700 2704 2966 2976 2977
		2978 2979 2980 2981 3037 3116 3124 3127 3129 3132 3192 3196 3974 4139 4200
		4205 4220 4222 4224 4227 4228 4365 4367 4371 4373 4377 4380 4382 4525 4534
		4536 4538 4541 4556 4557 4568 6295 6301 6302 6304 6320 6323 6335 6337 6341
		6342 6351 6353 6358 6361 6626 6627 6628 6630 6746 6755 6757 6759 6761 6764
		6781 6790 6793 6795 6800 6803 6806 6807 6808 6816 6847 6850 6863 6868 6870
		6990 6994 6995 6997 6999 7002 7003
1	XQCB	959 959 968 969 971 973
2	XRQE	956 956 965 968 976 4566 4570 4572 4730 4922
0	XSTT	3115 1183 1184 1185 3115 3120 3121 3139 3140 3142 3143 3148 3149 3151
2	XTFP	5761 5761 5772 5773 5774 5776 5777 5797 5817 5828 5829 5830 5832 5834 5836 5851
		5866 5879 5880 5881 5882 5884 5886 5898 5899 5901 5903 5909 5910 5912 5916
		5918 5923 5929 5930 5933 5937 5939 5940 5945 5947 5948 5950 5969 5972 5973
		5974 5981 5982 5983
4	XTLNK	5760 5760 5778 5795 5798 5815 5818 5837 5849 5852 5864 5867 5887 5906 5919
0	XTMP	6880 396 399 400 408 410 412 414 415 435 445 447 774 799 871 877
		1151 1162 1163 1197 1198 1200 1594 1595 1646 1686 1690 1693 1695 1699 1700
		3038 3049 3050 3726 3761 3762 3788 3789 3803 3806 4140 4155 4158 4167 4168
		4184 4185 4266 4297 4298 4312 4337 4338 4649 4656 4663 4664 4763 4764 4783
		5762 5775 5776 5833 5834 5835 5836 5850 5851 5865 5866 5883 5884 5885 5886
		5902 5903 5911 5912 5917 5918 5921 5922 5923 5993 5999 6318 6320 6321 6323
		6517 6518 6523 6525 6526 6630 6631 6782 6817 6818 6880 6903 6906 6907 7004
		7005 7053 7060 7062 7064 7065

NOTAL SYMBOL REFERENCES BY SEQUENCE NO.

NOTAL	SYMBOL	REFERENCES BY SEQUENCE NO.
3364	ZFXLST	2758 2695 2758 2768
4	ZFXLSZ	2769 2696 2769
1	ZINTER	120 120 6138 6166 6205
2000	ZINTRP	105 105 566 1015 1594 2215
17	ZIOURC	111 111 1015 6091 6139 6142 6167 6169 6206 6209
40	ZIOWEN	109 109 1016 1594 6104 6109 6126 6186
55	ZOPCOD	4997 213 1327 1484 1715 1807 1858 2833 3932 4097 4597 4609 4614 4991 4997
20	ZSMAIN	110 110 8580
100000	ZSYSPR	102 102 6463 6489 6503 6507 6572 6653 6656 8754

** 41K LIMITS NEEDED FOR THIS ASSEMBLY.

**GFRC READ 1982 AND PUNCHED NONE COMDK CARDS

6
1
2
3
L 4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
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
61
62

6
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
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
61
62

SNUMB = 12481, ACTIVITY # = 02, , REPORT CODE = 73, RECORD COUNT = 00001

1 FBI DISP,H6600J7.057 SUBD0032

