

```
3 COPY LOG7A23 ** MAP EC HISTORY **
4 *****
5
6
7 *** PPEREQUISITES ***
8
9 NONE
10 *****
11
12 *** MODIFICATIONS ***
13
14 CHANGES MADE TO CORRECT ERRORS FOUND WHILE IN TEST
15 *****
16
17 *** REA'S INCORPORATED ***
18
19 NONE
20 *****
21
22 *** SPECIAL INSTRUCTIONS ***
23
24
25 NONE
26 *****
27
28 *** E. C. HISTORY ***
29
30
31
32 DATE 17AUG78 DATE 02OCT78 DATE 10JAN79 DATE
33 E.C. 755391 E.C. 375102 E.C. 375222 E.C.
34 *****
35
37 I7A23 START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
38 @QUES EQU X'0100' EQUATED VALUE FOR MDI STATEMENT
39 @FIXT EQU X'0101' EQUATED VALUE FOR MDI STATEMENT
40 @STOP EQU X'0102' EQUATED VALUE FOR MDI STATEMENT
41 @GOTO EQU X'0200' EQUATED VALUE FOR MDI STATEMENT
42 @CALL EQU X'0201' EQUATED VALUE FOR MDI STATEMENT
43 @INPT EQU X'0300' EQUATED VALUE FOR MDI STATEMENT
44 @QUXX EQU X'0400' EQUATED VALUE FOR MDI STATEMENT
45 @TUXX EQU X'0500' EQUATED VALUE FOR MDI STATEMENT
46 @NVLD EQU X'0600' EQUATED VALUE FOR MDI STATEMENT
47 EQ EQU X'0000' EQUATE FOR EQUAL
48 NE EQU X'0004' EQUATE FOR NOT EQUAL
49 HI EQU X'0008' EQUATE FOR HIGH
50 NH EQU X'000C' EQUATE FOR NOT HIGH
51 LO EQU X'0010' EQUATE FOR LOW
52 NL EQU X'0014' EQUATE FOR NOT LOW
53 LT EQU X'0018' EQUATE FOR LESS THAN
54 LE EQU X'000C' EQUATE FOR LESS THAN OR EQUAL TO
55 GT EQU X'0008' EQUATE FOR GREATER THAN
56 GE EQU X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
57 ON EQU X'0200' EQUATE FOR ON
58 OF EQU X'0202' EQUATE FOR OFF
59 MX EQU X'0204' EQUATE FOR MIXED
60 EBC EQU X'0000' EQUATE FOR EBCDIC DATA TRANSFER
61 HEX EQU X'0001' EQUATE FOR HEX DATA TRANSFER
62 XTRNL EQU X'0001' EQUATE FOR EXTERNAL REFERENCE
63 INTRNL EQU X'0000' EQUATE FOR INTERNAL REFERENCE
64 PARM EQU X'0000' EQUATE INDICATING PARAMETER
65 DA EQU X'0001' EQUATE FOR DEVICE ADDRESS
66 UA EQU X'0001' EQUATE FOR UNIT ADDRESS
67 DUMMY EQU X'0000' DUMMY EQUATE
68 PID EQU *-X'0D00' ADDRESS OF MDI HEADER
69 PTYPE EQU *-X'22CE' ADDRESS OF PROCESSOR TYPE FIELD
70 STEPNUM EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
71 OPWD1 EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
72 OPWD2 EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
73 TUSTATUS EQU PID+X'0018' ADDRESS OF TU STATUS WORD
74 TUWORK EQU PID+X'001A' ADDRESS OF TU WORK AREA
75 TUPARM1 EQU PID+X'009A' ADDRESS OF PARM 1 POINTER
76 TUPARM2 EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
77 TUPARM3 EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
78 TUPARM4 EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
79 TUPARM5 EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
80 TUPARM6 EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
81 TUPARM7 EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
82 TUPARM8 EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
83 TUPARM9 EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
84 TUPARM10 EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
85 TUPARM11 EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
86 TUPARM12 EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
87 TUPARM13 EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
88 TUPARM14 EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
89 TUPARM15 EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
90 TUPARM16 EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
91 TUMSGWTR EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
92 TUUA EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
93 TUDA EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
94 TUBUFF EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
95 TULAST EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
96 TURESUL EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
97 TURESUL EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
98 MAPNAME EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
99 TUINPT EQU PID+X'0148' ADDRESS OF $INPT DATA
100 PARMARA EQU PID+X'016E' ADDRESS OF $INPT INPUT AREA
101 @DCADD1 EQU PID+X'01B8' MDI POINTER
102 @DCADD2 EQU PID+X'01BA' MDI POINTER
103 @DCADD3 EQU PID+X'01BC' MDI POINTER
104 SUPSTAT EQU PID+X'01C4' ADDRESS OF MDI STATUS
105 DEVADD EQU PID+X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
106 DEVADD1 EQU PID+X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
107 DEVADD2 EQU PID+X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
108 DEVADD3 EQU PID+X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
109 DEVADD4 EQU PID+X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
110 DEVADD5 EQU PID+X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
111 DEVADD6 EQU PID+X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
112 DEVADD7 EQU PID+X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
113 PRINT OFF
```

