

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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3 COPY LOG7844 ** MAP EC HISTORY **
4 *****
5
6 *** PREREQUISITES ***
7
8 NONE
9
10 *****
11 *** MODIFICATIONS ***
12
13 CHANGES MADE TO MEET PROGRAM REQUIREMENTS
14 *****
15
16 *** REA'S INCORPORATED ***
17
18 NONE
19
20 *****
21 *** SPECIAL INSTRUCTIONS ***
22
23 NONE
24 *****
25
26 *** E. C. HISTORY ***
27
28 DATE 17DEC76 DATE 18JAN77 DATE 04MAR77 DATE 10JUN77
29 E.C. 578486 E.C. 578573 E.C. 578638 E.C. 578625
30
31 DATE 01MAP78 DATE DATE DATE
32 E.C. 755285 E.C. E.C. E.C.
33 *****
34
35 START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
36 EQUATE X'0100' EQUATED VALUE FOR MDI STATEMENT
37 EQUATE X'0101' EQUATED VALUE FOR MDI STATEMENT
38 EQUATE X'0102' EQUATED VALUE FOR MDI STATEMENT
39 EQUATE X'0200' EQUATED VALUE FOR MDI STATEMENT
40 EQUATE X'0201' EQUATED VALUE FOR MDI STATEMENT
41 EQUATE X'0300' EQUATED VALUE FOR MDI STATEMENT
42 EQUATE X'0400' EQUATED VALUE FOR MDI STATEMENT
43 EQUATE X'0500' EQUATED VALUE FOR MDI STATEMENT
44 EQUATE X'0600' EQUATED VALUE FOR MDI STATEMENT
45 EQUATE X'0000' EQUATE FOR EQUAL
46 EQUATE X'0004' EQUATE FOR NOT EQUAL
47 EQUATE X'0008' EQUATE FOR HIGH
48 EQUATE X'000C' EQUATE FOR NOT HIGH
49 EQUATE X'0010' EQUATE FOR LOW
50 EQUATE X'0014' EQUATE FOR NOT LOW
51 EQUATE X'0018' EQUATE FOR LESS THAN
52 EQUATE X'000C' EQUATE FOR LESS THAN OR EQUAL TO
53 EQUATE X'0008' EQUATE FOR GREATER THAN
54 EQUATE X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
55 EQUATE X'0200' EQUATE FOR ON
56 EQUATE X'0202' EQUATE FOR OFF
57 EQUATE X'0204' EQUATE FOR MIXED
58 EQUATE X'0000' EQUATE FOR EBCDIC DATA TRANSFER
59 EQUATE X'0001' EQUATE FOR HEX DATA TRANSFER
60 EQUATE X'0001' EQUATE FOR EXTERNAL REFERENCE
61 EQUATE X'0000' EQUATE FOR INTERNAL REFERENCE
62 EQUATE X'0000' EQUATE INDICATING PARAMETER
63 EQUATE X'0001' EQUATE FOR DEVICE ADDRESS
64 EQUATE X'0002' EQUATE FOR UNIT ADDRESS
65 DUMMY EQUATE
66 *-X'0000' ADDRESS OF MDI HEADER
67 *-X'22CE' ADDRESS OF PROCESSOR TYPE FIELD
68 PIDX'000C' ADDRESS OF DECIMAL STEP NUMBER
69 OPWD1 EQUATE X'000E' ADDRESS OF OPTION WORD ONE
70 OPWD2 EQUATE X'0010' ADDRESS OF OPTION WORD TWO
71 TUSTATUS EQUATE X'0018' ADDRESS OF TU STATUS WORD
72 TUWOKR EQUATE X'001A' ADDRESS OF TU WORK AREA
73 TUPARM1 EQUATE X'009A' ADDRESS OF PARM 1 POINTER
74 TUPARM2 EQUATE X'009B' ADDRESS OF PARM 2 POINTER
75 TUPARM3 EQUATE X'009C' ADDRESS OF PARM 3 POINTER
76 TUPARM4 EQUATE X'009D' ADDRESS OF PARM 4 POINTER
77 TUPARM5 EQUATE X'009E' ADDRESS OF PARM 5 POINTER
78 TUPARM6 EQUATE X'009F' ADDRESS OF PARM 6 POINTER
79 TUPARM7 EQUATE X'00A0' ADDRESS OF PARM 7 POINTER
80 TUPARM8 EQUATE X'00A1' ADDRESS OF PARM 8 POINTER
81 TUPARM9 EQUATE X'00A2' ADDRESS OF PARM 9 POINTER
82 TUPARM10 EQUATE X'00A3' ADDRESS OF PARM 10 POINTER
83 TUPARM11 EQUATE X'00A4' ADDRESS OF PARM 11 POINTER
84 TUPARM12 EQUATE X'00A5' ADDRESS OF PARM 12 POINTER
85 TUPARM13 EQUATE X'00A6' ADDRESS OF PARM 13 POINTER
86 TUPARM14 EQUATE X'00A7' ADDRESS OF PARM 14 POINTER
87 TUPARM15 EQUATE X'00A8' ADDRESS OF PARM 15 POINTER
88 TUPARM16 EQUATE X'00A9' ADDRESS OF PARM 16 POINTER
89 TUNSGWTR EQUATE X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
90 TUDA EQUATE X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
91 TUBUFF EQUATE X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
92 TULAST EQUATE X'00C2' ADDRESS OF LAST USED WORD IN MAP
93 TURESULN EQUATE X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
94 TURESULN EQUATE X'00C6' ADDRESS OF LENGTH OF TU RESULTS
95 TURESULN EQUATE X'00C8' ADDRESS OF TU RESULTS FIELD
96 MAPNAME EQUATE X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
97 TUNPT EQUATE X'0148' ADDRESS OF SINPT DATA
98 TARMARA EQUATE X'016E' ADDRESS OF TARMARA
99 @DCADD1 EQUATE X'01B8' ADDRESS OF MDI POINTER
100 @DCADD2 EQUATE X'01BA' ADDRESS OF MDI POINTER
101 SUPSTAT EQUATE X'01C4' ADDRESS OF MDI STATUS
102 DEVADD EQUATE X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
103 DEVADD1 EQUATE X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
104 DEVADD2 EQUATE X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
105 DEVADD3 EQUATE X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
106 DEVADD4 EQUATE X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
107 DEVADD5 EQUATE X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
108 DEVADD6 EQUATE X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
109 DEVADD7 EQUATE X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
110 PRINT OFF

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002500 2786 201 DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE
202 *****
203 *****
204 *****
205 THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00)
206 TO LOCATE THE CORRECT RULE TO INVOKE, TO OBTAIN THE PROPER
207 PARAMETERS TO PASS TO THE TUS AND TO PASS TO THE OPERATOR
208 THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS
209 PURPOSE THEY ARE:
210
211 STEP AND RULE ADDRESS TABLE
212 THIS TABLE GIVES THE ADDRESS OF THE RULE TO INVOKE AND
213 THE ASSOCIATED STEP DECIMAL STEP NUMBER OF THAT RULE.
214 ENTRIES ARE AS FOLLOWS
215 A) AN ADDRESS OF THE RULE DC START AREA
216 B) THE STEP NUMBER IN DECIMAL
217 C) AN EQUATE FOR THE STEP NUMBER
218
219 RULE INFORMATION TABLE
220 THIS TABLE CONTAINS THE REQUIRED INFORMATION TO EXECUTE
221 THE APPROPRIATE RULE UNDER MDI. EACH RULE HAS ITS OWN
222 UNIQUELY DEFINED AREA INDICATED BELOW. END OF TABLE IS
223 INDICATED WITH A X'0000' FOR THE RULE EQUATE.
224
225 $QUES
226 A) RULE EQUATE X'0100'
227 B) ADDRESS OF THE YES LEG RULE
228
229 $FIXT
230 A) RULE EQUATE X'0101'
231 B) ADDRESS OF MESSAGE TO PRINT
232
233 $STOP
234 A) RULE EQUATE X'0102'
235 B) ADDRESS OF MESSAGE
236
237 $GOTO
238 A) RULE EQUATE X'0200'
239 B) ADDRESS OF MESSAGE
240 C) NAME OF MAP TO GO TO
241 D) ENTRY POINT WITHIN GO TO MAP TO USE
242 E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
243
244 $CALL
245 A) RULE EQUATE X'0201'
246 B) ADDRESS OF MESSAGE
247 C) NAME OF MAP TO CALL
248 D) ENTRY POINT WITHIN CALLED MAP TO USE
249 E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
250
251 $INPT
252 A) RULE EQUATE X'0300'
253 B) INPUT TYPE (EBCDIC OR HEX)
254 C) ADDRESS OF YES LEG RULE
255 D) DESTINATION LOCATION OF INPUT DATA
256 E) LENGTH OF INPUT DATA
257 F) LOWER LIMIT OF GOOD DATA
258 G) HIGHER LIMIT OF GOOD DATA
259
260 $QUXX
261 A) RULE EQUATE X'0400'
262 B) ADDRESS OF YES LEG RULE
263 C) TU BRANCH TO ADDRESS (INITIAL)
264 D) TU BRANCH TO ADDRESS (SECONDARY)
265 E) LENGTH OF PARAMETER IN BYTES
266 F) PARAMETER TO PASS TO TU
267 G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
268
269 $TVLD
270 A) RULE EQUATE X'0500'
271 B) ADDRESS OF YES LEG RULE
272 C) TU BRANCH TO ADDRESS
273 D) TYPE OF COMPARE TO MAKE ON RESULTS
274 E) LENGTH OF COMPARED RESULTS
275 F) MASK FIELD FOR COMPARE
276 G) LENGTH OF PARAMETER IN BYTES
277 H) PARAMETER TO PASS TO THE TU
278 I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
279
280 $NVID
281 A) RULE EQUATE X'0600'
282
283 ENTRY POINT TABLE
284 THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT
285 THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE
286 REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWS:
287
288 A) NAME OF ENTRY POINT
289 B) ADDRESS OF ENTRY POINT RULE TABLE
290
291 THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'
292
293 MESSAGE TABLE
294 THIS TABLE CONTAINS THE MESSAGE PASSED TO THE OPERATOR
295 VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWS:
296
297 A) EQUATE FOR START OF MESSAGE BLOCK
298 B) NUMBER OF LINES OF MESSAGE
299 C) LENGTH OF FOLLOWING LINE
300 D) FIRST LINE OF MESSAGE
301 E) LENGTH OF FOLLOWING LINE
302 F) SECOND LINE OF MESSAGE
303 G) ETC.
304
305 *****
306 *****
307 *****
308 *****

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311			*****	
312			*****	
313			*****	
314			STEP AND RULE ADDRESS TABLE	
315			*****	
316			*****	
317			*****	
002502	25D0	118	DC AL2(N00001)	
002504	0001	119	DC XL2'0001'	
000001		120	EQN00001 EQU	
002506	25D4	121	DC AL2(N00002)	
002508	0002	122	DC XL2'0002'	
000002		123	EQN00002 EQU	
00250A	25D8	124	DC AL2(N00003)	
00250C	0003	125	DC XL2'0003'	
000003		126	EQN00003 EQU	
00250E	25DC	127	DC AL2(N00004)	
002510	0004	128	DC XL2'0004'	
000004		129	EQN00004 EQU	
002512	25E0	130	DC AL2(N00005)	
002514	0005	131	DC XL2'0005'	
000005		132	EQN00005 EQU	
002516	25E4	133	DC AL2(N00006)	
002518	0006	134	DC XL2'0006'	
000006		135	EQN00006 EQU	
00251A	25E8	136	DC AL2(N00007)	
00251C	0007	137	DC XL2'0007'	
000007		138	EQN00007 EQU	
00251E	25EC	139	DC AL2(N00008)	
002520	0008	140	DC XL2'0008'	
000008		141	EQN00008 EQU	
002522	25F0	142	DC AL2(N00009)	
002524	0009	143	DC XL2'0009'	
000009		144	EQN00009 EQU	
002526	25FC	145	DC AL2(N00010)	
002528	0010	146	DC XL2'0010'	
00000A		147	EQN00010 EQU	
00252A	260A	148	DC AL2(N00011)	
00252C	0011	149	DC XL2'0011'	
00000B		150	EQN00011 EQU	
00252E	2618	151	DC AL2(N00012)	
002530	0012	152	DC XL2'0012'	
00000C		153	EQN00012 EQU	
002532	261C	154	DC AL2(N00013)	
002534	0013	155	DC XL2'0013'	
00000D		156	EQN00013 EQU	
002536	2620	157	DC AL2(N00014)	
002538	0014	158	DC XL2'0014'	
00000E		159	EQN00014 EQU	
00253A	262C	160	DC AL2(N00015)	
00253C	0015	161	DC XL2'0015'	
00000F		162	EQN00015 EQU	
00253E	263A	163	DC AL2(N00016)	
002540	0016	164	DC XL2'0016'	
000010		165	EQN00016 EQU	
002542	2648	166	DC AL2(N00017)	
002544	0017	167	DC XL2'0017'	
000011		168	EQN00017 EQU	
002546	264C	169	DC AL2(N00018)	
002548	0018	170	DC XL2'0018'	
000012		171	EQN00018 EQU	
00254A	2650	172	DC AL2(N00019)	
00254C	0019	173	DC XL2'0019'	
000013		174	EQN00019 EQU	
00254E	265C	175	DC AL2(N00020)	
002550	0020	176	DC XL2'0020'	
000014		177	EQN00020 EQU	
002552	266A	178	DC AL2(N00021)	
002554	0021	179	DC XL2'0021'	
000015		180	EQN00021 EQU	
002556	2678	181	DC AL2(N00022)	
002558	0022	182	DC XL2'0022'	
000016		183	EQN00022 EQU	
00255A	267C	184	DC AL2(N00023)	
00255C	0023	185	DC XL2'0023'	
000017		186	EQN00023 EQU	
00255E	2680	187	DC AL2(N00024)	
002560	0024	188	DC XL2'0024'	
000018		189	EQN00024 EQU	
002562	268C	190	DC AL2(N00025)	
002564	0025	191	DC XL2'0025'	
000019		192	EQN00025 EQU	
002566	269A	193	DC AL2(N00026)	
002568	0026	194	DC XL2'0026'	
00001A		195	EQN00026 EQU	
00256A	26A8	196	DC AL2(N00027)	
00256C	0027	197	DC XL2'0027'	
00001B		198	EQN00027 EQU	
00256E	26AC	199	DC AL2(N00028)	
002570	0028	200	DC XL2'0028'	
00001C		401	EQN00028 EQU	
002572	26B0	402	DC AL2(N00029)	
002574	0029	403	DC XL2'0029'	
00001D		404	EQN00029 EQU	
002576	26BC	405	DC AL2(N00030)	
002578	0030	406	DC XL2'0030'	
00001E		407	EQN00030 EQU	
00257A	26CA	408	DC AL2(N00031)	
00257C	0031	409	DC XL2'0031'	
00001F		410	EQN00031 EQU	
00257E	26D8	411	DC AL2(N00032)	
002580	0032	412	DC XL2'0032'	
000020		413	EQN00032 EQU	
002582	26DC	414	DC AL2(N00033)	
002584	0033	415	DC XL2'0033'	
000021		416	EQN00033 EQU	
002586	26E0	417	DC AL2(N00034)	
002588	0034	418	DC XL2'0034'	
000022		419	EQN00034 EQU	
00258A	26EC	420	DC AL2(N00035)	
00258C	0035	421	DC XL2'0035'	
000023		422	EQN00035 EQU	
00258E	26FA	423	DC AL2(N00036)	
002590	0036	424	DC XL2'0036'	