```
002500 33A4 198 DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE
199 *****
200 *****
201 *****
202 THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00)
203 TO LOCATE THE CORRECT RULE TO INVOKE, TO OBTAIN THE PROPER
204 PARAMETERS TO PASS TO THE TU'S AND TO PASS TO THE OPERATOR
205 THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS
206 PURPOSE THEY ARE:
207
208 STEP AND RULE ADDRESS TABLE
209 THIS TABLE GIVES THE ADDRESS OF THE RULE TO INVOKE AND
210 THE ASSOCIATED STEP DECIMAL STEP NUMBER OF THAT RULE.
211 ENTRIES ARE AS FOLLOWS
212 A) AN ADDRESS OF THE RULE DC START AREA
213 B) THE STEP NUMBER IN DECIMAL
214 C) AN EQUATE FOR THE STEP NUMBER
215
216 RULE INFORMATION TABLE
217 THIS TABLE CONTAINS THE REQUIRED INFORMATION TO EXECUTE
218 THE APPROPRIATE RULE UNDER MDI. EACH RULE HAS ITS OWN
219 UNIQUELY DEFINED AREA INDICATED BELOW. END OF TABLE IS
220 INDICATED WITH A X'0000' FOR THE RULE EQUATE.
221
222 $QUES
223 A) RULE EQUATE X'0100'
224 B) ADDRESS OF THE YES LEG RULE
225
226 $FIXT
227 A) RULE EQUATE X'0101'
228 B) ADDRESS OF MESSAGE TO PRINT
229
230 $STOP
231 A) RULE EQUATE X'0102'
232 B) ADDRESS OF MESSAGE
233
234 $GOTO
235 A) RULE EQUATE X'0200'
236 B) ADDRESS OF MESSAGE
237 C) NAME OF MAP TO GO TO
238 D) ENTRY POINT WITHIN GO TO MAP TO USE
239 E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
240
241 $CALL
242 A) RULE EQUATE X'0201'
243 B) ADDRESS OF MESSAGE
244 C) NAME OF MAP TO CALL
245 D) ENTRY POINT WITHIN CALLED MAP TO USE
246 E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
247
248 $INPT
249 A) RULE EQUATE X'0300'
250 B) INPUT TYPE (EBCDIC OR HEX)
251 C) ADDRESS OF YES LEG RULE
252 D) DESTINATION LOCATION OF INPUT DATA
253 E) LENGTH OF INPUT DATA
254 F) LOWER LIMIT OF GOOD DATA
255 G) HIGHER LIMIT OF GOOD DATA
256
257 $QUXX
258 A) RULE EQUATE X'0400'
259 B) ADDRESS OF YES LEG RULE
260 C) TU BRANCH TO ADDRESS (INITIAL)
261 D) TU BRANCH TO ADDRESS (SECONDARY)
262 E) LENGTH OF PARAMETER IN BYTES
263 F) PARAMETER TO PASS TO TU
264 G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
265
266 $TUXX
267 A) RULE EQUATE X'0500'
268 B) ADDRESS OF YES LEG RULE
269 C) TU BRANCH TO ADDRESS
270 D) TYPE OF COMPARE TO MAKE ON RESULTS
271 E) LENGTH OF COMPARED RESULTS
272 F) MASK FIELD FOR COMPARE
273 G) LENGTH OF PARAMETER IN BYTES
274 H) PARAMETER TO PASS TO THE TU
275 I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
276
277 $NVLD
278 A) RULE EQUATE X'0600'
279
280 ENTRY POINT TABLE
281 THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT
282 THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE
283 REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWS:
284
285 A) NAME OF ENTRY POINT
286 B) ADDRESS OF ENTRY POINT RULE TABLE
287
288 THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'
289
290 MESSAGE TABLE
291 THIS TABLE CONTAINS THE MESSAGE PASSED TO THE OPERATOR
292 VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWS:
293
294 A) EQUATE FOR START OF MESSAGE BLOCK
295 B) NUMBER OF LINES OF MESSAGE
296 C) LENGTH OF FOLLOWING LINE
297 D) FIRST LINE OF MESSAGE
298 E) LENGTH OF FOLLOWING LINE
299 F) SECOND LINE OF MESSAGE
300 G) ETC.
301
302 *****
303 *****
304 *****
305 *****
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I7A23 --- FRU ISOLATION MAP P/N=8327662 EC=375222 PAGE 05  
 LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

002890 3516 992+ DC A(T7A02)  
 002892 0202 993+ DC AL2(OF)  
 002894 0009 994+ DC AL2(9)  
 002896 00000000080000000 995+ DC X\*000000000800000008'  
 00289F 00 996+ ALIGN WORD  
 0028A0 0000 997+ DC AL2(0)  
 0028A2 C1C1 998+ DC C'AA'  
 999+ ALIGN WORD  
 1000+ DC AL2(PARMARA)  
 0028A6 0500 1001 N00007 STUXX T7A02,7,0000000008000000080,OF,QT=(Q00006),YES=N00053, X  
 0028A8 2E32 1002+ N00007 DC A(@TUXX)  
 0028AA 3516 1003+ DC AL2(N00053)  
 0028AC 0202 1004+ DC A(T7A02)  
 0028AE 0009 1005+ DC AL2(OF)  
 0028B0 000000000800000008 1006+ DC X\*0000000008000000080'  
 0028B9 00 1007+ ALIGN WORD  
 0028BA 0000 1008+ DC AL2(0)  
 0028BC C1C1 1009+ DC C'AA'  
 1010+ ALIGN WORD  
 1011+ DC AL2(PARMARA)  
 0028BE 196E 1012+ STUXX T7A02,7,00000000000004,ON,QT=(Q00007),YES=N00036, X  
 0028C0 0500 1013 N00008 DC A(@TUXX)  
 0028C2 2A4A 1014+ N00008 DC AL2(N00036)  
 0028C4 3516 1015+ DC A(T7A02)  
 0028C6 0200 1016+ DC AL2(ON)  
 0028C8 0007 1017+ DC AL2(7)  
 0028CA 000000000000004 1018+ DC X\*000000000000004'  
 0028D1 00 1019+ ALIGN WORD  
 0028D2 0000 1020+ DC AL2(0)  
 0028D4 C1C1 1021+ DC C'AA'  
 1022+ ALIGN WORD  
 1023+ DC AL2(PARMARA)  
 0028D6 196E 1024+ STUXX T7A02,7,00001000000010,OF,QT=(Q00006),YES=N00033, X  
 0028D8 0500 1025 N00009 DC A(@TUXX)  
 0028DA 2A2A 1026+ N00009 DC AL2(N00033)  
 0028DC 3516 1027+ DC A(T7A02)  
 0028DE 0202 1028+ DC AL2(OF)  
 0028E0 0007 1029+ DC AL2(7)  
 0028E2 00001000000010 1030+ DC X\*00001000000010'  
 0028E9 00 1031+ ALIGN WORD  
 0028EA 0000 1032+ DC AL2(0)  
 0028EC C1C1 1033+ DC C'AA'  
 1034+ ALIGN WORD  
 1035+ DC AL2(PARMARA)  
 0028EE 196E 1036+ STUXX T7A02,8,000000000000002,ON,QT=(Q00007),YES=N00032, X  
 0028F0 0500 1037 N00010 DC A(@TUXX)  
 0028F2 2A26 1038+ N00010 DC AL2(N00032)  
 0028F4 3516 1039+ DC A(T7A02)  
 0028F6 0200 1040+ DC AL2(ON)  
 0028F8 0008 1041+ DC AL2(8)  
 0028FA 000000000000002 1042+ DC X\*000000000000002'  
 1043+ ALIGN WORD  
 1044+ DC AL2(0)  
 1045+ DC C'AA'  
 1046+ ALIGN WORD  
 1047+ DC AL2(PARMARA)  
 002900 196E 1048+ STUXX T7A02,8,000000000000040,ON,QT=(Q00007),YES=N00031, X  
 002908 0500 1049 N00011 DC A(@TUXX)  
 00290A 2A22 1050+ N00011 DC AL2(N00031)  
 00290C 3516 1051+ DC A(T7A02)  
 00290E 0200 1052+ DC AL2(ON)  
 002910 0008 1053+ DC AL2(8)  
 002912 0000000000000040 1054+ DC X\*0000000000000040'  
 1055+ ALIGN WORD  
 1056+ DC AL2(0)  
 1057+ DC C'AA'  
 1058+ ALIGN WORD  
 1059+ DC AL2(PARMARA)  
 00291E 196E 1060+ STUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00014, X  
 002920 0500 1061 N00012 DC A(@TUXX)  
 002922 293C 1062+ N00012 DC AL2(N00014)  
 002924 3516 1063+ DC A(T7A02)  
 002926 0202 1064+ DC AL2(OF)  
 002928 0007 1065+ DC AL2(7)  
 00292A 00000100000001 1066+ DC X\*00000100000001'  
 002931 00 1067+ ALIGN WORD  
 002932 0000 1068+ DC AL2(0)  
 002934 C1C1 1069+ DC C'AA'  
 1070+ ALIGN WORD  
 1071+ DC AL2(PARMARA)  
 002936 196E 1072+ STUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00030, X  
 002938 0101 1073 N00013 \$FIXT FT=(F00093),GTO=((7A76,R))  
 00293A 33C2 1074+ N00013 DC A(@FIXT)  
 1075+ DC A(F00093)  
 00293C 0500 1076 N00014 STUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00030, X  
 00293E 2A1E 1077+ N00014 DC A(@TUXX)  
 002940 3516 1078+ DC AL2(N00030)  
 002942 0202 1079+ DC A(T7A02)  
 002944 0007 1080+ DC AL2(OF)  
 002946 00008000000080 1081+ DC X\*00008000000080'  
 00294D 00 1082+ ALIGN WORD  
 00294E 0000 1083+ DC AL2(0)  
 002950 C1C1 1084+ DC C'AA'  
 1085+ ALIGN WORD  
 1086+ DC AL2(PARMARA)  
 002952 196E 1087+ STUXX T7A02,8,0000004000000040,OF,QT=(Q00006),YES=N00017, X  
 002954 0500 1088 N00015 DC A(@TUXX)  
 002956 2970 1089+ N00015 DC AL2(N00017)  
 002958 3516 1090+ DC A(T7A02)  
 00295A 0202 1091+ DC AL2(OF)  
 00295C 0008 1092+ DC AL2(8)  
 00295E 0000004000000040 1093+ DC X\*0000004000000040'  
 1094+ ALIGN WORD  
 1095+ DC AL2(0)  
 1096+ DC C'AA'  
 1097+ ALIGN WORD  
 1098+ DC AL2(PARMARA)  
 00296A 196E 1099+ \$FIXT FT=(F00093),GTO=((7A76,R))  
 00296C 0101 1100 N00016 DC A(@FIXT)  
 00296E 33C2 1101+ N00016 DC A(F00093)  
 1102+ DC A(T7A02)  
 002970 0500 1103 N00017 STUXX T7A02,8,000000100000010,OF,QT=(Q00006),YES=N00029, X  
 002972 2A1A 1104+ N00017 DC A(@TUXX)  
 1105+ DC AL2(N00029)

I7A23 --- FRU ISOLATION MAP P/N=8327662 EC=375222 PAGE 05A  
 LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

002974 3516 1106+ DC A(T7A02)  
 002976 0202 1107+ DC AL2(OF)  
 002978 0008 1108+ DC AL2(9)  
 00297A 0000001000000010 1109+ DC X\*0000001000000010'  
 1110+ ALIGN WORD  
 002982 0000 1111+ DC AL2(0)  
 002984 C1C1 1112+ DC C'AA'  
 1113+ ALIGN WORD  
 1114+ DC AL2(PARMARA)  
 002986 196E 1115 N00018 STUXX T7A02,9,0000000000000010,ON,QT=(Q00007),YES=N00020, X  
 002988 0500 1116+ N00018 DC A(@TUXX)  
 00298A 29A6 1117+ DC AL2(N00020)  