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000024		425	EQN00036 EQU	
002592	2708	426	DC AL2(N00037)	
002594	0037	427	DC XL2'0037'	
000025		428	EQN00037 EQU	
002596	270C	429	DC AL2(N00038)	
002598	0038	430	DC XL2'0038'	
000026		431	EQN00038 EQU	
00259A	2710	432	DC AL2(N00039)	
00259C	0039	433	DC XL2'0039'	
000027		434	EQN00039 EQU	
00259E	271C	435	DC AL2(N00040)	
0025A0	0040	436	DC XL2'0040'	
000028		437	EQN00040 EQU	
0025A2	272A	438	DC AL2(N00041)	
0025A4	0041	439	DC XL2'0041'	
000029		440	EQN00041 EQU	
0025A6	2738	441	DC AL2(N00042)	
0025A8	0042	442	DC XL2'0042'	
00002A		443	EQN00042 EQU	
0025AA	273C	444	DC AL2(N00043)	
0025AC	0043	445	DC XL2'0043'	
00002B		446	EQN00043 EQU	
0025AE	2740	447	DC AL2(N00044)	
0025B0	0044	448	DC XL2'0044'	
00002C		449	EQN00044 EQU	
0025B2	274C	450	DC AL2(N00045)	
0025B4	0045	451	DC XL2'0045'	
00002D		452	EQN00045 EQU	
0025B6	275A	453	DC AL2(N00046)	
0025B8	0046	454	DC XL2'0046'	
00002E		455	EQN00046 EQU	
0025BA	2768	456	DC AL2(N00047)	
0025BC	0047	457	DC XL2'0047'	
00002F		458	EQN00047 EQU	
0025BE	276C	459	DC AL2(N00048)	
0025C0	0048	460	DC XL2'0048'	
000030		461	EQN00048 EQU	
0025C2	2770	462	DC AL2(N00049)	
0025C4	0049	463	DC XL2'0049'	
000031		464	EQN00049 EQU	
0025C6	277E	465	DC AL2(N00050)	
0025C8	0050	466	DC XL2'0050'	
000032		467	EQN00050 EQU	
0025CA	2780	468	DC AL2(N00051)	
0025CC	0051	469	DC XL2'0051'	
000033		470	EQN00051 EQU	
0025CE	0000	471	DC AL2(DUMMY)	
472		472	*****	
473		473	*****	
474		474	*****	
475		475	*****	
476		476	*****	
477		477	*****	
478		478	*****	
479		479	*****	
480+	N00001	480+	\$QUES QT=(000016),YES=N00045,CT=(C00034)	
481+	N00001	481+	DC A(@QUES)	
482+	N00002	482+	\$QUES QT=(000016),YES=N00040,CT=(C00038)	
483+	N00002	483+	DC A(@QUES)	
484+	N00003	484+	\$QUES QT=(000016),YES=N00035,CT=(C00042)	
485+	N00003	485+	DC A(@QUES)	
486+	N00003	486+	\$QUES QT=(000016),YES=N00030,CT=(C00046)	
487+	N00004	487+	DC A(@QUES)	
488+	N00004	488+	\$QUES QT=(000016),YES=N00025,CT=(C00050)	
489+	N00004	489+	DC A(@QUES)	
490+	N00005	490+	\$QUES QT=(000016),YES=N00020,CT=(C00054)	
491+	N00005	491+	DC A(@QUES)	
492+	N00006	492+	\$QUES QT=(000016),YES=N00015,CT=(C00058)	
493+	N00006	493+	DC A(@QUES)	
494+	N00007	494+	\$QUES QT=(000016),YES=N00010,CT=(C00062)	
495+	N00007	495+	DC A(@QUES)	
496+	N00008	496+	\$QUES QT=(000016),YES=N00005,CT=(C00066)	
497+	N00008	497+	DC A(@QUES)	
498+	N00009	498+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
499+	N00009	499+	DC A(@GOTO)	
500+	N00009	500+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
501+	N00009	501+	DC A(@GOTO)	
502+	N00009	502+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
503+	N00009	503+	DC A(@GOTO)	
504+	N00009	504+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
505+	N00009	505+	DC A(@GOTO)	
506+	N00009	506+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
507+	N00009	507+	DC A(@GOTO)	
508+	N00009	508+	\$GOTO TYPE=INTRNL,EP=A,FT=(F00066),GTO=(N00001)	
509+	N00010	509+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00446),YES=N00014,X	
510+	N00010	510+	DC A(@QUXX)	
511+	N00010	511+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00459),YES=N00013,X	
512+	N00010	512+	DC A(@QUXX)	
513+	N00010	513+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
514+	N00010	514+	DC A(@QUXX)	
515+	N00010	515+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
516+	N00010	516+	DC A(@QUXX)	
517+	N00010	517+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
518+	N00010	518+	DC A(@QUXX)	
519+	N00010	519+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
520+	N00010	520+	DC A(@QUXX)	
521+	N00010	521+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
522+	N00010	522+	DC A(@QUXX)	
523+	N00010	523+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
524+	N00010	524+	DC A(@QUXX)	
525+	N00010	525+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
526+	N00010	526+	DC A(@QUXX)	
527+	N00010	527+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
528+	N00010	528+	DC A(@QUXX)	
529+	N00010	529+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
530+	N00010	530+	DC A(@QUXX)	
531+	N00010	531+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
532+	N00010	532+	DC A(@QUXX)	
533+	N00010	533+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
534+	N00010	534+	DC A(@QUXX)	
535+	N00010	535+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
536+	N00010	536+	DC A(@QUXX)	
537+	N00010	537+	\$QUXX T7838,PLNG=02,PARM=87,REPT=TS16L,QT=(Q00466),CT=(C00031)	
538+	N00010	538+	DC A(@QUXX)	

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00262C 0400 539 N00015 $QUXX T7838,PLNG=02,PARM=86,REPT=TS16L,QT=(Q00398),YES=N00019,X
00262E 2650 540+ N00015 A(@QUXX)
002630 3822 541+ DC AL2(N00019)
002632 3848 542+ DC A(T7838)
002634 0002 543+ DC AL2(TS16L)
002636 F8F6 544+ DC AL2(02)
002638 196E 545+ DC C'86'
00263A 0400 546+ DC AL2(PARMARA)
00263C 264C 547+ DC AL2(PARMARA)
00263E 3822 548 N00016 $QUXX T7838,PLNG=02,PARM=86,REPT=TS16L,QT=(Q00411),YES=N00018,X
002640 3848 549+ N00016 A(@QUXX)
002642 0002 550+ DC AL2(N00018)
002644 F8F6 551+ DC A(T7838)
002646 196E 552+ DC AL2(TS16L)
002648 0101 553+ DC AL2(02)
00264A 299E 554+ DC C'86'
00264C 0101 555+ DC AL2(PARMARA)
00264E 293C 556+ DC AL2(PARMARA)
002650 0200 557 N00017 $FIXT FT=(F00415),CT=(C00031)
002652 2860 558+ N00017 A(@FIXT)
002654 F3C3FOFO 559+ DC A(F00415)
002656 D140 560 N00018 $FIXT FT=(F00418),CT=(C00031)
002658 0000 561+ N00018 A(@FIXT)
00265A 0400 562+ DC A(F00418)
00265C 2680 563 N00019 $GOTO TYPE=INTRNL,EP=J,FT=(F00426),GTO=(N00049)
00265E 3822 564+ N00019 A(@GOTO)
002660 3848 565+ DC A(F00426)
002662 0002 566+ DC CL4'3C00'
002664 F8F5 567+ DC CL2'J'
002666 196E 568+ DC AL2(INTRNL)
002668 0400 569 N00020 $QUXX T7838,PLNG=02,PARM=85,REPT=TS16L,QT=(Q00350),YES=N00024,X
00266A 267C 570+ N00020 A(@QUXX)
00266C 3822 571+ DC AL2(N00024)
00266E 3848 572+ DC A(T7838)
002670 0002 573+ DC AL2(TS16L)
002672 F8F5 574+ DC AL2(02)
002674 196E 575+ DC C'85'
002676 0400 576+ DC AL2(PARMARA)
002678 0101 577+ DC AL2(PARMARA)
00267A 2866 578 N00021 $QUXX T7838,PLNG=02,PARM=85,REPT=TS16L,QT=(Q00363),YES=N00023,X
002680 267C 579+ N00021 A(@QUXX)
002682 3822 580+ DC AL2(N00023)
002684 3848 581+ DC A(T7838)
002686 0002 582+ DC AL2(TS16L)
002688 F8F5 583+ DC AL2(02)
00268A 196E 584+ DC C'85'
00268C 0400 585+ DC AL2(PARMARA)
00268E 2650 586+ DC AL2(PARMARA)
002690 3822 587 N00022 $FIXT FT=(F00367),CT=(C00031)
002692 3848 588+ N00022 A(@FIXT)
002694 0002 589+ DC A(F00367)
002696 F8F5 590 N00023 $FIXT FT=(F00370),CT=(C00031)
002698 0101 591+ N00023 A(@FIXT)
00269A 28B4 592+ DC A(F00370)
00269C 0200 593 N00024 $GOTO TYPE=INTRNL,EP=J,FT=(F00378),GTO=(N00049)
00269E 2D28 594+ N00024 A(@GOTO)
002698 F3C3FOFO 595+ DC A(F00378)
002698 D140 596+ DC CL4'3C00'
002698 0000 597+ DC CL2'J'
002698 0400 598+ DC AL2(INTRNL)
002698 2650 599 N00025 $QUXX T7838,PLNG=02,PARM=84,REPT=TS16L,QT=(Q00302),YES=N00029,X
002698 3822 600+ N00025 A(@QUXX)
002698 3848 601+ DC AL2(N00029)
002698 0002 602+ DC A(T7838)
002698 F8F4 603+ DC AL2(TS16L)
002698 0400 604+ DC AL2(02)
002698 2650 605+ DC C'84'
002698 3822 606+ DC AL2(PARMARA)
002698 3848 607+ DC AL2(PARMARA)
002698 0002 608 N00026 $QUXX T7838,PLNG=02,PARM=84,REPT=TS16L,QT=(Q00315),YES=N00028,X
002698 264C 609+ N00026 A(@QUXX)
002698 3822 610+ DC AL2(N00028)
002698 3848 611+ DC A(T7838)
002698 0002 612+ DC AL2(TS16L)
002698 F8F4 613+ DC AL2(02)
002698 196E 614+ DC C'84'
002698 0400 615+ DC AL2(PARMARA)
002698 2650 616+ DC AL2(PARMARA)
002698 3822 617 N00027 $FIXT FT=(F00319),CT=(C00031)
002698 3848 618+ N00027 A(@FIXT)
002698 0002 619+ DC A(F00319)
002698 0101 620 N00028 $FIXT FT=(F00322),CT=(C00031)
002698 2D7C 621+ N00028 A(@FIXT)
002698 0200 622+ DC A(F00322)
002698 28F0 623 N00029 $GOTO TYPE=INTRNL,EP=J,FT=(F00330),GTO=(N00049)
002698 F3C3FOFO 624+ N00029 A(@GOTO)
002698 D140 625+ DC A(F00330)
002698 0000 626+ DC CL4'3C00'
002698 0400 627+ DC CL2'J'
002698 2650 628+ DC AL2(INTRNL)
002698 3822 629 N00030 $QUXX T7838,PLNG=02,PARM=83,REPT=TS16L,QT=(Q00254),YES=N00034,X
002698 3848 630+ N00030 A(@QUXX)
002698 0002 631+ DC AL2(N00034)
002698 F8F3 632+ DC A(T7838)
002698 0400 633+ DC AL2(TS16L)
002698 2650 634+ DC AL2(02)
002698 3822 635+ DC C'83'
002698 3848 636+ DC AL2(PARMARA)
002698 0002 637+ DC AL2(PARMARA)
002698 0101 638 N00031 $QUXX T7838,PLNG=02,PARM=83,REPT=TS16L,QT=(Q00267),YES=N00033,X
002698 26DC 639+ N00031 A(@QUXX)
002698 3822 640+ DC AL2(N00033)
002698 3848 641+ DC A(T7838)
002698 0002 642+ DC AL2(TS16L)
002698 F8F3 643+ DC AL2(02)
002698 196E 644+ DC C'83'
002698 0400 645+ DC AL2(PARMARA)
002698 2650 646+ DC AL2(PARMARA)
002698 3822 647 N00032 $FIXT FT=(F00271),CT=(C00031)
002698 3848 648+ N00032 A(@FIXT)
002698 0002 649+ DC A(F00271)
002698 0101 650 N00033 $FIXT FT=(F00274),CT=(C00031)
002698 2F44 651+ N00033 A(@FIXT)
002698 264C 652+ DC A(F00274)

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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0026E0 0200 653 N00034 $GOTO TYPE=INTRNL,EP=J,FT=(F00282),GTO=(N00049)
0026E2 30B8 654+ N00034 A(@GOTO)
0026E4 F3C3FOFO 655+ DC A(F00282)
0026E6 D140 656+ DC CL4'3C00'
0026E8 0000 657+ DC CL2'J'
0026EA 0400 658+ DC AL2(INTRNL)
0026EC 0400 659 N00035 $QUXX T7838,PLNG=02,PARM=82,REPT=TS16L,QT=(Q00206),YES=N00039,X
0026EE 2710 660+ N00035 A(@QUXX)
0026F0 3822 661+ DC AL2(N00039)
0026F2 3848 662+ DC A(T7838)
0026F4 0002 663+ DC AL2(TS16L)
0026F6 F8F2 664+ DC AL2(02)
0026F8 196E 665+ DC C'82'
0026FA 0400 666+ DC AL2(PARMARA)
0026FC 270C 667+ N00036 $QUXX T7838,PLNG=02,PARM=82,REPT=TS16L,QT=(Q00219),YES=N00038,X
0026FE 3822 668+ N00036 A(@QUXX)
002700 3848 669+ DC AL2(N00038)
002702 0002 670+ DC A(T7838)
002704 F8F2 671+ DC AL2(TS16L)
002706 196E 672+ DC AL2(02)
002708 0101 673+ DC C'82'
00270A 30BE 674+ DC AL2(PARMARA)
00270C 0101 675+ DC AL2(PARMARA)
00270E 310C 676+ N00037 $FIXT FT=(F00223),CT=(C00031)
002710 0200 677+ N00037 A(@FIXT)
002712 3280 678+ DC A(F00223)
002714 F3C3FOFO 679+ DC A(F00226)
002716 D140 680 N00038 $FIXT FT=(F00226),CT=(C00031)
002718 0000 681+ N00038 A(@FIXT)
00271A 0400 682+ DC A(F00226)
00271C 0400 683 N00039 $GOTO TYPE=INTRNL,EP=J,FT=(F00234),GTO=(N00049)
00271E 2740 684+ N00039 A(@GOTO)
002720 3822 685+ DC A(F00234)
002722 3848 686+ DC CL4'3C00'
002724 0002 687+ DC CL2'J'
002726 F8F1 688+ DC AL2(INTRNL)
002728 196E 689+ N00040 $QUXX T7838,PLNG=02,PARM=81,REPT=TS16L,QT=(Q00158),YES=N00044,X
00272A 0400 690+ N00040 A(@QUXX)
00272C 273C 691+ DC AL2(N00044)
00272E 3822 692+ DC A(T7838)
002730 3848 693+ DC AL2(TS16L)
002732 0002 694+ DC AL2(02)
002734 F8F1 695+ DC C'81'
002736 196E 696+ DC AL2(PARMARA)
002738 0101 697+ N00041 $QUXX T7838,PLNG=02,PARM=81,REPT=TS16L,QT=(Q00171),YES=N00043,X
00273A 3286 698+ N00041 A(@QUXX)
00273C 0101 699+ DC AL2(N00043)
00273E 32D4 700+ DC A(F00175)
002740 0200 701+ DC A(F00178),CT=(C00031)
002742 3448 702+ DC A(F00178)
002744 F3C3FOFO 703+ DC AL2(INTRNL,EP=J,FT=(F00186),GTO=(N00049)
002746 0000 704+ DC A(@GOTO)
002748 D140 705+ DC A(F00186)
00274A 0400 706+ DC CL4'3C00'
00274C 0400 707+ DC CL2'J'
00274E 2770 708+ N00045 $QUXX T7838,PLNG=02,PARM=80,REPT=TS16L,QT=(Q00087),YES=N00049,X
002750 3822 709+ N00045 A(@QUXX)
002752 3848 710+ DC AL2(N00049)
002754 0002 711+ DC A(T7838)
002756 F8F0 712+ DC AL2(TS16L)
002758 196E 713+ DC AL2(02)
00275A 0400 714+ DC C'80'
00275C 276C 715+ DC AL2(PARMARA)
00275E 3822 716+ DC AL2(PARMARA)
002760 3848 717+ DC A(T7838)
002762 0002 718+ DC AL2(TS16L)
002764 F8F0 719+ DC AL2(02)
002766 196E 720+ DC C'80'
002768 0101 721+ DC AL2(PARMARA)
00276A 3448 722+ DC AL2(PARMARA)
00276C 0101 723+ DC AL2(PARMARA)
00276E 349C 724+ N00047 $FIXT FT=(F00104),CT=(C00031)
002770 0400 725+ N00047 A(@FIXT)
002772 0400 726+ DC A(F00104)
002774 2780 727+ DC A(F00107),CT=(C00031)
002776 385E 728+ N00048 $FIXT FT=(F00107),CT=(C00031)
002778 3870 729+ N00048 A(@FIXT)
00277A 0000 730+ DC A(F00107)
00277C 196E 731+ DC A(F00107)
00277E 0600 732+ N00049 $QUXX T7872,REPT=T72A,QT=(Q00127),YES=N00051,CT=(C00115),X
002780 0400 733+ N00049 A(@QUXX)
002782 3648 734+ DC AL2(N00051)
002784 0000 735+ DC A(T7872)
002786 0000 736+ DC AL2(T72A)
002788 0000 737+ DC AL2(0)
00278A 0000 738+ DC C'81'
00278C 196E 739+ DC AL2(PARMARA)
00278E 0600 740+ DC AL2(PARMARA)
002790 0101 741+ DC AL2(PARMARA)
002792 3648 742+ DC AL2(PARMARA)
002794 0000 743+ DC AL2(PARMARA)
002796 0000 744+ DC AL2(PARMARA)
002798 0000 745+ DC AL2(PARMARA)
00279A 0000 746+ DC AL2(PARMARA)
00279C 0000 747+ DC AL2(PARMARA)
00279E 0000 748+ DC AL2(PARMARA)
002800 0000 749+ DC AL2(PARMARA)
002802 0000 750+ DC AL2(PARMARA)
002804 0000 751+ DC AL2(PARMARA)
002806 0000 752+ DC AL2(PARMARA)
002808 0000 753+ DC AL2(PARMARA)
00280A 0000 754+ DC AL2(PARMARA)
00280C 0000 755+ DC AL2(PARMARA)
00280E 0000 756+ DC AL2(PARMARA)
002810 0000 757+ DC AL2(PARMARA)
002812 0000 758+ DC AL2(PARMARA)
002814 0000 759+ DC AL2(PARMARA)
002816 0000 760+ DC AL2(PARMARA)
002818 0000 761+ DC AL2(PARMARA)
00281A 0000 762+ DC AL2(PARMARA)
00281C 0000 763+ DC AL2(PARMARA)
00281E 0000 764+ DC AL2(PARMARA)
002820 0000 765+ DC AL2(PARMARA)
002822 0000 766+ DC AL2(PARMARA)