 00298C 3516 1118+ DC A(T7A02)  
 00298E 0200 1119+ DC AL2(ON)  
 002990 0009 1120+ DC AL2(9)  
 002992 0000000000000001 1121+ DC X\*0000000000000001'  
 002998 00 1122+ ALIGN WORD  
 00299C 0000 1123+ DC AL2(0)  
 00299E C1C1 1124+ DC C'AA'  
 1125+ ALIGN WORD  
 1126+ DC AL2(PARMARA)  
 0029A0 196E 1127 N00019 \$FIXT FT=(F00034),GTO=((7A70,C))  
 0029A2 0101 1128+ N00019 DC A(@FIXT)  
 0029A4 33CE 1129+ DC A(F00034)  
 0029A6 0500 1130 N00020 STUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00028, X  
 0029A8 2A16 1131+ N00020 DC A(@TUXX)  
 0029AA 3516 1132+ DC AL2(N00028)  
 0029AC 0202 1133+ DC A(T7A02)  
 0029AE 0007 1134+ DC AL2(OF)  
 0029B0 00004000000040 1135+ DC X\*00004000000040'  
 0029B7 00 1136+ ALIGN WORD  
 0029B8 0000 1137+ DC AL2(0)  
 0029BA C1C1 1138+ DC C'AA'  
 1139+ ALIGN WORD  
 1140+ DC AL2(PARMARA)  
 0029BC 196E 1141+ STUXX T7A02,7,0000800000008,OF,QT=(Q00006),YES=N00025, X  
 0029BE 0500 1142+ N00021 DC A(@TUXX)  
 0029C0 29F6 1143+ N00021 DC AL2(N00025)  
 0029C2 3516 1144+ DC A(T7A02)  
 0029C4 0202 1145+ DC AL2(OF)  
 0029C6 0007 1146+ DC AL2(7)  
 0029C8 0000800000008 1147+ DC X\*0000800000008'  
 0029CC 00 1148+ ALIGN WORD  
 0029D0 0000 1149+ DC AL2(0)  
 0029D2 C1C1 1150+ DC C'AA'  
 1151+ ALIGN WORD  
 1152+ DC AL2(PARMARA)  
 0029D4 196E 1153+ STUXX T7A02,7,00000400000004,OF,QT=(Q00006),YES=N00024, X  
 0029D6 0500 1154+ N00022 DC A(@TUXX)  
 0029D8 29F2 1155+ N00022 DC AL2(N00024)  
 0029DA 3516 1156+ DC A(T7A02)  
 0029DC 0202 1157+ DC AL2(OF)  
 0029DE 0007 1158+ DC AL2(7)  
 0029E0 00000400000004 1159+ DC X\*00000400000004'  
 0029E7 00 1160+ ALIGN WORD  
 0029E8 0000 1161+ DC AL2(0)  
 0029EA C1C1 1162+ DC C'AA'  
 1163+ ALIGN WORD  
 1164+ DC AL2(PARMARA)  
 0029EC 196E 1165+ \$FIXT FT=(F00034),GTO=((7A70,C))  
 0029EE 0101 1166+ N00023 DC A(@FIXT)  
 0029F0 33CE 1167+ N00023 DC A(F00034)  
 0029F2 0101 1168+ N00024 \$FIXT FT=(F00093),GTO=((7A76,R))  
 0029F4 33C2 1169+ N00024 DC A(@FIXT)  
 1170+ N00024 DC A(F00093)  
 0029F6 0500 1171+ STUXX T7A02,7,00000400000004,OF,QT=(Q00006),YES=N00027, X  
 0029F8 2A12 1172+ N00025 DC A(@TUXX)  
 0029FA 3516 1173+ N00025 DC AL2(N00027)  
 0029FC 0202 1174+ DC A(T7A02)  
 0029FE 0007 1175+ DC AL2(OF)  
 002A00 00000400000004 1176+ DC X\*00000400000004'  
 002A07 00 1177+ ALIGN WORD  
 002A08 0000 1178+ DC AL2(0)  
 002A0A C1C1 1179+ DC C'AA'  
 1180+ ALIGN WORD  
 1181+ DC AL2(PARMARA)  
 002A0C 196E 1182+ \$FIXT FT=(F00093),GTO=((7A76,R))  
 002A0E 0101 1183+ N00026 DC A(@FIXT)  
 002A10 33C2 1184+ N00026 DC A(F00093)  
 002A12 0101 1185+ N00027 \$FIXT FT=(F00034),GTO=((7A70,C))  
 002A14 33CE 1186+ N00027 DC A(@FIXT)  
 1187+ N00027 DC A(F00034)  
 002A16 0101 1188+ N00028 \$FIXT FT=(F00093),GTO=((7A76,R))  
 002A18 33C2 1189+ N00028 DC A(@FIXT)  
 1190+ N00028 DC A(F00093)  
 002A1A 0101 1191+ N00029 \$FIXT FT=(F00093),GTO=((7A76,R))  
 002A1C 33C2 1192+ N00029 DC A(@FIXT)  
 1193+ N00029 DC A(F00093)  
 002A1E 0101 1194+ N00030 \$FIXT FT=(F00034),GTO=((7A70,C))  
 002A20 33CE 1195+ N00030 DC A(@FIXT)  
 1196+ N00030 DC A(F00034)  
 002A22 0101 1197+ N00031 \$FIXT FT=(F00034),GTO=((7A70,C))  
 002A24 33CE 1198+ N00031 DC A(@FIXT)  
 1199+ N00031 DC A(F00034)  
 002A26 0101 1200+ N00032 \$FIXT FT=(F00018),GTO=((7A79,A))  
 002A28 33DC 1201+ N00032 DC A(@FIXT)  
 1202+ N00032 DC A(F00018)  
 002A2A 0500 1203+ N00033 STUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00035, X  
 002A2C 2A46 1204+ N00033 DC A(@TUXX)  
 002A2E 3516 1205+ N00033 DC AL2(N00035)  
 002A30 0202 1206+ N00033 DC A(T7A02)  
 002A32 0007 1207+ DC AL2(OF)  
 002A34 00004000000040 1208+ DC X\*00004000000040'  
 002A36 00 1209+ ALIGN WORD  
 002A38 0000 1210+ DC AL2(0)  
 002A3C 0000 1211+ DC C'AA'  
 002A3E C1C1 1212+ ALIGN WORD  
 1213+ DC AL2(PARMARA)  
 002A40 196E 1214+ \$FIXT FT=(F00034),GTO=((7A70,C))  
 002A42 0101 1215+ N00034 DC A(@FIXT)  
 002A44 33CE 1216+ N00034 DC A(F00034)



Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for FRU isolation map.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for FRU isolation map.





Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Rows include statements like '1904 N00125 \$TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00129,' and '1914+ N00126 \$TUXX T7A02,8,000000000000002,ON,QT=(Q00007),YES=N00128,'.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Rows include statements like '2018+ DC A(T7A02)', '2019+ DC AL2(ON)', and '2027 N00142 \$TUXX T7A02,8,0000000000000080,ON,QT=(Q00007),YES=N00146,'.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for FRU isolation map.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for FRU isolation map.

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

```

0032A6 C1C1 2360+ DC C'AA'
0032A8 196E 2361+ ALIGN WORD
2362+ DC AL2(PARMARA)
0032AA 0101 2363 N00188 $FIXT FT=(P00034),GTO=((7A70,C))
0032AC 33CE 2364 N00188 DC A(@FIXT)
2365+ DC A(F00034)
0032AE 0500 2366 N00189 $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00191, X
0032B0 32CA 2367 N00189 DC A(@TUXX)
0032B2 3516 2368+ DC AL2(N00191)
0032B4 0202 2369+ DC A(T7A02)
0032B6 0007 2370+ DC AL2(OF)
0032B8 00004000000040 2371+ DC AL2(7)
0032BF 00 2372+ DC X'00004000000040'
0032C0 0000 2373+ ALIGN WORD
0032C2 C1C1 2374+ DC AL2(0)
2375+ DC C'AA'
2376+ ALIGN WORD
0032C4 196E 2377+ DC AL2(PARMARA)
2378 N00190 $FIXT FT=(P00034),GTO=((7A70,C))
0032C6 0101 2379 N00190 DC A(@FIXT)
0032C8 33CE 2380+ DC A(F00034)
2381 N00191 $FIXT FT=(P00051),GTO=((7A76,Q))
0032CA 0101 2382 N00191 DC A(@FIXT)
0032CC 3464 2383+ DC A(F00091)
2384 N00192 $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00198, X
2385 N00192 DC A(@TUXX)
2386+ DC AL2(N00198)
2387+ DC A(T7A02)
0032D0 3516 2388+ DC AL2(OF)
0032D2 0202 2389+ DC AL2(7)
0032D4 0007 2390+ DC X'00004000000040'
0032D6 00004000000040 2391+ ALIGN WORD
0032D8 00 2392+ DC AL2(0)
0032DF 00 2393+ DC C'AA'
0032E0 0000 2394+ ALIGN WORD
0032E2 C1C1 2395+ DC AL2(PARMARA)
2396 N00193 $TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00197, X
2397 N00193 DC A(@TUXX)
2398+ DC AL2(N00197)
0032E8 331E 2399+ DC A(T7A02)
0032EA 3516 2400+ DC AL2(OF)
0032EC 0202 2401+ DC AL2(7)
0032EE 0007 2402+ DC X'00000100000001'
0032F0 0000100000001 2403+ ALIGN WORD
0032F7 00 2404+ DC AL2(0)
0032F8 0000 2405+ DC C'AA'
0032FA C1C1 2406+ ALIGN WORD
2407+ DC AL2(PARMARA)
0032FC 196E 2408 N00194 $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00196, X
2409 N00194 DC A(@TUXX)
2410+ DC AL2(N00196)
0032FE 0500 2411+ DC A(T7A02)
003300 331A 2412+ DC AL2(OF)
003302 3516 2413+ DC AL2(7)
003304 0202 2414+ DC X'0000002000000020'
003306 0008 2415+ ALIGN WORD
003308 000002000000020 2416+ DC AL2(0)
2417+ DC C'AA'
2418+ ALIGN WORD
003310 0000 2419+ DC AL2(PARMARA)
003312 C1C1 2420 N00195 $FIXT FT=(P00092),GTO=((7A76,Q))
2421 N00195 DC A(@FIXT)
2422+ DC A(F00092)
003314 196E 2423 N00196 $FIXT FT=(P00034),GTO=((7A70,C))
2424 N00196 DC A(@FIXT)
2425+ DC A(F00034)
003316 0101 2426 N00197 $FIXT FT=(P00092),GTO=((7A76,Q))
003318 3400 2427 N00197 DC A(@FIXT)
2428+ DC A(F00092)
2429 N00198 $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00202, X
003322 0500 2430 N00198 DC A(@TUXX)
003324 335A 2431+ DC AL2(N00202)
003326 3516 2432+ DC A(T7A02)
003328 0202 2433+ DC AL2(OF)
00332A 0008 2434+ DC AL2(8)
00332C 000002000000020 2435+ DC X'0000002000000020'
2436+ ALIGN WORD
003334 0000 2437+ DC AL2(0)
003336 C1C1 2438+ DC C'AA'
2439+ ALIGN WORD
003338 196E 2440+ DC AL2(PARMARA)
2441 N00199 $TUXX T7A02,8,0000001000000010,OF,QT=(Q00006),YES=N00201, X
2442 N00199 DC A(@TUXX)
00333A 0500 2443+ DC AL2(N00201)
00333C 335E 2444+ DC A(T7A02)
00333E 3516 2445+ DC AL2(OF)
003340 0202 2446+ DC AL2(8)
003342 0008 2447+ DC X'0000001000000010'