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ENTRY POINT TABLE

ENTPT EP=A,STEP=00001

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
002786 C140 767+ DC CL2'A'
002788 25D0 768+ DC A(N00001)
00278A C240 769+ ENTPT EP=B,STEP=00002
00278C 25D4 770+ DC CL2'B'

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
002B60 0001 881 F00426 EQU *
002B62 0002 882 DC AL2(0001)
002B64 4040 883 DC A(0002)
002B66 0003 884 DC C10002'

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
003038	002A	995	DC A(0042)	
00303A	D5D6E3C540F1407A4	996	DC CLO0042	NOTE 1 : AFTER THE NEW FRU IS INSTALLED , '
00306A	002C	997	DC A(0044)	
00306B	C5E7C5C3E4E3C540D	998	DC CLO0044	EXECUTE MAP 7815 TO ENSURE THAT THE ACTUATOR'
003092	0024	999	DC A(0036)	
003094	C1D9D440C9E240D4D	1000	DC CLO0036	ARM IS MOVING AT THE CORRECT SPEED . '
0030B8		1001	EQU *	
0030B8	0001	1002	DC AL2(0001)	
0030BA	0002	1003	DC A(0002)	
0030BC	4040	1004	DC CLO0002	'
0030BE		1005	EQU *	
0030BE	0003	1006	DC AL2(0003)	
0030C0	0016	1007	DC A(0022)	
0030C2	C6C3E440C8C5C1C44	1008	DC CLO0022	FCU HEAD SELECT ERROR.'
0030D2	0018	1009	DC A(0024)	
0030DA	D9C5D7D3C1C3C540C	1010	DC CLO0024	REPLACE FCU CARD A-A1C2.'
0030F2	0018	1011	DC A(0024)	
0030F4	D9C5D7D3C1C3C540C	1012	DC CLO0024	REPLACE FCU CAPD A-A1D2.'
00310C		1013	EQU *	
00310C	000D	1014	DC AL2(0013)	
00310E	000A	1015	DC A(0010)	
003110	D7D6E6C5D940D6C6C	1016	DC CLO0010	POWER OFF.'
00311A	002C	1017	DC A(0044)	
00311C	C3C8C5C3D240C3D6D	1018	DC CLO0044	CHECK CONTINUITY OF CABLE A-A1Y2 TO D-W1B2 . '
003148	0024	1019	DC A(0036)	
00314A	E2C5C540E2C6F3F0F	1020	DC CLO0036	SEE SF308 , MLD VOLUME 01 FOR CABLE '
00316A	000C	1021	DC A(0012)	
003170	C9D5C6D6D9D4C1E3C	1022	DC CLO0012	INFORMATION.'
00317C	0002	1023	DC A(0002)	
00317E	4040	1024	DC CLO0002	'
003180	002A	1025	DC A(0042)	
003182	C9C640C3C1C2D3C54	1026	DC CLO0042	IF CABLE IS BAD , REPAIR OR REPLACE CABLE.'
0031AC	0002	1027	DC A(0002)	
0031AE	4040	1028	DC CLO0002	'
0031B0	000E	1029	DC A(0014)	
0031B2	C9C640C3C1C2D3C54	1030	DC CLO0014	IF CABLE IS OK'
0031C0	0022	1031	DC A(0034)	
0031C2	D9C5D7D3C1C3C540C	1032	DC CLO0034	REPLACE CARD A-A1G2 (SEE NOTE 1) . '
0031E6	0018	1033	DC A(0026)	
0031E6	D9C5D7D3C1C3C5404	1034	DC CLO0026	REPLACE (DE) CARD D-W1A2. '
003200	002A	1035	DC A(0042)	
003202	D5D6E3C540F1407A4	1036	DC CLO0042	NOTE 1 : AFTER THE NEW FRU IS INSTALLED , '
00322C	002C	1037	DC A(0044)	
00322E	C5E7C5C3E4E3C540D	1038	DC CLO0044	EXECUTE MAP 7815 TO ENSURE THAT THE ACTUATOR'
00325A	0024	1039	DC A(0036)	
00325C	C1D9D440C9E240D4D	1040	DC CLO0036	ARM IS MOVING AT THE CORRECT SPEED . '
003280		1041	EQU *	
003280	0001	1042	DC AL2(0001)	
003282	0002	1043	DC A(0002)	
003284	4040	1044	DC CLO0002	'
003286		1045	EQU *	
003286	0003	1046	DC AL2(0003)	
003288	0016	1047	DC A(0022)	
00328A	C6C3E440C8C5C1C44	1048	DC CLO0022	FCU HEAD SELECT ERROR.'
0032A0	0018	1049	DC A(0024)	
0032A2	D9C5D7D3C1C3C540C	1050	DC CLO0024	REPLACE FCU CARD A-A1C2.'
0032BA	0018	1051	DC A(0024)	
0032BC	D9C5D7D3C1C3C540C	1052	DC CLO0024	REPLACE FCU CARD A-A1D2.'
0032D4		1053	EQU *	
0032D4	000D	1054	DC AL2(0013)	
0032D6	000A	1055	DC A(0010)	
0032D8	D7D6E6C5D940D6C6C	1056	DC CLO0010	POWER OFF.'
0032E2	002C	1057	DC A(0044)	
0032E4	C3C8C5C3D240C3D6D	1058	DC CLO0044	CHECK CONTINUITY OF CABLE A-A1Y2 TO D-W1B2 . '
003310	0024	1059	DC A(0036)	
003312	E2C5C540E2C6F3F0F	1060	DC CLO0036	SEE SF308 , MLD VOLUME 01 FOR CABLE '
003336	000C	1061	DC A(0012)	
003338	C9D5C6D6D9D4C1E3C	1062	DC CLO0012	INFORMATION.'
003344	0002	1063	DC A(0002)	
003346	4040	1064	DC CLO0002	'
003348	002A	1065	DC A(0042)	
00334A	C9C640C3C1C2D3C54	1066	DC CLO0042	IF CABLE IS BAD , REPAIR OR REPLACE CABLE.'
003374	0002	1067	DC A(0002)	
003376	4040	1068	DC CLO0002	'
003378	000E	1069	DC A(0014)	
00337A	C9C640C3C1C2D3C54	1070	DC CLO0014	IF CABLE IS OK'
003388	0022	1071	DC A(0034)	
00338A	D9C5D7D3C1C3C540C	1072	DC CLO0034	REPLACE CARD A-A1G2 (SEE NOTE 1) . '
0033AC	001A	1073	DC A(0026)	
0033AE	D9C5D7D3C1C3C5404	1074	DC CLO0026	REPLACE (DE) CARD D-W1A2. '
0033C8	002A	1075	DC A(0042)	
0033CA	D5D6E3C540F1407A4	1076	DC CLO0042	NOTE 1 : AFTER THE NEW FRU IS INSTALLED , '
0033F4	002C	1077	DC A(0044)	
0033F6	C5E7C5C3E4E3C540D	1078	DC CLO0044	EXECUTE MAP 7815 TO ENSURE THAT THE ACTUATOR'
003422	0024	1079	DC A(0036)	
003424	C1D9D440C9E240D4D	1080	DC CLO0036	ARM IS MOVING AT THE CORRECT SPEED . '
003448		1081	EQU *	
003448	0001	1082	DC AL2(0001)	
00344A	0002	1083	DC A(0002)	
00344C	4040	1084	DC CLO0002	'
00344E		1085	EQU *	
00344E	0003	1086	DC AL2(0003)	
003450	0016	1087	DC A(0022)	
003452	C6C3E440C8C5C1C44	1088	DC CLO0022	FCU HEAD SELECT ERROR.'
003468	0018	1089	DC A(0024)	
00346A	D9C5D7D3C1C3C540C	1090	DC CLO0024	REPLACE FCU CARD A-A1C2.'
00348A	0018	1091	DC A(0024)	
003484	D9C5D7D3C1C3C540C	1092	DC CLO0024	REPLACE FCU CAPD A-A1D2.'
00349C		1093	EQU *	
00349C	000D	1094	DC AL2(0013)	
00349E	000A	1095	DC A(0010)	
0034A0	D7D6E6C5D940D6C6C	1096	DC CLO0010	POWER OFF '
0034AA	002C	1097	DC A(0044)	
0034AC	C3C8C5C3D240C3D6D	1098	DC CLO0044	CHECK CONTINUITY OF CABLE A-A1Y2 TO D-W1B2 . '
0034D8	0024	1099	DC A(0036)	
0034DA	E2C5C540E2C6F3F0F	1100	DC CLO0036	SEE SF308 , MLD VOLUME 01 FOR CABLE '
0034FE	000C	1101	DC A(0012)	
0034F0	C9D5C6D6D9D4C1E3C	1102	DC CLO0012	INFORMATION.'
00350C	0002	1103	DC A(0002)	
00350E	4040	1104	DC CLO0002	'
003510	002A	1105	DC A(0042)	
003512	C9C640C3C1C2D3C54	1106	DC CLO0042	IF CABLE IS BAD , REPAIR OR REPLACE CABLE. '
00353C	0002	1107	DC A(0002)	
00353E	4040	1108	DC CLO0002	'

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
003540	000E	1109	DC A(0014)	
003542	C9C640C3C1C2D3C54	1110	DC CLO0014	IF CABLE IS OK'
003550	0022	1111	DC A(0034)	
003552	D9C5D7D3C1C3C540C	1112	DC CLO0034	REPLACE CARD A-A1G2 (SEE NOTE 1) . '
003574	001A	1113	DC A(0026)	
003576	D9C5D7D3C1C3C5404	1114	DC CLO0026	REPLACE (DE) CARD D-W1A2. '
003590	002A	1115	DC A(0042)	
003592	D5D6E3C540F1407A4	1116	DC CLO0042	NOTE 1 : AFTER THE NEW FRU IS INSTALLED , '
0035BC	002C	1117	DC A(0044)	
0035BE	C5E7C5C3E4E3C540D	1118	DC CLO0044	EXECUTE MAP 7815 TO ENSURE THAT THE ACTUATOR'
0035EA	0024	1119	DC A(0036)	
0035EC	C1D9D440C9E240D4D	1120	DC CLO0036	ARM IS MOVING AT THE CORRECT SPEED . '
003610		1121	EQU *	
003610	0002	1122	DC AL2(0002)	
003612	0028	1123	DC A(0040)	
003614	7DD5D67D40C9E240D	1124	DC CLO0040	'NO'' IS NOT VALID RESPONSE , CONTINUE AT'
00363C	000A	1125	DC A(0010)	
00363E	D5C5E7E340E2E3C5D	1126	DC CLO0010	NEXT STEP.'
003648		1127	EQU *	
003648	0009	1128	DC AL2(0009)	
00364A	0028	1129	DC A(0040)	
00364C	E3C5E2E340C9C47D7	1130	DC CLO0040	TEST ID''''S ON FIXED HEAD TPACKS USING MAP '
003674	0006	1131	DC A(0006)	
003676	F7E8F6F94B40	1132	DC CLO0006	7869. '
00367C	0028	1133	DC A(0040)	
00367E	C9C640C2C1C440C9C	1134	DC CLO0040	IF BAD ID''''S ARE DETECTED , FORMAT THEM , '
0036A8	0012	1135	DC A(0018)	
0036A8	E3C8C5D540D9E4D54	1136	DC CLO0018	THEN RUN MAP 7811.'
0036BA	0002	1137	DC A(0002)	
0036BC	4040	1138	DC CLO0002	'
0036BE	001C	1139	DC A(0028)	
0036C0	C9C640D5D640C2C1C	1140	DC CLO0028	IF NO BAD ID''''S ARE DETECTED , '
0036DC	001A	1141	DC A(0026)	
0036DE	D9C5D7D3C1C3C5404	1142	DC CLO0026	REPLACE (DE) CARD D-W1A2. '
0036F8	001A	1143	DC A(0026)	
0036FA	D9C5D7D3C1C3C5404	1144	DC CLO0026	REPLACE (DE) CARD D-W1B3. '
003714	0014	1145	DC A(0020)	
003716	E5C5D9C9C6E840E3C	1146	DC CLO0020	VERIFY THE REPAIR . '
00372A	0000	1147	HDIT 00B2	
00372C	0000	1149+OPTN1	DC X'0000'	PROGRAM OPTION CONTROL WORD 1
		1150+*		
		1151+OPTN2	DC X'0000'	PROGRAM OPTION CONTROL WORD 2
		1152+*		
000010		1153+B48	EQU 16	BIT 8
000011		1154+B49	EQU 17	0 4
000012		1155+B50	EQU 18	2 2
000013		1156+B51	EQU 19	3 1
000014		1157+B52	EQU 20	4 8
000015		1158+B53	EQU 21	5 4
000016		1159+B54	EQU 22	6 2
000017		1160+B55	EQU 23	7 1
000018		1161+B56	EQU 24	8 8
000019		1162+B57	EQU 25	9 4
00001A		1163+B58	EQU 26	10 2
00001B		1164+B59	EQU 27	11 1
00001C		1165+B60	EQU 28	12 8
00001D		1166+B61	EQU 29	13 4
00001E		1167+B62	EQU 30	14 2
00001F		1168+B63	EQU 31	15 1
00001E		1169+CH	EQU 30	14 2
00001F		1170+CHP	EQU 31	15 1
00372E	0000	1172+OPTN3	DC X'0000'	PROGRAM OPTION CONTROL WORD 3
		1173+*		
1174+*	0	MYSTERY INTERRUPT	MI	8 CS STATUS IN PROGRESS CS
1175+*	1	ERROR INTERRUPT	ER	9 CS AVAILABLE CSA
1176+*	2	EXPECTED INTERRUPT	XI	10 CS STATUS INTERRUPT ERR CS
1177+*	3	INTERRUPT RECEIVED	IN	11 ISB BITS ON (1-7) ISBON
1178+*				
1179+*	4	EXPECTED ERR/ATTENT	XE	12 TEST UNIT RESULTS VOID NG
1180+*	5	HARD ERROR FOUND	HE	13 OIO CC ERROR IOCC
1181+*	6	WRONG INTR LEVEL	SLE	14 NO INTERRUPT NOIN
1182+*	7	NO INTR EXPECTED	NI	15 INTERRUPT CC ERROR INCC
1183+*			BIT	HEX
000020		EQU 32	0	8
000021		EQU 33	1	4
000022		EQU 34	2	2
000023		EQU 35	3	1
000024		EQU 36	4	8
000025		EQU 37	5	4
000026		EQU 38	6	2
000027		EQU 39	7	1
000028		EQU 40	8	8
000029		EQU 41	9	4
00002A		EQU 42	10	2
00002B		EQU 43	11	1
00002C		EQU 44	12	8
00002D		EQU 45	13	4
00002E		EQU 46	14	2
00002F		EQU 47	15	1
1201+*		COMMON BUFFER FOR PRINTING DATA		
1202+*				
003730	0000	1204+\$TUID	DC A(*-*)	TEST UNIT IDENTIFICATION
003732	0000	1205+\$IOIN	DC A(*-*)	I/O AND INTR CONDITION CODES
003734	0000	1206+\$ISB	DC A(*-*)	R7 INTR STATUS BYTE & DEV ADRS
003736	0000	1207+\$LSTIO	DC A(*-*)	ADRS OF LAST I/O + 4 BYTES
003738	0000	1208+\$DEV1	DC A(*-*)	DEVICE DEPENDENT DATA
00373A	0000	1209+\$DEV2	DC A(*-*)	*
00373C	0000	1210+\$DEV3	DC A(*-*)	*
00373E	0000	1211+\$DEV4	DC A(*-*)	*
003738		1212+\$SCTID	EQU DEV1	READ ID BUFFER FOR IBIS & TERN
003740		1213+\$DCBUF	EQU *	DCB BUFFER FOR LAST DCB USED
003740	0000	1214+\$DCB1	DC A(*-*)	LAST DCB TABLE, CONTROL WORD
003742	0000	1215+\$DCB2	DC A(*-*)	LAST DCB TABLE, DEV DEP WORD
003744	0000			