003344 000001000000010 2448+ ALIGN WORD
2449+ DC AL2(0)
2450+ DC C'AA'
2451+ ALIGN WORD
00334C 0000 2452+ DC AL2(PARMARA)
00334E C1C1 2453 N00200 $FIXT FT=(P00048),GTO=((7A70,B))
2454 N00200 DC A(@FIXT)
2455+ DC A(F00048)
003352 0101 2456 N00201 $FIXT FT=(P00093),GTO=((7A76,R))
003354 3470 2457 N00201 DC A(@FIXT)
2458+ DC A(F00093)
2459 N00202 $TUXX T7A02,7,00002000000020,OF,QT=(Q00006),YES=N00206, X
2460 N00202 DC A(@TUXX)
2461+ DC AL2(N00206)
003356 0500 2462+ DC A(T7A02)
003360 3516 2463+ DC AL2(OF)
003362 0202 2464+ DC AL2(7)
003364 00002000000020 2465+ DC X'00002000000020'
2466+ ALIGN WORD
00336B 00 2467+ DC AL2(0)
00336C 0000 2468+ DC C'AA'
00336E C1C1 2469+ ALIGN WORD
2470+ DC AL2(PARMARA)
003370 196E 2471 N00203 $TUXX T7A02,8,0000004000000040,OF,QT=(Q00006),YES=N00205, X
2472 N00203 DC A(@TUXX)
003372 0500 2473+ DC AL2(N00205)
003374 338E

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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003376 3516 2474+ DC A(T7A02)
003378 0202 2475+ DC AL2(OF)
00337A 0008 2476+ DC AL2(8)
00337C 0000004000000040 2477+ DC X'0000004000000040'
2478+ ALIGN WORD
003384 0000 2479+ DC AL2(0)
003386 C1C1 2480+ DC C'AA'
2481+ ALIGN WORD
2482+ DC AL2(PARMARA)
2483 N00204 $FIXT FT=(P00048),GTO=((7A70,B))
2484 N00204 DC A(@FIXT)
2485+ DC A(F00048)
00338A 0101 2486 N00205 $FIXT FT=(P00092),GTO=((7A76,Q))
00338C 3470 2487+ N00205 DC A(@FIXT)
2488+ DC A(F00092)
2489 N00206 $FIXT FT=(P00048),GTO=((7A70,B))
003392 0101 2490+ N00206 DC A(@FIXT)
003394 3470 2491+ DC A(F00048)
2492 N00207 $GOTO TYPE=XTRNL,EP=H,MAP=7A24,FT=(P00077),GTO=((7A24,H))
2493+ N00207 DC A(@GOTO)
003396 0200 2494+ DC A(F00077)
003398 34BA 2495+ DC CL4'7A24'
00339A F7C1F2F4 2496+ DC CL2'H'
00339C C840 2497+ DC AL2(XTRNL)
0033A2 0000 2498+ DC AL2(DUMMY)
2499+ ENTPT EQU *
2500 *****
2501 *****
2502 **
2503 ** ENTRY POINT TABLE
2504 **
2505 *****
2506 *****
2507 ENTPT EP=E,STEP=00001
2508+ DC CL2'E'
0033A4 C540 2509+ DC A(N00001)
0033A6 2840 2510+ DC AL2(DUMMY)
0033A8 0000 2511 *****
2512 *****
2513 **
2514 ** MESSAGE TABLE
2515 **
2516 *****
2517 *****
2518 F00075 EQU *
2519 DC AL2(0001)
0033AA 0001 2520+ DC A(0008)
0033AA 0008 2521+ DC CL0008'MAP7A26F'
0033AC 0008 2522 F00081 EQU *
0033AE D4C1D7F7C1F2F6C6 2523+ DC AL2(0001)
2524+ DC A(0008)
0033B6 0001 2525+ DC CL0008'MAP7A72T'
0033B8 0008 2526 F00093 EQU *
0033BA D4C1D7F7C1F7F2E3 2527+ DC AL2(0001)
2528+ DC A(0008)
0033C2 0001 2529+ DC CL0008'MAP7A76R'
0033C4 0008 2530 F00034 EQU *
0033C6 D4C1D7F7C1F7F6D9 2531+ DC AL2(0001)
2532+ DC A(0010)
0033CE 0001 2533+ DC CL0010'MAP7A70-C'
0033D0 000A 2534 F00018 EQU *
0033D2 D4C1D7F7C1F7F06C 2535+ DC AL2(0001)
2536+ DC A(0032)
0033DC 0001 2537+ DC CL0032'F08 GO TO POWER FAILURE MAP 7A79'
0033DE 0020 2538 F00092 EQU *
0033E0 C6F0F840C7D640E3D 2539+ DC AL2(0001)
2540+ DC A(0008)
003400 0001 2541+ DC CL0008'MAP7A76Q'
003402 0008 2542 F00053 EQU *
003404 D4C1D7F7C1F7F6D8 2543+ DC AL2(0001)
2544+ DC A(0010)
00340C 0001 2545+ DC CL0010'MAP7A70-E'
2546+ DC AL2(0001)
00341A 000A 2547+ DC A(0010)
2548+ DC CL0010'MAP7A70-D'
00341C 000A 2549 F00086 EQU *
00341E D4C1D7F7C1F7F06C 2550+ DC AL2(0001)
2551+ DC A(0008)
003428 0001 2552+ DC CL0008'MAP7A76B'
2553+ DC A(0008)
00342C 0008 2554 F00094 EQU *
003434 D4C1D7F7C1F7F6C2 2555+ DC AL2(0001)
2556+ DC A(0008)
00343A 0001 2557+ DC CL0008'MAP7A76U'
2558+ DC AL2(0001)
00343C 0008 2559+ DC A(0008)
2560+ DC CL0008'MAP7A76A'
003440 0001 2561 F00088 EQU *
003442 0008 2562+ DC AL2(0001)
2563+ DC A(0008)
003444 D4C1D7F7C1F7F6C1 2564+ DC CL0008'MAP7A76F'
2565+ DC AL2(0001)
00344C 0001 2566+ DC A(0008)
2567+ DC CL0008'MAP7A76F'
00344E 0008 2568 F00080 EQU *
003450 D4C1D7F7C1F7F6C6 2569+ DC AL2(0001)
2570+ DC A(0008)
003458 0001 2571+ DC CL0008'MAP7A72P'
2572+ DC AL2(0001)
00345A 0008 2573 F00048 EQU *
00345C D4C1D7F7C1F7F2D7 2574+ DC AL2(0001)
2575+ DC A(0010)
003464 0001 2576+ DC CL0010'MAP7A70-B'
2577+ DC AL2(0001)
003466 0008 2578 F00078 EQU *
003468 D4C1D7F7C1F7F6D6 2579+ DC AL2(0001)
2580+ DC A(0008)
003470 0001 2581+ DC CL0008'MAP7A72F'
2582+ DC AL2(0001)
003472 000A 2583+ DC A(0008)
2584+ DC CL0008'MAP7A76D'
003474 D4C1D7F7C1F7F06C 2585 F00089 EQU *
00347E 0001 2586+ DC AL2(0001)
2587+ DC A(0008)
003480 0008 2588+ DC AL2(0001)
2589+ DC A(0008)
003482 D4C1D7F7C1F7F2C6 2590+ DC AL2(0001)
2591+ DC A(0008)
003484 0001 2592+ DC CL0008'MAP7A72F'
2593+ DC AL2(0001)
00348A 0001 2594+ DC A(0008)
2595+ DC CL0008'MAP7A76D'
00348C 0008 2596 F00087 EQU *
00348E D4C1D7F7C1F7F6C4 2597+ DC AL2(0001)
2598+ DC A(0008)
003496 0001 2599+ DC AL2(0001)
2600+ DC A(0008)

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LOC TR OBJECT TEXT STMT SOURCE STATEMENT
003498 0008 2588 DC A(0008)
00349A D4C1D7F7C1F7F6C8 2589 DC CL0008'MAP7A76H'

LOC TR OBJECT TEXT STMT SOURCE STATEMENT
003516 4020 34CC 7A02 2705+T7A02 MVNI X'7A02', \$TUID SET UP TEST UNIT ID
00351C 5700 2706+ BXS (R7) RETURN TO MDI SUPVR

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2820 \*
2821 \*\*\*\* READ SECTOR ID SKEWED \*\*\*\*
2822 \*
2823 RKDCB DC X'201D' CONTROL WORD
2824 DC A(\*-\*) FLAG / PHYSICAL SECTOR#
2825 DC A(\*-\*) HEAD / CYLINDER#\*S
2826 DC F'0' NOT USED
2827 DC A(RSBA) RSB ADDRESS
2828 DC A(\*-\*) CHAIN ADDRESS
2829 DC X'0004' BYTE COUNT
2830 DC A(SCTID) SECTOR ID DATA ADDRESS
2831 \*
2832 \*\*\*\* READ MULTIPLE SECTOR IDS \*\*\*\*
2833 \*
2834 RMDCB DC X'201C' CONTROL WORD
2835 DC A(\*-\*) FLAG / PHYSICAL SECTOR#
2836 DC A(\*-\*) HEAD / CYLINDER#\*S
2837 DC F'0' NOT USED
2838 DC A(RSBA) RSB ADDRESS
2839 DC A(\*-\*) CHAIN ADDRESS
2840 DC X'0084' BYTE COUNT
2841 DC A(ID00) DATA AREA ADDRESS
2842 \*
2843 \* CONSTANTS AND DEFINED STORAGE LOCATIONS
2844 ZER0 DC X'0000' CONSTANT ZERO
2845 ONE DC X'0001' CONSTANT ONE
2846 RY DC A(\*-\*) WRITE PARAMETER POINTER
2847 WDATA DC X'EB6D' WRITE DATA
2848 DC X'6BDB' \*
2849 LGSEC DC X'0000' LOGICAL SECTOR #
2850 PHYSC DC X'0000' CONVERTED PHYSICAL SEC #
2851 WRSID DC X'0000' FLAG,SECTOR (WRT SECTOR ID DATA)
2852 DC X'0000' HEAD,CYLINDER
2853 WSIDT DC X'FF34' WRITE SECTOR ID TEST DATA
2854 DC X'5678' \*
2855 SCTST DC X'0000' READ SECTOR ID TEST DATA BUFFER
2856 RSBA DC X'0000' RESIDUAL STATUS BLOCK
2857 CTR02 DC X'0000' COUNTER
2858 CTR03 DC X'0000' COUNTER
2859 ID00 DC X'0000' ID ADDRESS TO BE SET BY USER
2860 PDATA DC X'1010' WRITE DIAG WORD 1 DATA PATTERNS
2861 DC X'5555' \*
2862 DC X'AAAA' \*
2863 DC X'FFFF' \*
2864 \*
2865 \*\*\*\*\*4/06/77\*\*\*\*\*
2866 \*
2867 \* SUBROUTINE
2868 \*
2869 \* PURPOSE
2870 \*
2871 \* COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
2872 \*
2873 \* CALLING SEQUENCE
2874 \*
2875 \* BAL CMPRW,R6 (NORMAL)
2876 \*
2877 \* RETURN
2878 \*
2879 \* BXS (R6,2) - NORMAL
2880 \*
2881 \*
2882 \*
2883 \*\*\*\*\*
2884 \*
2885 CMPRW MVWI 4,R7 COMPARE BYTE COUNT
2886 MVA SCTID,R3 ADDR OF RD SEC ID DATA
2887 MVA WRSID,R5 ADDR OF WR SEC ID DATA
2888 CFNEN (R3),(R5) COMPARE ID DATA
2889 BE (R6,2) BCH IF WRITE ID DATA OK
2890 B (R6)\* COMPARE ERROR
2891 \*\*\*\*\*
2892 \*
2893 \* EXECUTE INPUT & OUTPUT COMMANDS
2894 \* TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
2895 \* EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
2896 \* LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
2897 \* SUPVR CALL.