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
003754 0000 1226+CS1L3 DC A(*-*) CYCLE STEAL WD 3, DEVICE DEPEND
003755 0000 1227+CS1L4 DC A(*-*) CYCLE STEAL WD 4, DEVICE DEPEND
003756 0000 1228+CS1L5 DC A(*-*) CYCLE STEAL WD 5, DEVICE DEPEND
003757 0000 1229+CS1L6 DC A(*-*) CYCLE STEAL WD 6, DEVICE DEPEND
003758 0000 1230+CS1L7 DC A(*-*) CYCLE STEAL WD 7, DEVICE DEPEND
003759 0000 1231+CS1L8 DC A(*-*) CYCLE STEAL WD 8, DEVICE DEPEND
003760 0000 1232+* * * * *
003761 00000000 1233+SSUBN DC A(*-*) LAST SUBROUTINE ADDRESS USED
003762 0021 1234+SDATA DC 2A(*-*) OPTIONAL DATA
003763 0000 1235+SINTL DC X'0021' INTERRUPT LEVEL REQUESTED
003764 0000 1236+TURTN DC A(*-*) TEST UNIT RETURN ADRS TO MDI
003765 00B2 1237+SDVID DC X'00B2' DEVICE ID
003766 19D0 1238+SVCAL DC A(DEVADD) ADRS OF DEVICE ADDRESS
003767 0000 1239+* * * * *
1240+* * * * *
1241+* * * * *
1242+* * * * *
1243+* * * * *
1244+* * * * *
003770 4020 3730 3C02 1245+T3C02 MVWI X'3C02',STUID SET UP TEST UNIT ID
003776 5700 1246+ BXS (R7) RETURN TO MDI SUPVR
1248 COPY COMEQU
1249 *****
1250 *
1251 * EQUATED NAMES FOR SUPPORTED SVC'S
1252 *
1253 *****
1254 OUT EQU 0 OUT SVC
1255 OUTIN EQU 1 OUTIN SVC
1256 IDLE EQU 2 IDLE SVC
1257 ASCII EQU 3 HEX TO ASCII SVC
1258 CHNGE EQU 4 CHANGE LEVEL SVC
1259 PGMCK EQU 5 ALLOW RETURN ON PROGRAM CHECK SVC
1260 EXIT EQU 6 EXIT SVC
1261 TERM EQU 7 TERMINATE SVC
1262 RESET EQU 8 RESET DEVICE SVC
1263 RID EQU 9 READ ID SVC
1264 START EQU 10 START CYCLE STEAL SVC
1265 STCSS EQU 11 START CYCLE STEAL STATUS SVC
1266 PREP EQU 12 PREPARE DEVICE SVC
1267 READ0 EQU 13 READ WITH FUNCTION BIT 3 OFF SVC
1268 READ1 EQU 14 READ WITH FUNCTION BIT 3 ON SVC
1269 RSTAT EQU 15 READ STATUS SVC
1270 WRIT0 EQU 16 WRITE WITH FUNCTION BIT 3 OFF SVC
1271 WRIT1 EQU 17 WRITE WITH FUNCTION BIT 3 ON SVC
1272 CTRL EQU 18 CONTROL SVC
1273 INTER EQU 19 RELEASE INTERRUPT CONTROL BLOCK SVC
1274 CIB EQU 20 CONNECT INTERRUPT CONTROL BLOCK SVC
1275 HIO EQU 21 HALT ALL I/O
1276 RECDSD EQU 22 REQUEST USE OF DCP DISK SVC
1277 RELSD EQU 23 RELEASE USE OF DCP DISK SVC
1278 HALT EQU 24 HALT SVC
1279 EBCDIC EQU 25 EBCDIC TO HEX SVC (STRING)
1280 HTOE EQU 26 HEX TO EBCDIC SVC (STRING)
1281 ATOH EQU 27 ASCII TO HEX SVC (STRING)
1282 HTOA EQU 28 HEX TO ASCII SVC (STRING)
1283 ETOA EQU 29 EBCDIC TO ASCII SVC (STRING)
1284 ATOE EQU 30 ASCII TO EBCDIC SVC (STRING)
1285 READI EQU 31 READ DATA SETS FOR MDI/UTIL
1286 WRITI EQU 32 WRITE DATA SETS FOR UTIL
1288 *****
1289 *
1290 * EQUATES USED BY TU'S AS CONSTANTS
1291 *
1292 *****
1293 PLUS EQU C'+1' PLUS CHAR
1294 MINUS EQU C'-1' MINUS CHAR
1296 ZERO EQU 0
1297 ONE EQU 1
1298 TWO EQU 2
1299 THREE EQU 3
1300 FOUR EQU 4
1301 FIVE EQU 5
1302 SIX EQU 6
1303 SEVEN EQU 7
1304 EIGHT EQU 8
1305 NINE EQU 9
1306 TEN EQU 10
1307 ELEVN EQU 11
1308 TWELV EQU 12
1309 THRTN EQU 13
1310 FIVTN EQU 15
1311 SIXTN EQU 16
1312 THRY2 EQU 32
1313 SIXT4 EQU 64
1314 ONE28 EQU 128
1315 TWO56 EQU 256
1316 ONEK EQU 1024
1317 TWOK EQU 2048
1318 THREEK EQU 3072
1319 FOURK EQU 4096
1321 M1 EQU -1
1322 M2 EQU -2
1323 M3 EQU -3
1324 M4 EQU -4
1326 *****
1327 *
1328 * THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE
1329 * BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.
1331 *****
1332 BS0 EQU 0
1333 BS1 EQU 1
1334 BS2 EQU 2
1335 BS3 EQU 3
1336 BS4 EQU 4
1337 BS5 EQU 5
1338 BS6 EQU 6
1339 BS7 EQU 7
1340 BS8 EQU 8
1341 BS9 EQU 9
1342 BS10 EQU 10
1343 BS11 EQU 11
1344 BS12 EQU 12

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
00000D 1345 BS13 EQU 13
00000E 1346 BS14 EQU 14
00000F 1347 BS15 EQU 15
1349 COPY T7820 01DEC76
1350 T7820 TUIT \$ERR\$
1351+*****06FEB76**
1352+*
1353+* TEST UNIT
1354+*
1355+* T7820 SETUP FOR SCOPE LOOPS 12/01/76
1356+*
1357+* PURPOSE
1358+*
1359+* FUNCTION:
1360+*
1361+* . PROGRAM INITIALIZES ATTACHMENT.
1362+* . RECALIBRATE
1363+* . SEEK TO CE TRACK
1364+*
1365+*
1366+* CALLING SEQUENCE
1367+*
1368+* PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
1369+* . NO STATUS PASSED BACK TO MDI
1370+*
1371+* EXITS NORMAL
1372+* . MDI TERMINATES LOOP
1373+*
1374+* EXITS ERROR
1375+* . NONE
1376+*
1377+* RETURN CONTROL
1378+*
1379+* B TURTN* RETURN TO MDI SUPERVISOR
1380+*
1381+*****
1382+T7820 MVW R7,TURTN SAVE RETURN ADDRESS
1383+ MVWI X'7820',STUID SAVE TU ID FOR DISPLAY
1384+ MVA QPN1,R4 SET UP POINTER ADRS IN R4
1385+ BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
1386+ DC A(\$ERR\$) ERROR ADVS FOR INVALID PREP
1387+*
1388 S20A MVA IOBLK,R7 SETUP IOBLK
1389 MVB CPUID,R0 DETERMINE TYPE OF PROCESSOR
1390 CBI 37,R0 *
1391 JNE T20TC JUMP IF NOT 4955
1392 MVWI X'254C',T20T1+2 LOAD TIME CONSTANT FOR 2 SEC
1393 J T20T2
1394 R20TC MVWI X'0C0E',T20T1+2 (4953) LOAD TIME CONS FOR 2 SEC
1395 T20T2 SVC RESET ISSUP IO RESET
1396 T20T1 MVWI '0000',R0 TIME OUT 2 SEC
1397 T0720 SVC IDLE *
1398 JCT T0720,R0 *
1399 BAL \$RECL,R6 RECALIBRATE
1400 DC A(\$ERR\$) ERROR-EXIT
1401 TBTR (R4,ER) INTERRUPT ERROR?
1402 BON \$ERR\$ YES-EXIT
1403 MVWI 302,SKDCB+2 SEEK TO CE TRACK
1404 MVWI 5,SKDCB SEEK CONTROL WORD
1405 MVWI 0,SKDCB+8 SELECT HEAD ZERO
1406 BAL \$SEEK,R6 SEEK TO CE TRACK
1407 DC A(\$ERR\$) ERROR-EXIT
1408 TBTR (R4,ER) INTERRUPT ERROR?
1409 BON \$ERR\$ YES-EXIT
1410 MVWI X'200A',RSDCB READ SECTOR ID CONTROL WORD
1411 MVWI 0,LGSEC INIT LOG SECT LOC
1412 S20B BAL CONVT,R6 CONVERT LOG SECT TO PHYS-1
1413 MVB PHYSC+1,RSDCB+4 LOAD PHYSC SECT -1 IN RDSEC DCB
1414 BAL \$RIDD,R6 READ SECTOR ID
1415 DC A(\$ERR\$) ERROR-EXIT
1416 TBTR (R4,ER) INTERRUPT ERROR?
1417 BON S20D YES-EXIT
1418 CBI ZER0,SCTID+1 FLAG ZERO?
1419 JNE S20C NO
1420 CWI 302,SCTID+2 CE TRACK?
1421 JE S20D YES
1422 S20C CWI 59,LGSEC END OF TRACK?
1423 BE \$ERR\$ YES-BAD TRACK-RESTART ROUTINE
1424 AWI 1,LGSEC INCREMENT LOG SECT NUM
1425 J S20B LOOP
1426 S20D TXIT
1427+S20D B \$CONX RETURN TO MDI CONTROLLER
1428+*****
1429 *
1430 *
1431 *
1433 COPY T7838 01DEC76
1434 T7838 TUIT \$16E
1435+*****06FEB76**
1436+*
1437+* TEST UNIT
1438+*
1439+* T78S16 FEAD ID TEST LOOP 12/01/76
1440+*
1441+* PURPOSE
1442+*
1443+* FUNCTION:
1444+*
1445+* . SELECT HEAD FROM MDI
1446+* . READ ID SECTOR #30
1447+* . LOOP UNTIL CE INPUTS ANSWER TO MAP QUESTION.
1448+*
1449+*
1450+* CALLING SEQUENCE
1451+*
1452+* PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
1453+* . NO STATUS PASSED BACK TO MDI
1454+*
1455+* EXITS NORMAL
1456+* . MDI TERMINATES LOOP
1457+*
1458+* EXITS ERROR
1459+* . NONE
1460+*

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
1461** RETURN CONTROL
1462**
1463** B TURTN* RETURN TO MDI SUPERVISOR
1464**
1465*****
003822 6F0D 3768 1466+T7838 MVW R7,TURTN SAVE RETURN ADDRESS
003826 4020 3730 7838 1467+ MVW X'7838',STUID SAVE TU ID FOP DISPLAY
00382C 4424 372A 1468+ MVA OPTN1,R4 SET UP POINTER ADRS IN R4
003830 6E03 3CA6 1469+ BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
003834 385A 1470+ DC A(S16E) ERROR ADPS FOP INVALID PPEP
1471**
003836 4020 38CA 0000 1472 MVWI 0,SKDCB+2 SETUP SEEK NO-OP (HEAD SELECT)
00383C 8838 189A 38D0 1473 MVW TUPARM1*,SKDCB+8 SELECT HEAD FROM MDI
003842 6E03 3AC4 1474 DC \$SEEK,R6 SEEK
003846 385A 1475 DC A(S16E) ERROR-EXIT
003848 4020 38A8 200A 1476 TS16L MVWI X'200A',RSDCB READ SECTOR ID CONTROL WORD
00384E 4020 38AC 0000 1477 MVWI 0,RSDCB+4 LOAD DCB WITH PHY SEC #0 (LOG 30)
003854 6E03 3AD4 1478 BAL \$RDIS,R6 READ SECTOR ID
003858 385A 1479 DC A(S16E) ERROR-EXIT
1480 S16E TXIT EXIT
00385A 6802 3D2A 1481+S16E B \$CONX RETURN TO MDI CONTROLLER
1482*****
1483 *
1484 *
1485 *
1487 ***** COPY T7872 03JAN77 *****
1488 *****
1489 *T7872 *****
1490 * THIS TU INHIBITS INTERRUPT 12/01/76*
1491 * CALLING ROUTINE LOOPS ON T72A *****
1492 *****
00385E 6F0D 3768 1493 T7872 MVW R7,TURTN SAVE RETURN ADDRESS
003862 4020 3C96 0020 1494 MVWI X'0020',IODCB PREP TO LEVEL 2 WITH THE 'I' BIT OFF
003868 4724 3C92 1495 MVA IOBLK,R7 *
00386C 600C 1496 SVC PREP *
00386E 500D 1497 J T72B *
003870 6F0D 3768 1498 T72A MVW R7,TURTN SAVE RETURN ADDRESS
003874 6802 3D2A 1499 T72B B \$CONX EXIT
1500 *
1501 ***** COPY T78DCB 01DEC76 *****
1502 *****
1503 ** (T78DCB) *****
1504 *****
1505 *
1506 * DCB TABLES AND DC'S *****
1507 *
1508 *****
1509 *
1510 ***** DIAGNOSTIC DCB *****
1511 *
003878 2008 1512 DGDCB DC X'2008' DIAGNOSTIC DCB
00387A 0000 1513 DC X'0000' NOT USED
00387C 0000 1514 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
00387E 0000 1515 DC X'0000' NOT USED
003880 0000 1516 DC X'0000' NOT USED
003882 0000 1517 DC A(*-*) CHAINING ADDRESS
003884 0100 1518 DC X'0100' BYTE COUNT
003886 0000 1519 DC A(*-*) DATA ADDRESS
1520 *
1521 *
1522 ***** RECALIBRATE DCB *****
1523 *
003888 0007 1524 CLDCB DC X'0007' RECALIBRATE DCB
00388A 0000000000000000 1525 DC 7A(*-*)
1526 *
1527 ***** WRITE SECTOR ID **
1528 *
003898 0002 1529 WSDCB DC X'0002' WRITE SECTOR ID CONTROL WORD
00389A 0000 1530 DC X'0000' NOT USED
00389C 0000 1531 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
00389E 0000 1532 DC A(*-*) NOT USED
0038A0 0000 1533 DC A(*-*) NOT USED
0038A2 0000 1534 DC A(*-*) CHAIN ADDRESS
0038A4 0006 1535 DC X'0006' BYTE COUNT
0038A6 395E 1536 DC A(WRSID) ADDR OF SECTOR ID DATA
1537 *
1538 ***** READ SECTOR ID DCB *****
1539 *
0038A8 200A 1540 RSDCB DC X'200A' READ SECTOR ID
0038AA 0000 1541 DC X'0000' NOT USED
0038AC 0000 1542 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
0038AE 0000 1543 DC X'0000' NOT USED
0038B0 0000 1544 DC X'0000' NOT USED
0038B2 0000 1545 DC X'0000' CHAIN ADDRESS
0038B4 0006 1546 DC X'0006' BYTE COUNT FOR READ SECTOR ID
0038B6 3738 1547 DC A(SCTID) SECTOR ID DATA ADDRESS
1548 *
1549 ***** READ SECTOR ID IMMEDIATE DCB *****
1550 *
0038B8 200E 1551 RIDCB DC X'200E' READ SECTOR ID
0038BA 0000 1552 DC X'0000' NOT USED
0038BC 0000 1553 DC X'0000' NOT USED
0038BE 0000 1554 DC X'0000' NOT USED
0038C0 0000 1555 DC X'0000' NOT USED
0038C2 0000 1556 DC A(*-*) CHAIN ADDRESS
0038C4 0006 1557 DC X'0006' BYTE COUNT FOR READ SECTOR ID
0038C6 3738 1558 DC A(SCTID) SECTOR ID DATA ADDRESS
1559 *
1560 ***** SEEK DCB *****
1561 *
0038C8 0005 1562 SKDCB DC X'0005' SEEK DCB
0038CA 0000 1563 DC X'0000' BIT 0-3=0;BIT4=DIRECTION;5-15=DIFFER
0038CC 0000 1564 DC F'0'
0038CE 0000 1565 DC F'0'
0038D0 0000 1566 DC X'0000' 0-7 = HEAD;8-15 NOT USED
0038D2 0000 1567 DC A(*-*) CHAIN ADDRESS
0038D4 0000 1568 DC F'0' NOT USED
0038D6 0000 1569 DC F'0' NOT USED
1570 *
1571 ***** CYCLE STEAL STATUS DCB *****
1572 *
0038D8 2000 1573 CSDCB DC X'2000' CONTROL WORD
0038DA 0000 1574 DC F'0' NOT USED
0038DC 0000 1575 DC F'0' NOT USED

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0038DE 0000 1577 DC F'0' NOT USED
0038E0 0000 1578 DC F'0' NOT USED
0038E2 0000 1579 DC F'0' NOT USED
0038E4 0008 1580 DC X'0008' 4 WORDS OF STATS
0038E6 3750 1581 DC A(CSBUF) ADDRESS OF CYCLE STEAL STATUS DATA
1582 *
1583 ***** WRITE DCB *****
1584 *
0038E8 0001 1585 WRDCB DC X'0001' WRITE CONTROL WORD
0038EA 0000 1586 DC F'0' NOT USED
0038EC 0000 1587 DC X'0000' 0-7=0;8-15 = FLAG BYTE
0038EE 0000 1588 DC X'0000' SEARCH ARGUMENT CYLINDER
0038F0 0000 1589 DC X'0000' SEARCH ARGUMENT HEAD-SECTOR
0038F2 0000 1590 DC A(*-*) CHAIN ADDRESS
0038F4 0000 1591 DC F'0' BYTE COUNT
0038F6 0000 1592 DC A(*-*) WRITE DATA ADDRESS
1593 *
1594 ***** VERIFY DCB *****
1595 *
0038F8 200C 1596 VRDCB DC X'200C' CONTROL WORD
0038FA 0000 1597 DC F'0' NOT USED
0038FC 0000 1598 DC X'0000' 0-7=0;8-15 = FLAG BYTE
0038FE 0000 1599 DC X'0000' CYLINDER
003900 0000 1600 DC X'0000' HEAD SECTOR
003902 0000 1601 DC A(*-*) CHAIN ADDRESS
003904 0000 1602 DC F'0' BYTE COUNT
003906 0000 1603 DC A(*-*) VERIFY DATA ADDRESS
1604 *
1605 ***** READ DCB *****
1606 *
003908 2009 1607 RDCB DC X'2009' READ DCB CONTROL WORD
00390A 0000 1608 DC F'0' NOT USED
00390C 0000 1609 DC X'0000' 0-7=0;8-15 = FLAG BYTE
00390E 0000 1610 DC X'0000' SEARCH ARGUMENT CYLINDER
003910 0101 1611 DC X'0101' SEARCH ARGUMENT H-R
003912 0000 1612 DC A(*-*) CHAIN ADDRESS
003914 0000 1613 DC F'0' BYTE COUNT
003916 0000 1614 DC A(*-*) READ DATA ADDRESS
1615 *
1616 ***** WRITE SECTOR ID SKEWED *****
1617 *
003918 0003 1618 WKDCB DC X'0003' CONTROL WORD
00391A 0000 1619 DC X'0000' NOT USED
00391C 0000 1620 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
00391E 0000 1621 DC A(*-*) NOT USED
003920 0000 1622 DC A(*-*) NOT USED
003922 0000 1623 DC A(*-*) CHAIN ADDRESS
003924 0006 1624 DC X'0006' BYTE COUNT
003926 395E 1625 DC A(WRSID) ADDR OF SECTOR ID DATA
1626 *
1627 ***** READ SECTOR ID SKEWED *****
1628 *
003928 200B 1629 RKDCB DC X'200B' CONTROL WORD
00392A 0000 1630 DC X'0000' NOT USED
00392C 0000 1631 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
00392E 0000 1632 DC X'0000' NOT USED
003930 0000 1633 DC X'0000' NOT USED
003932 0000 1634 DC A(*-*) CHAIN ADDRESS
003934 0006 1635 DC X'0006' BYTE COUNT FOR READ SECTOR ID
003936 3738 1636 DC A(SCTID) SECTOR ID DATA ADDRESS
1637 *
1638 ***** CONSTANTS AND DEFINED STORAGE LOCATIONS *****
1639 ZERO0 DC X'0000' CONSTANT ZERO
1640 ONE1 DC X'0001' CONSTANT ONE
1641 TIMEOUT DC 2A(*-*) TIMEOUT COUNTER
1642 TONE DC X'0000' CONSTANT FOR ADD DOUBLE
1643 *
1644 COUNT DC F'1280' BYTE COUNT (1280)
1645 DIFF DC A(*-*) SEEK DIFFERENCE
1646 XXX DC A(*-*) WORK WORD INT TO ZERO
1647 BCNT DC X'0000' BYTE COUNT
1648 JOE DC A(*-*) WRITE PARAMETER POINTER
1649 JOE1 DC A(*-*) SAVE LOC FOP FARM LIST ADDRESS
1650 WDATA DC X'0000' WRITE DATA
1651 *
1652 TABLE DC A(*-*) ADDR OF WRT PAR LIST FOR FORMAT RTNS
1653 LGSEC DC X'0000' LOGICAL SECTOR #
1654 PHYSC DC X'0000' CONVERTED PHYSICAL SEC #
1655 CB29 DC X'1D00' CONSTANT BYTE 29
1656 FIVE9 DC X'3B00' CONSTANT BYTE 59
1657 WRSID DC X'0000' FLAG,CYLINDER (WRT SECTOR ID DATA)
1658 *
1659 *
1660 CDAT DC X'0000' CYLINDER,HEAD
1661 WSIDT DC X'00FF' LOG SECTOR,NOT USED
1662 *
1663 *
1664 *
1665 *
1666 *
1667 CTR01 DC X'0000' COUNTER
1668 CTR02 DC X'0000' COUNTER
1669 CTR03 DC X'0000' COUNTER
1670 CTR04 DC X'0000' COUNTER
1671 CTR05 DC X'0000' COUNTER
1672 CTR06 DC X'0000' COUNTER
1673 SAVR3 DC X'0000' SAVE AREA
1674 SAVR5 DC X'0000' SAVE AREA
1675 WR2 DC X'0000'
1676 SVSEK DC X'0000'
1677 LCT DC X'0000'
1678 T56AA DC X'0000'
1679 T56BB DC X'0000'
1680 T56CC DC X'0000'
1681 T56DD DC X'0000'
1682 T56EE DC X'0000'
1683 T56FF DC X'0000'
1684 T56GG DC X'0000'
1685 T56HA DC X'0000'
1686 T56IB DC X'0000'
1687 T56CC DC X'0000'
1688 T56DD DC X'0000'
1689 T56EE DC X'0000'
1690 T56FF DC X'0000'

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LOCTR OBJECT TEXT          STMT SOURCE STATEMENT          COPYRIGHT IBM CORP 1976
0039A2 0000          1691 T86GG DC      X'00000'
0039A4 0000          1692 T41D  DC      X'00000'
0039A6 0000          1693 T41LP DC      X'00000'
0039A8 0000          1694 WRLCT DC      X'00000'
0039AA 0000          1695 CYIOC DC      X'00000'
0039AC 0000          1696 PASS1 DC     A(*-*)
0039AE 0000          1697 HEAD0 DC     A(*-*)
0039B0 0000          1698 HEAD1 DC     A(*-*)
0039B2 0000          1699 GDSE0 DC     A(*-*)
0039B4 0000          1700 GDSE1 DC     A(*-*)
0039B6 0000          1701 ER00  DC     A(*-*)
0039B8 0000          1702 ER01  DC     A(*-*)
0039BA 0000          1703 HD0SV DC     A(*-*)
0039BC 0000          1704 HD1SV DC     A(*-*)
0039BE 0000          1705 ER0SV DC     A(*-*)
0039C0 0000          1706 ER1SV DC     A(*-*)
0039C2 0000          1707 PATTR DC     A(*-*)
0039C4 0000          1708 CECYL DC     A(*-*)
0039C6 0000          1709 STATS DC     A(*-*)
1710 *
1711 *
1712 * COPY T78DFCIO          01DEC76
1713 ** (T78DFCIO)
1714 *
1715 * EXECUTE DPC INPUT/OUTPUT COMMANDS          2/07/77
1716 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1717 *
1718 * 1 BAL CEOP1,R6          CE DIAGNOSTIC OP1(TURN ON DIAG MODE)
1719 *
1720 * 2 BAL CEOP2,R6          WRITE DIAG CLOCK STEP DATA
1721 *
1722 * 3 BAL SENS0,R6          CE READ SENSE WORD ZERO
1723 *
1724 * 4 BAL SENS1,P6          CE READ SENSE WORD ONE
1725 *
1726 * 5 BAL WRAP,R6          READ DIAGNOSTIC WRAP
1727 *
1728 * BXS (R6,2)          RETURN
1729 *
1730 *****
1731 *
1732 * CE DIAGNOSTIC OP2 DATA WORD (CLOCK STEP)
1733 *
1734 * BIT 00 - SET READY
1735 * BIT 01 - RESET READY
1736 * BIT 02 - SET WRITE CLOCK
1737 * BIT 03 - SET READ CLOCK
1738 * BIT 04 - INDEX PULSE
1739 * BIT 05 - SECTOR PULSE
1740 * BIT 06 - STANDARD READ DATA
1741 * BIT 07 - SPEED PULSE
1742 * BIT 08 - BEHIND HOME
1743 * BIT 09 - SET SEEK COMPLETE
1744 * BIT 10 - RESET SEEK COMPLETE
1745 * BIT 11 - PLO OUT OF SYNC
1746 * BIT 12 - RST RD/WRT CLOCK
1747 * BIT 13 -
1748 * BIT 14 -
1749 * BIT 15 - RESET DIAGNOSTIC MODE
1750 *
1751 *****
1752 *
1753 *
1754 WRAP MVW R6,LSTIO          SAVE ADDRESS OF LAST IO
0039C8 6E0D 3736          1755 MVB DEVADD,IDCBRAP+1      LOAD DEVICE ADDRESS IN IDCB
0039CC 8028 19D0 3A4B          1756 IO IDCBRAP              READ SENSE WORD 1
0039D2 680C 3A4A          1757 BNCC 7,CCERR            CHECK COND CODE
0039D6 6F05 3A2C          1758 BXS (R6,2)            RETURN TO CALLER
0039DA 5601          1759 *
1760 CEOP1 MVW R6,LSTIO          SAVE ADDRESS OF LAST IO
0039DC 6E0D 3736          1761 MVB DEVADD,IDCBCE1+1      LOAD DEVICE ADDRESS IN IDCB
0039E0 8028 19D0 3A43          1762 IO IDCBCE1              SET DIAGNOSTIC MODE
0039E6 680C 3A42          1763 BNCC 7,CCERR            CHECK COND CODE
0039EA 6F05 3A2C          1764 BXS (R6,2)            RETURN TO CALLER
0039EE 5601          1765 *
1766 CEOP2 MVW R6,LSTIO          SAVE ADDRESS OF LAST IO
0039F0 6E0D 3736          1767 MVB DEVADD,IDCBCE2+1      LOAD DEVICE ADDRESS IN IDCB
0039F4 8028 19D0 3A47          1768 IO IDCBCE2              WRITE DIAG CLOCK STEP
0039FA 680C 3A46          1769 BNCC 7,CCERR            CHECK COND CODE
0039FE 6F05 3A2C          1770 BXS (R6,2)            RETURN TO CALLER
003A02 5601          1771 *
1772 *
1773 SENS1 MVW R6,LSTIO          SAVE ADDRESS OF LAST IO
003A04 6E0D 3736          1774 MVB DEVADD,IDCB1+1        LOAD DEVICE ADDRESS IN IDCB
003A08 8028 19D0 3A3F          1775 IO IDCB1                READ SENSE WORD 2
003A0E 680C 3A3E          1776 BNCC 7,CCERR            CHECK COND CODE
003A12 6F05 3A2C          1777 BXS (R6,2)            RETURN TO CALLER
003A16 5601          1778 *
1779 *
1780 SENS0 MVW R6,LSTIO          SAVE ADDRESS OF LAST IO
003A18 6E0D 3736          1781 MVB DEVADD,IDCB0+1        LOAD DEVICE ADDRESS IN IDCB
003A1C 8028 19D0 3A3B          1782 IO IDCB0                READ SENSE WORD 1
003A22 680C 3A3A          1783 BNCC 7,CCERR            CHECK COND CODE
003A26 6F05 3A2C          1784 BXS (R6,2)            RETURN TO CALLER
003A2A 5601          1785 *
1786 CCERR DC X'706E'          COPY STATUS ANY LEVEL INTO P3
003A2C 706E          1787 SRL 13,R3              POSITION CC CODE TO BITS 13-15
003A2E 336A          1788 MVB R3,SIOIN            * PUT IN LOG AREA
003A30 C328 3732          1789 B (R6)*                RETURN TO USER
003A34 68D2 0000          1790 *
1791 *
1792 IGRST DC X'6F05'          RESET IO
003A38 6F05          1793 IDCBO DC X'2205'          SENSE WORD ZERO
003A3A 2205          1794 RDATA0 DC A(*-*)        DATA WORD
003A3C 0000          1795 IDCBI DC X'2105'          SENSE WORD ONE
003A3E 2105          1796 RDATA DC A(*-*)
003A40 0000          1797 IDCBE1 DC X'4005'          CE DIAG OP1
003A42 4005          1798 CEDAT DC A(*-*)          SENSE DATA
003A44 0000          1799 IDCBE2 DC X'4105'          CE DIAG OP2
003A46 4105          1800 CEDAT2 DC A(*-*)          SENSE DATA
003A48 0000          1801 IDCBRAP DC X'2F05'        READ DIAG WRAP
003A4A 2F05          1802 RAPDAT DC A(*-*)        SENSE DATA
003A4C 0000          1803 CPUID EQU X'0232'        CPU ID
000232          1804 *
1805 * COPY T78IO          01DEC76
1806 ** (T78IO)
1807 *****12/01/76*****

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LOCTR OBJECT TEXT          STMT SOURCE STATEMENT          COPYRIGHT IBM CORP 1976
1807 *
1808 * SUBROUTINE
1809 *
1810 * PURPOSE
1811 *
1812 * COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
1813 * NORMAL AND TEST DATA.
1814 *
1815 * CALLING SEQUENCE
1816 *
1817 * BAL CMPRW,R6          (NORMAL)
1818 * BAL CMPRT,R6          (TEST)
1819 *
1820 * RETURN
1821 *
1822 * BXS (R6,2) - NORMAL
1823 *
1824 *
1825 *****
1826 *
1827 CMPRT MVWI 5,P7          BYTE COUNT
003A4E 4724 0005          1828 MVA SCTID+1,R3          ADDR OF RD SECT ID DATA (TEST)
003A52 4324 396D          1829 MVA WSIDT,R5           ADDR OF WR SECT ID DATA (TEST)
003A56 4524 3966          1830 J TT4Y
003A5A 5006          1831 J
003A5C 4724 0005          1832 CMPRW MVWI 5,R7          COMPARE BYTE COUNT
003A60 4324 3739          1833 MVA SCTID+1,R3          ADDR OF RD SECT ID DATA
003A64 4524 395E          1834 MVA WRSID,R5           ADDR OF WR SECT ID DATA
003A68 2BA6          1835 TT4Y CFNEN (R3),(R5)    COMPARE ID DATA
003A6A 68C0 0002          1836 BE (R6,2)              BCH IF WRITE ID DATA OK
003A6E 68D2 0000          1837 B (R6)*                COMPARE ERROR
1838 *
1839 *****
1840 * SUBROUTINE
1841 *
1842 * PURPOSE
1843 * CONVERT LOGICAL SECTOR NUMBER TO A PHYSICAL SECTOR MINUS
1844 * ONE
1845 * SETUP LOGICAL SECTOR # IN LOCATION 'LGSEC'
1846 * PHYSICAL SECTOR # WILL BE LOADED IN LOCATION 'PHYS'
1847 *
1848 * LOGICAL SECTOR# TO PHYSICAL SECTOR# CONVERSION
1849 * LOGICAL- X 00, 1E, 01, 1F, 02, 20, 03, 21, 04, 22, 05, 23, 06, 24,
1850 * PHYSICAL X 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D,
1851 *
1852 * LOGICAL- 07, 25, 08, 26, 09, 27, 0A, 28, 0B, 29, 0C, 2A, 0D, 2B,
1853 * PHYSICAL 0E, 0F, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 1A, 1B,
1854 *
1855 * LOGICAL- 0E, 2C, 0F, 2D, 10, 2E, 11, 2F, 12, 30, 13, 31, 14, 32,
1856 * PHYSICAL 1C, 1D, 1E, 1F, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29,
1857 *
1858 * LOGICAL- 15, 33, 16, 34, 17, 35, 18, 36, 19, 37, 1A, 38, 1B, 39,
1859 * PHYSICAL 2A, 2B, 2C, 2D, 2E, 2F, 30, 31, 32, 33, 34, 35, 36, 37,
1860 *
1861 * LOGICAL- 1C, 3A, 1D, 3B, X
1862 * PHYSICAL 38, 39, 3A, 3B, X
1863 *
1864 *
1865 * CALLING SEQUENCE
1866 *
1867 * BAL CONV1,R6
1868 *
1869 * RETURN
1870 *
1871 * B (TT304+2)
1872 *
1873 *****
1874 *
1875 CONV1 MVW R6,TT304+2      SETUP RETURN ADDR
003A72 6E0D 3AB2          1876 CB ZERO0,LGSEC+1        CK FOR LOG # ZERO
003A76 802B 3938 3957          1877 JE TT303                BCH IF LOG # IS ZERO
003A7C 100D          1878 CB LGSEC+1,CB29         COMP LOG TO 29
003A7E 802B 3957 395A          1879 JGE RTT01              BCH IF LGSEC EQ OR LESS THAN CB29
003A84 1C0D          1880 MVWI 2,R0                SETUP MULTIPLIER
003A86 4024 0002          1881 MVA LGSEC+1,R0          LOG SECTOR # TIMES 2
003A88 E821 3957          1882 SWI 60,R0              LOG SEC TIMES 2 MINUS 60
003A8E 7802 003C          1883 MVB R0,PHYS+1          PHYSICAL SECTOR NUMBER
003A92 C028 3959          1884 J TT304                RETURN TO CALLER
003A96 500C          1885 TT303 MVB FIVE9,PHYS+1 PHYSICAL SECTOR # 59
003A98 8028 395C 3959          1886 J TT304                RETURN TO CALLER
003AA0 5008          1887 RTT01 MVWI 2,R0        LOAD MULTIPLIER
003AA4 E821 3957          1888 MB LGSEC+1,R0          LOG SECTOR # TIMES 2
003AA8 7802 0001          1889 SWI 1,R0                SUBTRACT ONE
003AAC C028 3959          1890 MVB R0,PHYS+1          LOAD PHYSICAL SECTOR #
003AB0 6802 0000          1891 B *-*                  RETURN TO CALLER
1892 *
1893 *****
1894 *
1895 * SUBROUTINE
1896 *
1897 * PURPOSE
1898 *
1899 * LOAD WRITE SECTOR ID DATA BUFFER FROM RD SEC ID BUFFER
1900 *
1901 * CALLING SEQUENCE
1902 *
1903 * BAL LWSID,R6
1904 *
1905 * RETURN
1906 *
1907 * BXS (R6)
1908 *
1909 *****
1910 *
1911 *
1912 LWSID MVWI 5,R7          BYTE COUNT
003AB4 4724 0005          1913 MVA SCTID+1,R3          ADDR OF RD SECT ID DATA BUFFER
003AB8 4324 3739          1914 MVA WRSID,R5           ADDR OF WR SECT ID DATA BUFFER
003ABC 4524 395E          1915 MVFN (R3),(R5)         MOV DATA FROM RD TO WR BUFFER
003ABE 2BA4          1916 BXS (R6)                RETURN TO CALLER
003AC2 5600          1917 *
1918 *
1919 *
1920 * EXECUTE INPUT & OUTPUT COMMANDS
1921 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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1922 * EACH OF THESE ENTRIES SET P7 WITH THE ADRS OF ITS PAPANMTEP
1923 * LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
1924 * SUPVR CALL.
1926 * THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
1927 * 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
1928 * 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
1929 *
1930 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1931 *
1932 *
1933 * 1 BAL SRKEW,R6 READ SECTOR ID SKEWED
1934 *
1935 * 2 BAL $WKST,R6 WRITE SECTOR ID SKEWED (TEST)
1936 *
1937 * 3 BAL $RWST,R6 READ SECTOR ID SKEWED (TEST)
1938 *
1939 * 4 BAL $RIDS,R6 READ SECTOR ID (TEST)
1940 *
1941 * 5 BAL $WKEW,R6 WRITE SECTOP ID SKEWED
1942 *
1943 * 6 BAL $WSEC,R6 WRITE SECTOR ID
1944 *
1945 * 7 BAL $WSTS,R6 WRITE SECTOR ID (TEST)
1946 *
1947 * 8 BAL $DIAG,R6 DIAGNOSTIC
1948 *
1949 * 9 BAL $XIOCS,R6 CYCLE STEAL STATUS
1950 *
1951 * 10 BAL $SSEEK,R6 SEEK
1952 *
1953 * 11 BAL $RRECL,R6 RECALIBRATE
1954 *
1955 * 12 BAL $RDID,R6 READ SECTOR ID
1956 *
1957 * 13 BAL $RD,R6 READ
1958 *
1959 * 14 BAL $RDVY,R6 READ VERIFY
1960 *
1961 * 15 BAL $WRT,R6 WRITE
1962 *
1963 *
003AC4 4020 3C96 38C8 1964 $SSEEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003ACA 5064 J XIO
1965 *
1966 *
003ACC 4020 3C96 3888 1967 $RRECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
003AD2 5060 J XIO
1968 *
1969 *
003AD4 4020 3C96 38A8 1970 $RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
003ADA 0BFF MVEI X'FF',R3 SET BUFFER TO F'S
003ADC 4524 3738 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
003AEO 4724 0006 MVTI 6,R7 SETUP BUFFER LENGTH
003AE4 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
003AE6 4020 38B6 3738 1975 MVA SCTID,$SDCB+14 DATA ADDR
003AEC 5053 J XIO
1976 *
1977 *
003AEE 0BFF $RD MVEI X'FF',R3 SETRD BUFFER TO ALL F'S
003AF0 6D08 3916 MVW RDDCB+14,R5 SET UP READ BUFFER ADRS
003AF4 4724 0100 MVTI X'0100',R7 SET UP BUFFER LENGTH
003AF8 2BAC FPN R3,(R5) CLEAR READ BUFFER
003AFA 4020 3C96 3908 1982 $RDS MVA RDCCB,IODCB SET UP BLOCK FOR SVC CALL
003B00 5049 J XIO
1983 *
1984 *
003B02 4020 3C96 38F8 1985 $RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B08 5045 J XIO
1986 *
1987 *
003B0A 4020 3C96 38E8 1988 $WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B10 5041 J XIO
1989 *
1990 *
003B12 4020 3C96 3928 1991 $RKEW MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B18 0BFF MVEI X'FF',R3 SET BUFFER TO F'S
003B1A 4524 3738 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
003B1E 4724 0006 MVTI 6,R7 SETUP BUFFER LENGTH
003B22 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
003B24 4020 3936 3738 1995 MVA SCTID,$KDCB+14 DATA ADDR
003B2A 5034 J XIO
1996 *
1997 *
003B2C 4020 3C96 3918 1999 $WKST MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B32 4020 3926 3966 2000 MVA WSIDT,$WKDCB+14 DATA ADDR
003B38 502D J XIO
2001 *
2002 *
003B3A 4020 3C96 3928 2003 $RWST MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B40 4020 3936 396C 2004 MVA SCTST,$RKDCB+14 DATA ADDR
003B46 5026 J XIO
2005 *
2006 *
003B48 4020 3C96 38A8 2008 $RIDS MVA PSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B4E 0BFF MVEI X'FF',R3 SET BUFFER TO F'S
003B50 4524 396C MVA SCTST,R5 SETUP READ SECTOR ID BUFFER ADRS
003B54 4724 0006 MVTI 6,R7 SETUP BUFFER LENGTH
003B58 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
003B5A 4020 38B6 396C 2012 MVA SCTST,$SDCB+14 DATA ADDR
003B60 5019 J XIO
2013 *
2014 *
003B62 4020 3C96 3918 2015 $WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B68 4020 3926 395E 2016 MVA WRSID,$WKDCB+14 DATA ADDR
003B6E 5012 J XIO
2017 *
2018 *
003B70 4020 3C96 3898 2018 $WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B76 4020 38A6 395E 2019 MVA WSIDT,$WSDCB+14 DATA ADDR
003B7C 500B J XIO
2020 *
2021 *
003B7E 4020 3C96 3898 2022 $WSTS MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B84 4020 38A6 3966 2023 MVA WSIDT,$WSDCB+14 DATA ADDR
003B8A 5004 J XIO
2024 *
2025 *
003B8C 4020 3C96 3878 2026 $DIAG MVA DGDCCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003B92 5000 J XIO
2027 *
2028 *
2029+*****29JUL76**
2030 *
2031+ SUB-ROUTINE
2032 *
2033+ EXECUTE INPUT AND OUTPUT COMMANDS
2034 *
2035+ PURPOSE

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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2036+* TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
2037+* THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
2038+*
2039+*
2040+* 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
2041+* THE I/O COMMAND.
2042+* 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
2043+* ISSUED BY THIS SUBROUTINE.
2044+* 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
2045+* START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
2046+* 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
2047+* SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
2048+* MYSTER INTERRUPT (MI) CONTROL BIT IS SET.
2049+* 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
2050+* EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
2051+* 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
2052+* STARTS TO DETERMINE A LOST INTERRUPT.
2053+* 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
2054+* WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
2055+* 8. CHECK IF THERE WAS A WPONG INTERRUPT LEVEL.
2056+* 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
2057+* 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
2058+* 11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
2059+* 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
2060+* ISSUED BY THIS SUBROUTINE.
2061+* 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
2062+* CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
2063+* COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
2064+*
2065+* CALLING SEQUENCE
2066+*
2067+* THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2068+*
2069+* --> BAL XIO OR XEO ANY CYCLE STEAL COMMAND, MOD=0
2070+* --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
2071+* --> BAL XIOCS,R6 OR XEO START CYCLE STEAL STATUS, MOD=F
2072+* --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
2073+* AND DOES NOT POST INTERRUPT STATUS)
2074+*
2075+* RETURN CONTROL
2076+*
2077+* BXS (R6,2) RETURN TO USER NO ERROR
2078+* OR B (R6)* RETURN AND RETRY ON ERROR
2079+*****
2081+XIO MVWZ IOMOD,R3 SET MOF OF 0 FOR CYCLE STEAL OP
2082+ J XIO1 CS I/O'S ARE NOT RETPTD
2083+*
2084+* TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
2085+* TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
2086+XIOCS MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2087+* MVTI X'0000',IOMOD SET CYCLE STEAL MODIFIER
2088+* TBTR (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
2089+* JON XIO2 * YES, BYPASS SAVING I/O ADRS
2090+XIO1 MVW R6,ISTIO SAVE IAR FOR RETRY IF REQUESTED
2091+ MVA DCBUF,R3 SET UP TO ADRS TO MOVE DCB TABLE
2092+ MVA IODCB,R5 * AND THE FROM ADRS, ALONG WITH
2093+ MVEI 16,R7 * THE NUMBER OF MOVES
2094+ MVEI (R5),(R3) MOVE 1 STATUS WORD AND ADJUST
2095+ MVEI 255,R3 CLEAR CYCLE STATUS BUFFER
2096+ MVA CSBUF,R5 * TO ALL ONES *
2097+ MVEI 16,R7 *
2098+* FPN R3,(R5) *
2099+ MVTI X'0708', $IIOIN OVERLAY OLD CONDITION CODES
2100+ MVWZ $ISB,R3 ZERO OUT OLD ISB VALUE
2101+*
2102+* TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
2103+XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
2104+ MVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
2105+ TBTR (R4,$IE) RESET LEVEL ERROR INDICATOR
2106+ TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
2107+ SVC STAPT CALL SUPVR FOR I/O COMMAND
2108+*
2109+* TBTR (R4,NI) IS AN INTR EXPECTED
2110+ BN (R6,2) * NO, RETURN TO USER
2111+*
2112+* THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
2113+*
2114+* MVEI X'00',R5 SET UP WORK REG FOR 'LOST INTR'
2115+XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
2116+ JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
2117+ SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
2118+* SUPVR WILL RETURN HERE
2119+* ADVANCE TIME OUT COUNT
2120+* BCH IF TIME OUT NOT REACHED
2121+* TBTS (R4,ER) SET ON ERROR CONTROL BIT
2122+ B (R6)* ERR 'NO INTERRUPT
2123+*****03FEB76**
2124+*
2125+*
2126+* SUBROUTINE
2127+*
2128+* I/O EXECUTE ERROR HANDLING ROUTINE
2129+*
2130+* PURPOSE
2131+*
2132+* THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
2133+* PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
2134+* SUPERVISOR AND IT WAS NOT ACCEPTED.
2135+*
2136+* CALLING SEQUENCE
2137+*
2138+* SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
2139+*
2140+* RETURN CONTROL
2141+*
2142+* B (R6)* RETURN TO USERS ERROR HANDLER
2143+*
2144+*****
2145+*
2146+* CC 0= DEVICE NOT ATTACHED
2147+* FOR 1= DEVICE BUSY
2148+* I/O 2= DEVICE BUSY AFTER REJECT
2149+* 3= COMMAND REJECT
2150+* 4= INTERVENTION REQUIRED
2151+* 5= INTERFACE DATA CHECK

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2152** 6= CONTROLLER BUSY
2153** 7= I/O COMMAND EXPECTED
003BFA 706E
003BFC 336A
003BFE C328 3732
003C02 68D2 0000
2154**
2155+XIOER DC X'706E' COPY STATUS ANY LEVEL INTO R3
2156+ SRL 13,R3 POSITION INDICATORS IN R3
2157+ MVB R3,\$IOIN * PUT IN LOG OUT AREA
2158+ B (R6)* RETURN TO USER ERROR HANDLER
2160+*****14APR76**
2161**
2162** SUB-ROUTINE
2163**
2164** ERROR INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2165**
2166** PURPOSE
2167**
2168** THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR
2169** OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
2170** EXPECTED CODE.
2171**
2172** CALLING SEQUENCE
2173**
2174** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT
2175**
2176** RETURN CONTROL
2177**
2178** SVC EXIT RETURN TO USER VIA SUPVR
2179**
2180+*****14APR76**
2181**
2182** CC 0= CONTROLLE END ISB 0= ADD STATUS
2183** FOR 1= PROGRAM CONTROL INTERRUPT BITS 1= COMD REJECT
2184** INTR 2= EXCEPTION INTERRUPT FOR 2= INCOR LENGTH
2185** 3= DEVICE END INTERRUPT INTR 3= DCB SPEC CK
2186** 4= ATTENTION INTERRUPT 4= STG DATA CK
2187** 5= ATTENTION / PROGRAM CNTL INTR 5= INV STG ADRS
2188** 6= ATTENTION / EXCEPTION INTR 6= PROTRCT CK
2189** 7= ATTENTION / DEVICE END INTR 7= I-FACE DATA
2190**
2191+INTR DC X'706E' COPY STATUS ANY LEVEL INTO R3
2192+ SRL 13,R3 POSITION INDICATORS IN R3
2193+ MVA OPTN1,R4 SET UP BASE ADRS
2194+ TBT (R4,CS) IS CS IN PROGRESS
2195+ JOFF INTES * NO
2196+ TBT (R4,CE) TURN ON CYCLE STEAL INTER EPOR
2197+ MVB R7,\$IOIN8 SAVE CS ERR ISB VALUE, BITS 0-7
2198+ MVB R3,\$IOIN8+1 * AND THE COND CODE
2199+ J INTR1
2200+INTES TBT (R4,XE) TEST EXPECTED ATEN / ERROR IND
2201+ JOFF INTET BCH IF NOT EXPECTED
2202+ CBI 4,R3 IS THIS AN 'ATTENTION' INTR
2203+ JE INTR1 * YES, BCH TO END INTR SEQUENCE
2204+INTET TBT (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT
2205+ J INTR1
2206** THE ERROR INTERRUPT USES THE SAME
2207** ENDING SEQUENCE AS THE NORMAL INTR
2208** *****14APR76**
2209**
2210**
2211** SOUBROUTINE
2212**
2213** OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2214**
2215** PURPOSE
2216**
2217** TO CHECK THE INTERRUPT AND CONTINUE THE TEST
2218**
2219** CALLING SEQUENCE
2220**
2221** SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED
2222** THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE
2223** AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE
2224** COMMON SECTION IS HANDLED HERE.
2225**
2226** RETURN CONTROL
2227**
2228** SVC EXIT RETURN TO USER VIA SUPVR
2229**
2230+*****14APR76**
2231+INTOK DC X'706E' COPY STATUS ANY LEVEL INTO R3
2232+ SRL 13,R3 POSITION INDICATORS IN R3
2233+ MVA OPTN1,R4 SET UP BASE ADRS
2234+INTR1 TBT (R4,IN) SET INTERRUPT RECEIVED
2235+ TBT (R4,CS) IS 'CS' IN PROGRESS' ON
2236+ JON INT#2 * YES, BCH AROUND UPDATE
2237+ MVB R3,\$IOIN+1 SAVE INTERRUPTING CC CODE
2238+ MVB R7,\$ISB SAVE INTR STATUS AND DEV ADRS
2239+INTR2 EQU *
2240** CPCL R5 CURRENT LEVEL COPIED BY DCP
2241+ SLL 4,R5 POSITION INTR LEVEL AND PUT
2242+ ABI 1,R5 * IN 'I' BIT
2243+ CW \$INTL,R5 IS THIS THE CORRECT INTP LEVEI
2244+ JE INTR3 * YES, GO EXIT THIS LEVEL
2245+ TBT (R4,\$LE) SET INTR LEVEL ERROR CONTROL BIT
2246+ TBT (R4,IE) SET ERROR ON I/O COMMAND CNTL BIT
2247+INTR3 TBT (R4,IE) WAS INTERRUPT EXPECTED
2248+ JON INTR#X * YES, EXIT OFF THIS INTR LEVEL
2249+ TBT (R4,MI) * NO, SET MYSTERY INTR CONTROL BIT
2250+ CBI 4,R3 ATTENTION INTERRUPT?
2251+ JE INTR#X YES
2252+ TBT (R4,NG) ERPROR, UNEXPECTED INTERRUPT
2253+INTR#X SVC EXIT EXIT THIS LEVEL VIA SUPVR TO PGM
2254+*****03FER76**
2255**
2256** THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
2257** HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
2258** RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERPR CONDITIONS.
2259**
2260**
2261**
2262+XIOCK TBT (R4,XE) WAS AN ERROR EXPECTED
2263+ BN (R6,2) * YES, EXIT THIS ROUTINE
2264+ TBT (R4,CS) WAS AUTO CS IN PROGRESS
2265+ JOFF XIOCV * NO, CONTINUE CHECKING
2266+ TBT (R4,CE) IS CS IN AN ERF CONDITION
2267+ JOFF XIOCO * NO, BCH
2268+ B (R6)* CS ERROR

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
003C6E 4C69 2269+XIOCO TBT (R4,CSA) TURN ON CS STATS AVAIL FLAG
003C70 5601 2270+ BXS (R6,2) GO TO USER
003C72 4C21 2271+XIOCV TBT (R4,ER) WAS ERROR INTP CONTROL BIT ON
003C74 100B 2272+ JOFF XIOCX * NO, EXIT THIS ROUTINE
2273**
2274+ MVB \$IOIN+1,R5 GET LAST INTR CC CODE
2275+ CBI 2,R5 IS THIS CC=2
2276+ B (R6)* * NO, BCH TO ERROR HANDLER
2277+XIOCO MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS
2278+ BN XIOCS-4 * AVAILABLE, GO AND GET IT
2279+ B (R6)* ERROR
2280+XIOCX MVBZ OPTN3,R3 CLEAR OUT OPTION 3 CNTL BITS
2281+ BXS (R6,2) RETURN TO USER VIA REG 6
2282**
2283** I/O PARAMETER LIST
2284**
2285+TOBLK DC A(DEVADD) ADRS OF DEVICE ADRS
003C94 3BFA A(XIOER) ERROR ROUTINE ADRS
2286+ DC A(*) DCB ADRS OR LEVEL & INTR
2287+IODCB DC A(*) DCB ADRS OR LEVEL & INTR
003C98 0000 2288+IOMOD DC A(*) MODIFIER
003C9A 0000 2289+ A(*) ADRS OF LAST SVC CALL
003C9C 0000 2290+TORSP DC A(*) SECOND WORD OF LAST IDCB
2291**
2292** INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
2293**
2294+INTBL DC A(DEVADD) ADRS OF DEVICE ADRS
003CA0 19D0 2295+ DC A(INTOK) INTERRUPT OK RETURN ADRS
003CA2 3C06 2296+ DC A(INTR) INTERRUPT ERROR ADRS
003CA4 0003 2297+INTCC DC X'0003' INTERRUPT CODE EXPECTED
2298+*****11MAY76**
2299**
2300** SUBROUTINE
2301**
2302**
2303** CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
2304**
2305** PURPOSE
2306**
2307** TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2308** PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
2309** TO INTERRUPT.
2310**
2311** CALLING SEQUENCE
2312**
2313** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2314**
2315** --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
2316** --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
2317**
2318** RETURN CONTROL
2319**
2320** BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
2321** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
2322**
2323+*****11MAY76**
2324+ \$CONC MVB 6,R7 NUMBER OF BYTE TO CLEAR
003CA6 0F06 2325+ MVB 0,R3 * AND THE DATA TO USE
003CA8 0B00 2326+ MVA DEV1,R5 * ALONG WITH THE ADRS TO USE
003CAA 4E24 3738 2327+ R3,R5 *
003CAE 2BAC 2328+ MVBZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
003CB0 C825 372E 2329+ MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
003CB4 4724 3C9E 2330+ SVC CIBC * CONNECT IT TO THIS DEVICE
003CB8 6014 2331+ BN (R6)* ERROR RETURN TO USER
003CBA 6AD0 0000 2332**
003CBE 8828 3766 3C96 2333+ \$CONP MVB \$INTL,IODCB PUT IN LEVEL & INTR PARAMETER
003CC4 4724 3C92 2334+ MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
003CC8 4020 3732 0708 2335+ MVB X'0708,R3,\$IOIN INITIALIZE CONDITION CODE STOFAGE
003CCE C825 3734 2336+ MVBZ \$ISB,R3 * AND CLEAR OLD ISB VALUE
003CD2 680D 3736 2337+ MVB R6,\$STO SET UP ADDRESS THAT STARTED LAST I/O
003CD8 5601 2338+ SVC PDEF * AND CALL ON SUPVR
2339+ BXS (R6,2) RETURN TO USER
2340+*****06APR76**
2341**
2342**
2343** SUBROUTINE
2344**
2345** DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
2346**
2347** PURPOSE
2348**
2349** DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2350** SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
2351** BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
2352**
2353** CALLING SEQUENCE
2354**
2355** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2356**
2357** --> B \$ERR\$ SET 'NG' BIT AND CONVERT DATA TO LOG
2358** --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
2359**
2360** RETURN CONTROL
2361**
2362** OR B TURTN* RETURN TO MDI
2363** (R6)* IF THE DEVICE COULD NOT BE CONNECTED
2364**
2365+*****06APR76**
2366+ \$ERRS MVB X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
003CE0 4020 1818 8000 2367+ MVA HEBLK,R7 GET ADRS OF CONTROL BLOCK
003CE4 601A 2368+ SVC HTOE CONVERT HEX TO EBC VIS DCP
003CE6 0D03 2369+ \$PRNT MVB 3,R5
003CE8 4324 181A 2370+ MVA TWORK,R3 SET UP BUFFER STORAGE
003CEC 580D 3E3C 2371+ MVB R3,BUF#T
003CF0 4124 3D6C 2372+ MVA LINE1,R1
2373+ MVB 4,R7
003CF4 0E04 2374+ MVB 8,R6
2375+ MVB (R3),R1
003CFA 0F04 2376+ MVB 4,R7,(R1)
003CFC 0A40 2377+ MVB Y'40',R2
003CFE C258 2378+ MVB R2,(R1)+
003D00 BEFF 2379+ JCT MVB#R6
003D02 0E08 2380+ MVB 8,R6
003D04 7921 002C 2381+ AWI 44,R1
003D08 BDF7 2382+ JCT MVB#R5
003D0A 4020 1802 F1F0 2383+ MVB PIDMSG10,PID+2
003D10 4020 19B8 3E42 2384+ MVA FAKETG,@DCADD1

LOCTR	OBJECT TEXT	STMT	SOURCE	STATEMENT	COPYRIGHT IBM CORP 1976
003D16	4020 19BA 3E3E	2385+	NVA	DC2PT,@DCADD2	
003D1C	402C 19C4 0080	2386+	OWI	BIT0080,SUPSTAT	
003D22	4324 3730	2387+	MVA	STUID,R3	
003D26	6F13 18BA	2388+	BAL	TUMSG*TR*,R7	SET UP BUFFER STORAGE GO TO MESSAGE WRITER
003D2A		2389+*			
003D2A	C720 19D0	2390+\$CONX	EQU	*	
003D2E	6013	2391+	MVB	DEVADD,R7	GET DEVICE ADDRESS FROM MDI
003D30	6812 3768	2392+	SVC	RICB	RELEASE INTERRUPT CONTROL BLOCK
		2393+	B	TURTN*	RETURN TO MDI SUPERVISOR
003D34	0007	2394+*			
003D36	0008	2395+*	BEGIN	DC A(0007)	NUMBER OF LINES TO PPRINT
003D38	5C5C40C1C2D6D9E3	2396+	DC	A(0008)	LINE LENGTH = 8 CHAR
003D40	0028	2397+	DC	C'*** ABORT'	
003D42	E3E4C9C440C9D6C9D	2398+	DC	A(0040)	LINE LENGTH = 40 CHAR
003D6A	0028	2399+	DC	C'TUID IOIN ISB INST	DEV1 DEV2 DEV3 DEV4
003D6C	4040404040404040	2400+	DC	A(0040)	LINE LENGTH = 40 CHAR
003D94	0028	2401+*	LINE1	DC C'	
003D96	C3D5E3D340C4C3C2F	2402+	DC	A(0040)	LINE LENGTH = 40 CHAR
003DBE	0028	2403+	DC	C'CENTI DCB2 DCB3 DCB4	DCB5 CHAD BYCT ADRS
003DC0	4040404040404040	2404+	DC	A(0040)	LINE LENGTH = 40 CHAR
003DE8	0028	2405+*	LINE2	DC C'	
003E12	D9E2C9C440C3E260F	2406+	DC	A(0040)	LINE LENGTH = 40 CHAR
003E14	4040404040404040	2407+	DC	C'RSID CS-2 CS-3 CS-4	CS-5 CS-6 CS-7 CS-8
		2408+	DC	A(0040)	LINE LENGTH = 40 CHAR
003E3C	0000	2409+*	LINE3	DC C'	
003E3E	3D34	2410+*			
003E40	0101	2411+*	BUFPT	DC A(*--*)	
003E42	0101	2412+*	DC2PT	DC A(BEGIN)	
00F1F0		2413+*	FIXTU	DC X'0101'	
000080		2414+*	FAKETU	DC X'0101'	
		2415+*	PIDMSG10	EQU X'F1F0'	
		2416+*	BIT0080	EQU X'0080'	
		2417+*			
		2418+*			
		2419+*			
		2420+*	HEBLK	DC A(48)	NUMBER OF BYTES TO CONVERT
		2421+*	DC	A(STUID)	FROM ADRS
		2422+*	DC	A(TUWRK)	AND THE TO ADRS
		2423	END		

DECLARED	NAME	ATTRIBUTES AND REFERENCES	COPYRIGHT IBM CORP 1976
0	.R0.	ABSOLUTE. HEX VALUE(00000000)	
		1389 1390 1396 1398 1880 1881 1882 1883 1887	
0	.R1.	ABSOLUTE. HEX VALUE(00000001)	
		1888 1889 1890	
0	.R2.	ABSOLUTE. HEX VALUE(00000002)	
		2372 2375 2378 2381	
0	.R3.	ABSOLUTE. HEX VALUE(00000003)	
		2377 2378	
0	.R4.	ABSOLUTE. HEX VALUE(00000004)	
		1786 1787 1825 1832 1834 1913 1915 1971 1974	
		1788 1781 1992 1995 2008 2011 2081 2091 2094	
		2095 2098 2100 2156 2157 2192 2198 2202 2232	
		2237 2250 2280 2325 2327 2328 2336 2370 2371	
0	.R5.	ABSOLUTE. HEX VALUE(00000005)	
		2375 2387	
		1384 1401 1408 1416 1468 2084 2085 2088 2102	
		2103 2105 2106 2109 2115 2121 2193 2194 2196	
		2200 2204 2233 2234 2235 2245 2246 2247 2249	
		2252 2262 2264 2266 2269 2271	
0	.R6.	ABSOLUTE. HEX VALUE(00000006)	
		1829 1833 1834 1914 1915 1972 1974 1979 1981	
		2023 1935 2002 2011 2092 2094 2096 2098 2114	
		2118 2221 2242 2243 2274 2275 2277 2326 2327	
0	.R7.	ABSOLUTE. HEX VALUE(00000007)	
		2369 2382	
		1385 1399 1406 1412 1414 1469 1474 1478 1754	
		1758 1760 1764 1766 1770 1773 1777 1779 1783	
		1788 1835 1836 1875 1916 2090 2110 2122 2158	
		2263 2268 2270 2276 2279 2281 2331 2337 2339	
0	.R8.	ABSOLUTE. HEX VALUE(00000008)	
		2374 2379 2380	
2324	\$CONC	ADDRESS. HEX LOCATION(00003CA6) IN CSECT(I7844)) LENGTH(2)	
2390	\$CONX	ADDRESS. HEX LOCATION(00003D2A) IN CSECT(I7844)) LENGTH(1)	
2366	\$ERR\$	ADDRESS. HEX LOCATION(00003CDA) IN CSECT(I7844)) LENGTH(6)	
1235	\$INTL	ADDRESS. HEX LOCATION(00003766) IN CSECT(I7844)) LENGTH(2)	
1205	\$IOIN	ADDRESS. HEX LOCATION(00003732) IN CSECT(I7844)) LENGTH(2)	
1206	\$ISB	ADDRESS. HEX LOCATION(00003734) IN CSECT(I7844)) LENGTH(2)	
1190	\$LE	ABSOLUTE. HEX VALUE(00000026)	
1970	\$RDID	ADDRESS. HEX LOCATION(00003AD4) IN CSECT(I7844)) LENGTH(6)	
1967	\$RECL	ADDRESS. HEX LOCATION(00003ACC) IN CSECT(I7844)) LENGTH(6)	
1964	\$SEEK	ADDRESS. HEX LOCATION(00003AC4) IN CSECT(I7844)) LENGTH(6)	
1204	\$TUID	ADDRESS. HEX LOCATION(00003730) IN CSECT(I7844)) LENGTH(2)	
105	@DCADD1	ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7844)) LENGTH(1)	
106	@DCADD2	ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7844)) LENGTH(1)	
42	@FIXT	ABSOLUTE. HEX VALUE(00000101)	
		528 531 558 561 588 591 618 621 648	
44	@GOTO	ABSOLUTE. HEX VALUE(00000200)	
		651 678 681 708 711 738 741 755	
49	@NVLD	ABSOLUTE. HEX VALUE(00000600)	
		504 534 564 594 624 654 684 714	
41	@QUES	ABSOLUTE. HEX VALUE(00000100)	
		753	
47	@QUXX	ABSOLUTE. HEX VALUE(00000400)	
		480 483 486 489 492 495 498 501	
2395	BEGIN	ADDRESS. HEX LOCATION(00003D34) IN CSECT(I7844)) LENGTH(2)	
2412	BIT0080	ABSOLUTE. HEX VALUE(00000080)	
2411	BUFPT	ADDRESS. HEX LOCATION(00003E3C) IN CSECT(I7844)) LENGTH(2)	
1655	CB29	ADDRESS. HEX LOCATION(0000395A) IN CSECT(I7844)) LENGTH(2)	
1785	CCERR	ADDRESS. HEX LOCATION(00003A2C) IN CSECT(I7844)) LENGTH(2)	
1194	CE	ABSOLUTE. HEX VALUE(0000002A)	
1274	CICB	ABSOLUTE. HEX VALUE(00000014)	
1524	CLDCB	ADDRESS. HEX LOCATION(00003888) IN CSECT(I7844)) LENGTH(2)	
1875	CONVT	ADDRESS. HEX LOCATION(00003A72) IN CSECT(I7844)) LENGTH(4)	
1801	CPUID	ABSOLUTE. HEX VALUE(00000232)	
1192	CS	ABSOLUTE. HEX VALUE(00000028)	
1193	CSA	ABSOLUTE. HEX VALUE(00000029)	
1223	CSBUF	ADDRESS. HEX LOCATION(00003750) IN CSECT(I7844)) LENGTH(1)	
1574	CSDCB	ADDRESS. HEX LOCATION(000038D8) IN CSECT(I7844)) LENGTH(2)	
1231	CSTL8	ADDRESS. HEX LOCATION(0000375E) IN CSECT(I7844)) LENGTH(2)	
1213	DCBUF	ADDRESS. HEX LOCATION(00003740) IN CSECT(I7844)) LENGTH(1)	
2412	DC2PT	ADDRESS. HEX LOCATION(00003E3E) IN CSECT(I7844)) LENGTH(2)	
108	DEVADD	ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7844)) LENGTH(1)	
1208	DEV1	ADDRESS. HEX LOCATION(00003738) IN CSECT(I7844)) LENGTH(2)	
1512	DGDCB	ADDRESS. HEX LOCATION(00003878) IN CSECT(I7844)) LENGTH(2)	

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
70	DUMMY	ABSOLUTE. HEX VALUE(00000000)
758	ENTPT	ADDRESS. HEX LOCATION(00002786) IN CSECT(I7844) LENGTH(1)
1185	ER	ABSOLUTE. HEX VALUE(00000021)
1260	EXIT	ABSOLUTE. HEX VALUE(00000006)
2414	FAKETU	ADDRESS. HEX LOCATION(00003E42) IN CSECT(I7844) LENGTH(2)
1656	FIVE9	ADDRESS. HEX LOCATION(0000395C) IN CSECT(I7844) LENGTH(2)
801	F00066	ADDRESS. HEX LOCATION(000027AC) IN CSECT(I7844) LENGTH(1)
1085	F00104	ADDRESS. HEX LOCATION(0000344E) IN CSECT(I7844) LENGTH(1)
1093	F00107	ADDRESS. HEX LOCATION(0000349C) IN CSECT(I7844) LENGTH(1)
1127	F00132	ADDRESS. HEX LOCATION(00003648) IN CSECT(I7844) LENGTH(1)
1045	F00175	ADDRESS. HEX LOCATION(00003286) IN CSECT(I7844) LENGTH(1)
1053	F00178	ADDRESS. HEX LOCATION(000032D4) IN CSECT(I7844) LENGTH(1)
1081	F00186	ADDRESS. HEX LOCATION(00003448) IN CSECT(I7844) LENGTH(1)
1005	F00223	ADDRESS. HEX LOCATION(000030BE) IN CSECT(I7844) LENGTH(1)
1013	F00226	ADDRESS. HEX LOCATION(0000310C) IN CSECT(I7844) LENGTH(1)
1041	F00234	ADDRESS. HEX LOCATION(00003280) IN CSECT(I7844) LENGTH(1)
965	F00271	ADDRESS. HEX LOCATION(00002EF6) IN CSECT(I7844) LENGTH(1)
973	F00274	ADDRESS. HEX LOCATION(00002F44) IN CSECT(I7844) LENGTH(1)
1001	F00282	ADDRESS. HEX LOCATION(000030B8) IN CSECT(I7844) LENGTH(1)
925	F00319	ADDRESS. HEX LOCATION(00002D2E) IN CSECT(I7844) LENGTH(1)
933	F00322	ADDRESS. HEX LOCATION(00002D7C) IN CSECT(I7844) LENGTH(1)
961	F00330	ADDRESS. HEX LOCATION(00002EF0) IN CSECT(I7844) LENGTH(1)
885	F00367	ADDRESS. HEX LOCATION(00002B66) IN CSECT(I7844) LENGTH(1)
893	F00370	ADDRESS. HEX LOCATION(00002BB4) IN CSECT(I7844) LENGTH(1)
921	F00378	ADDRESS. HEX LOCATION(00002D28) IN CSECT(I7844) LENGTH(1)
845	F00415	ADDRESS. HEX LOCATION(0000299E) IN CSECT(I7844) LENGTH(1)
853	F00418	ADDRESS. HEX LOCATION(000029EC) IN CSECT(I7844) LENGTH(1)
881	F00426	ADDRESS. HEX LOCATION(00002B60) IN CSECT(I7844) LENGTH(1)
805	F00463	ADDRESS. HEX LOCATION(000027D6) IN CSECT(I7844) LENGTH(1)
813	F00466	ADDRESS. HEX LOCATION(00002824) IN CSECT(I7844) LENGTH(1)
841	F00474	ADDRESS. HEX LOCATION(00002998) IN CSECT(I7844) LENGTH(1)
2420	HEBLK	ADDRESS. HEX LOCATION(00003E44) IN CSECT(I7844) LENGTH(2)
1280	HTOE	ABSOLUTE. HEX VALUE(0000001A)
1795	IDCBCE1	ADDRESS. HEX LOCATION(00003A42) IN CSECT(I7844) LENGTH(2)
1797	IDCBCE2	ADDRESS. HEX LOCATION(00003A46) IN CSECT(I7844) LENGTH(2)
1799	IDCBRAP	ADDRESS. HEX LOCATION(00003A4A) IN CSECT(I7844) LENGTH(2)
1791	IDCB0	ADDRESS. HEX LOCATION(00003A3A) IN CSECT(I7844) LENGTH(2)
1793	IDCB1	ADDRESS. HEX LOCATION(00003A3E) IN CSECT(I7844) LENGTH(2)
1256	IDLE	ABSOLUTE. HEX VALUE(00000002)
1187	IN	ABSOLUTE. HEX VALUE(00000023)
2294	INTBL	ADDRESS. HEX LOCATION(00003C9E) IN CSECT(I7844) LENGTH(2)
2191	INTER	ADDRESS. HEX LOCATION(00003C06) IN CSECT(I7844) LENGTH(2)
2200	INTES	ADDRESS. HEX LOCATION(00003C1E) IN CSECT(I7844) LENGTH(2)
2204	INTET	ADDRESS. HEX LOCATION(00003C26) IN CSECT(I7844) LENGTH(2)
2231	INTOK	ADDRESS. HEX LOCATION(00003C2A) IN CSECT(I7844) LENGTH(2)
66	INTRNL	ABSOLUTE. HEX VALUE(00000000)
2253	INTRX	ADDRESS. HEX LOCATION(00003C5A) IN CSECT(I7844) LENGTH(2)
2234	INTR1	ADDRESS. HEX LOCATION(00003C32) IN CSECT(I7844) LENGTH(2)
2239	INTR2	ADDRESS. HEX LOCATION(00003C40) IN CSECT(I7844) LENGTH(1)
2247	INTR3	ADDRESS. HEX LOCATION(00003C4E) IN CSECT(I7844) LENGTH(2)
2285	IOBLK	ADDRESS. HEX LOCATION(00003C92) IN CSECT(I7844) LENGTH(2)
2287	IODCB	ADDRESS. HEX LOCATION(00003C96) IN CSECT(I7844) LENGTH(2)
2288	IONOD	ADDRESS. HEX LOCATION(00003C98) IN CSECT(I7844) LENGTH(2)
40	I7844	CSECT. STAPT(00002500) LENGTH(6474) ESDID(0)
1653	LGSEC	ADDRESS. HEX LOCATION(00003956) IN CSECT(I7844) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2401	LINE1	ADDRESS. HEX LOCATION(00003D6C) IN CSECT(I7844) LENGTH(40)
1207	LSTIO	ADDRESS. HEX LOCATION(00003736) IN CSECT(I7844) LENGTH(2)
1184	MI	ABSOLUTE. HEX VALUE(00000020)
2375	MVBUF	ADDRESS. HEX LOCATION(00003CF8) IN CSECT(I7844) LENGTH(2)
1196	NG	ABSOLUTE. HEX VALUE(0000002C)
1191	NI	ABSOLUTE. HEX VALUE(00000027)
480	N00001	ADDRESS. HEX LOCATION(000025D0) IN CSECT(I7844) LENGTH(2)
483	N00002	ADDRESS. HEX LOCATION(000025D4) IN CSECT(I7844) LENGTH(2)
486	N00003	ADDRESS. HEX LOCATION(000025D8) IN CSECT(I7844) LENGTH(2)
489	N00004	ADDRESS. HEX LOCATION(000025DC) IN CSECT(I7844) LENGTH(2)
492	N00005	ADDRESS. HEX LOCATION(000025E0) IN CSECT(I7844) LENGTH(2)
495	N00006	ADDRESS. HEX LOCATION(000025E4) IN CSECT(I7844) LENGTH(2)
498	N00007	ADDRESS. HEX LOCATION(000025E8) IN CSECT(I7844) LENGTH(2)
501	N00008	ADDRESS. HEX LOCATION(000025EC) IN CSECT(I7844) LENGTH(2)
504	N00009	ADDRESS. HEX LOCATION(000025F0) IN CSECT(I7844) LENGTH(2)
510	N00010	ADDRESS. HEX LOCATION(000025FC) IN CSECT(I7844) LENGTH(2)
519	N00011	ADDRESS. HEX LOCATION(0000260A) IN CSECT(I7844) LENGTH(2)
528	N00012	ADDRESS. HEX LOCATION(00002618) IN CSECT(I7844) LENGTH(2)
531	N00013	ADDRESS. HEX LOCATION(0000261C) IN CSECT(I7844) LENGTH(2)
534	N00014	ADDRESS. HEX LOCATION(00002620) IN CSECT(I7844) LENGTH(2)
540	N00015	ADDRESS. HEX LOCATION(0000262C) IN CSECT(I7844) LENGTH(2)
549	N00016	ADDRESS. HEX LOCATION(0000263A) IN CSECT(I7844) LENGTH(2)
558	N00017	ADDRESS. HEX LOCATION(00002648) IN CSECT(I7844) LENGTH(2)
561	N00018	ADDRESS. HEX LOCATION(0000264C) IN CSECT(I7844) LENGTH(2)
564	N00019	ADDRESS. HEX LOCATION(00002650) IN CSECT(I7844) LENGTH(2)
570	N00020	ADDRESS. HEX LOCATION(0000265C) IN CSECT(I7844) LENGTH(2)
579	N00021	ADDRESS. HEX LOCATION(0000266A) IN CSECT(I7844) LENGTH(2)
588	N00022	ADDRESS. HEX LOCATION(00002678) IN CSECT(I7844) LENGTH(2)
591	N00023	ADDRESS. HEX LOCATION(0000267C) IN CSECT(I7844) LENGTH(2)
594	N00024	ADDRESS. HEX LOCATION(00002680) IN CSECT(I7844) LENGTH(2)
600	N00025	ADDRESS. HEX LOCATION(0000268C) IN CSECT(I7844) LENGTH(2)
609	N00026	ADDRESS. HEX LOCATION(0000269A) IN CSECT(I7844) LENGTH(2)
618	N00027	ADDRESS. HEX LOCATION(000026A8) IN CSECT(I7844) LENGTH(2)
621	N00028	ADDRESS. HEX LOCATION(000026AC) IN CSECT(I7844) LENGTH(2)
624	N00029	ADDRESS. HEX LOCATION(000026B0) IN CSECT(I7844) LENGTH(2)
630	N00030	ADDRESS. HEX LOCATION(000026BC) IN CSECT(I7844) LENGTH(2)
639	N00031	ADDRESS. HEX LOCATION(000026CA) IN CSECT(I7844) LENGTH(2)
648	N00032	ADDRESS. HEX LOCATION(000026D8) IN CSECT(I7844) LENGTH(2)
651	N00033	ADDRESS. HEX LOCATION(000026DC) IN CSECT(I7844) LENGTH(2)
654	N00034	ADDRESS. HEX LOCATION(000026E0) IN CSECT(I7844) LENGTH(2)
660	N00035	ADDRESS. HEX LOCATION(000026EC) IN CSECT(I7844) LENGTH(2)
669	N00036	ADDRESS. HEX LOCATION(000026FA) IN CSECT(I7844) LENGTH(2)
678	N00037	ADDRESS. HEX LOCATION(00002708) IN CSECT(I7844) LENGTH(2)
681	N00038	ADDRESS. HEX LOCATION(0000270C) IN CSECT(I7844) LENGTH(2)
684	N00039	ADDRESS. HEX LOCATION(00002710) IN CSECT(I7844) LENGTH(2)
690	N00040	ADDRESS. HEX LOCATION(0000271C) IN CSECT(I7844) LENGTH(2)
699	N00041	ADDRESS. HEX LOCATION(0000272A) IN CSECT(I7844) LENGTH(2)
708	N00042	ADDRESS. HEX LOCATION(00002738) IN CSECT(I7844) LENGTH(2)
711	N00043	ADDRESS. HEX LOCATION(0000273C) IN CSECT(I7844) LENGTH(2)
714	N00044	ADDRESS. HEX LOCATION(00002740) IN CSECT(I7844) LENGTH(2)
720	N00045	ADDRESS. HEX LOCATION(0000274C) IN CSECT(I7844) LENGTH(2)
729	N00046	ADDRESS. HEX LOCATION(0000275A) IN CSECT(I7844) LENGTH(2)
738	N00047	ADDRESS. HEX LOCATION(00002768) IN CSECT(I7844) LENGTH(2)
741	N00048	ADDRESS. HEX LOCATION(0000276C) IN CSECT(I7844) LENGTH(2)
744	N00049	ADDRESS. HEX LOCATION(00002770) IN CSECT(I7844) LENGTH(2)
753	N00050	ADDRESS. HEX LOCATION(0000277E) IN CSECT(I7844) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
755	W00051	465 ADDRESS. HEX LOCATION(00002780) IN CSECT(I7844) LENGTH(2)
1149	OPTN1	468 745 ADDRESS. HEX LOCATION(0000372A) IN CSECT(I7844) LENGTH(2)
1172	OPTN3	1384 1466 2193 2233 ADDRESS. HEX LOCATION(0000372E) IN CSECT(I7844) LENGTH(2)
104	PARMARA	2280 2328 ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7844) LENGTH(1)
1654	PHYSC	517 526 547 556 577 586 607 616 637 646 667 676 697 706 727 736 751 ADDRESS. HEX LOCATION(00003958) IN CSECT(I7844) LENGTH(2)
72	PID	1413 1883 1885 1890 ADDRESS. HEX LOCATION(00001800) IN CSECT(I7844) LENGTH(1)
2415	PIDMSG10	74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 110 111 112 113 114 115 2383 ABSOLUTE. HEX VALUE(0000F1F0)
1266	PREP	2383 ABSOLUTE. HEX VALUE(0000000C)
1607	RDDCB	1496 2338 ADDRESS. HEX LOCATION(00003908) IN CSECT(I7844) LENGTH(2)
1262	RESET	1979 1982 ABSOLUTE. HEX VALUE(00000008)
1273	RICB	1395 ABSOLUTE. HEX VALUE(00000013)
1629	RKDCB	2392 ADDRESS. HEX LOCATION(00003928) IN CSECT(I7844) LENGTH(2)
1539	RSDCB	1991 1996 2003 2004 ADDRESS. HEX LOCATION(000038A8) IN CSECT(I7844) LENGTH(2)
1887	RTT01	1410 1413 1476 1477 1970 1975 2007 2012 ADDRESS. HEX LOCATION(00003AA0) IN CSECT(I7844) LENGTH(4)
1212	SCTID	1879 ADDRESS. HEX LOCATION(00003738) IN CSECT(I7844) LENGTH(2)
1664	SCTST	1418 1420 1546 1558 1636 1832 1913 1972 1975 1993 1996 ADDRESS. HEX LOCATION(0000396C) IN CSECT(I7844) LENGTH(2)
1563	SKDCB	1828 2004 2009 2012 ADDRESS. HEX LOCATION(000038C8) IN CSECT(I7844) LENGTH(2)
1264	START	1403 1404 1405 1472 1473 1964 ABSOLUTE. HEX VALUE(0000000A)
107	SUPSTAT	2107 ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7844) LENGTH(1)
1481	S16E	2386 ADDRESS. HEX LOCATION(0000385A) IN CSECT(I7844) LENGTH(4)
1412	S20B	1470 1475 1479 ADDRESS. HEX LOCATION(000037E6) IN CSECT(I7844) LENGTH(4)
1422	S20C	1425 ADDRESS. HEX LOCATION(0000380C) IN CSECT(I7844) LENGTH(6)
1427	S20D	1419 ADDRESS. HEX LOCATION(0000381E) IN CSECT(I7844) LENGTH(4)
1397	TO720	1417 1421 ADDRESS. HEX LOCATION(000037AC) IN CSECT(I7844) LENGTH(2)
1476	TS16L	1398 ADDRESS. HEX LOCATION(00003848) IN CSECT(I7844) LENGTH(6)
1885	TT303	513 522 543 552 573 582 603 612 633 642 663 672 693 702 723 732 ADDRESS. HEX LOCATION(00003A98) IN CSECT(I7844) LENGTH(6)
1891	TT304	1877 ADDRESS. HEX LOCATION(00003AB0) IN CSECT(I7844) LENGTH(4)
1834	TT4Y	1875 1884 1886 ADDRESS. HEX LOCATION(00003A68) IN CSECT(I7844) LENGTH(2)
95	TUMSGWTR	1830 ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7844) LENGTH(1)
79	TUPARM1	2388 ADDRESS. HEX LOCATION(0000189A) IN CSECT(I7844) LENGTH(1)
1236	TURTN	1473 ADDRESS. HEX LOCATION(00003768) IN CSECT(I7844) LENGTH(2)
77	TUSTATUS	1382 1466 1493 1498 2393 ADDRESS. HEX LOCATION(00001818) IN CSECT(I7844) LENGTH(1)
78	TUWORK	2366 ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7844) LENGTH(1)
1394	T20TC	2370 2422 ADDRESS. HEX LOCATION(000037A0) IN CSECT(I7844) LENGTH(6)
1396	T20T1	1391 ADDRESS. HEX LOCATION(000037A8) IN CSECT(I7844) LENGTH(4)
1395	T20T2	1392 1394 ADDRESS. HEX LOCATION(000037A6) IN CSECT(I7844) LENGTH(2)
1498	T72A	1393 ADDRESS. HEX LOCATION(00003870) IN CSECT(I7844) LENGTH(4)
1499	T72B	747 ADDRESS. HEX LOCATION(00003874) IN CSECT(I7844) LENGTH(4)
1466	T7838	1497 ADDRESS. HEX LOCATION(00003822) IN CSECT(I7844) LENGTH(4)
1493	T7872	512 521 542 551 572 581 602 611 632 641 662 671 692 701 722 731 ADDRESS. HEX LOCATION(0000385E) IN CSECT(I7844) LENGTH(4)
1596	VRDCB	746 ADDRESS. HEX LOCATION(000038F8) IN CSECT(I7844) LENGTH(2)
1618	WKDCB	1985 ADDRESS. HEX LOCATION(00003918) IN CSECT(I7844) LENGTH(2)
1585	WRDCB	1999 2000 2015 2016 ADDRESS. HEX LOCATION(000038E8) IN CSECT(I7844) LENGTH(2)
1657	WRSID	1988 ADDRESS. HEX LOCATION(0000395E) IN CSECT(I7844) LENGTH(2)
1529	WSDCB	1536 1625 1833 1914 2016 2020 ADDRESS. HEX LOCATION(00003898) IN CSECT(I7844) LENGTH(2)
1661	WSIDT	2019 2020 2022 2023 ADDRESS. HEX LOCATION(00003966) IN CSECT(I7844) LENGTH(2)
1188	XE	1829 2000 2023 ABSOLUTE. HEX VALUE(00000024)
1186	XI	2200 2262 ABSOLUTE. HEX VALUE(00000022)
2081	XIO	2106 2247 ADDRESS. HEX LOCATION(00003B94) IN CSECT(I7844) LENGTH(4)
2262	XIOCK	1965 1968 1976 1983 1986 1989 1997 2001 2005 2013 2017 2021 2024 2027 ADDRESS. HEX LOCATION(00003C5C) IN CSECT(I7844) LENGTH(2)
2269	XIOCO	2116 ADDRESS. HEX LOCATION(00003C6E) IN CSECT(I7844) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2086	XIOCS	2267 ADDRESS. HEX LOCATION(00003B9E) IN CSECT(I7844) LENGTH(6)
2271	XIOCV	2278 ADDRESS. HEX LOCATION(00003C72) IN CSECT(I7844) LENGTH(2)
2280	XIOCX	2265 ADDRESS. HEX LOCATION(00003C8C) IN CSECT(I7844) LENGTH(4)
2155	XIOER	2272 ADDRESS. HEX LOCATION(00003BFA) IN CSECT(I7844) LENGTH(2)
2090	XIO1	2286 ADDRESS. HEX LOCATION(00003BAE) IN CSECT(I7844) LENGTH(4)
2103	XIO2	2082 ADDRESS. HEX LOCATION(00003BD4) IN CSECT(I7844) LENGTH(2)
2115	XIO8	2089 ADDRESS. HEX LOCATION(00003BE8) IN CSECT(I7844) LENGTH(2)
1639	ZERO0	2120 ADDRESS. HEX LOCATION(00003938) IN CSECT(I7844) LENGTH(2)
		1418 1876

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