2898 \*
2899 \* THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
2900 \*
2901 \* 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
2902 \* 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
2903 \*
2904 \* THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2905 \*
2906 \*
2907 \* 1 BAL \$RKEW,R6 READ SECTOR ID SKEWED
2908 \*
2909 \* 2 BAL \$WKEW,R6 WRITE SECTOR ID SKEWED
2910 \*
2911 \* 3 BAL \$WSEC,R6 WRITE SECTOR ID
2912 \*
2913 \* 4 BAL \$DIAG,R6 DIAGNOSTIC
2914 \*
2915 \* 5 BAL \$XIOCS,R6 CYCLE STEAL STATUS
2916 \*
2917 \* 6 BAL \$SEEK,R6 SEEK
2918 \*
2919 \* 7 BAL \$RECL,R6 RECALIBRATE
2920 \*
2921 \* 8 BAL \$RDID,R6 READ SECTOR ID
2922 \*
2923 \* 9 BAL \$RD,R6 READ
2924 \*
2925 \* 10 BAL \$RDVY,R6 READ VERIFY
2926 \*
2927 \* 11 BAL \$WRT,R6 WRITE
2928 \*
2929 \* 12 BAL \$RDIM,R6 READ MULTI SECTOR IDS
2930 \*
2931 \*\*\*\*\*
2932 \*
2933 \$SEEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2934 J XIO

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2935 \*
2936 \$RECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
2937 J XIO
2938 \*
2939 \$RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
2940 MVBI X'BB',R3 SET BUFFER TO B'S
2941 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
2942 MVWI 4,R7 SETUP BUFFER LENGTH
2943 R3,(R5) INIT READ SECTOR ID BUFFER
2944 MVA SCTID,RSDCB+14 DATA ADDR
2945 J XIO
2946 \*
2947 \$RDIM MVA RMDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2948 MVWI 132,R7 SET BUFFER LENGTH
2949 MVA ID00,R5 SET BUFFER ADDRESS
2950 MVBI X'BB',R3 SET CLEAR CHARACTERS
2951 R3,(R5) CLEAR THE BUFFER
2952 J XIO
2953 \*
2954 \$RD MVBI X'FF',R3 SETRD BUFFER TO ALL F'S
2955 MVW RDDCB+14,R5 SET UP READ BUFFER ADRS
2956 MVW RDDCB+12,R7 SET UP BUFFER LENGTH
2957 R3,(R5) CLEAR READ BUFFER
2958 \$RDS\$ MVA RDDCB,IODCB SET UP BLOCK FOR SVC CALL
2959 J XIO
2960 \*
2961 \$RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2962 J XIO
2963 \*
2964 \$WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2965 J XIO
2966 \*
2967 \$RKEW MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2968 MVBI X'BB',R3 SET BUFFER TO B'S
2969 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
2970 MVWI 4,R7 SETUP BUFFER LENGTH
2971 R3,(R5) INIT READ SECTOR ID BUFFER
2972 MVA SCTID,RKDCB+14 DATA ADDR
2973 J XIO
2974 \*
2975 \$WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2976 WRSID,WKDCB+14 DATA ADDR
2977 J XIO
2978 \*
2979 \$WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2980 WRSID,WSDCB+14 DATA ADDR
2981 J XIO
2982 \*
2983 \$DIAG MVA DGDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2984 J XIO
2985 \*
2986 \$WRT0 MVW R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
2987 MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
2988 MVA CSBUF,R5 \* TO ALL ONES \*
2989 MVBI 22,R7 \*
2990 R3,(R5) \*
2991 MVA DCBUF,R5 CLEAR DCB BUFFER TO ALL ONES
2992 MVBI 16,R7 \*
2993 R3,(R5) \*
2994 MVBI X'0708', \$IOIN OVERLAY OLD CONDITION CODES
2995 MVWZ \$ISE,R3 ZERO OUT OLD ISE VALUE
2996 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
2997 TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
2998 TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
2999 MVA IOBLK,R7 SET UP CONTROL BLK FOR SUPR
3000 MVB IOMOD+1,R0 GET IDCBL FUNC/MODIFIER
3001 RBTWI X'00F0',IOMOD REMOVE FUNCTION FROM 'IOMOD'
3002 SRL 4,R0 RIGHT JUSTIFY FUNCTION BITS IN R0
3003 CBI 5,R0 IDCBL FUNCTION = 5?
3004 JE \$WRT1 YES - ISSUE 'SVC WRIT1'
3005 SVC WRIT0 ISSUE WRITE DPC '4X' OP
3006 XIOB-4 GO WAIT FOR THE INTERRUPT
3007 \$WRT1 SVC WRIT1 ISSUE WRITE DPC '5X' OP
3008 B XIOB-4 GO WAIT FOR THE INTERRUPT
3009 \*
3010 \$DGWR MVA WRDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
3011 B XIOB SET START CS DIAG CMD
3012 \*
3013 \$DGRD MVA RDDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
3014 MVW RDDCB+12,R7 GET NO. OF BYTES TO CLEAR
3015 MVW RDDCB+14,R5 ADDR OF READ BUFFER
3016 MVBI X'FF',R3 CLEAR TO F'S
3017 R3,(R5) \*
3018 B XIOB ISSUE START CS DIAG CMD
3019 \*
3020 COPY COMEQU
3021 \*\*\*\*\*
3022 \*
3023 \* EQUATED NAMES FOR SUPPORTED SVC'S
3024 \*
3025 \*\*\*\*\*
3026 OUT EQU 0 OUT SVC
3027 OUTIN EQU 1 OUTIN SVC
3028 IDLE EQU 2 IDLE SVC
3029 IDLES EQU 3 IDLE SVC - INDEPENDENT OF CPU TYPE
3030 CHNGE EQU 4 CHANGE LEVEL SVC
3031 PGMCK EQU 5 ALIEN RETURN ON PROGRAM CHECK SVC
3032 EXIT EQU 6 EXIT SVC
3033 TERM EQU 7 TERMINATE SVC
3034 RESET EQU 8 RESET DEVICE SVC
3035 RID EQU 9 READ ID SVC
3036 START EQU 10 START CYCLE STEAL SVC
3037 STCSS EQU 11 START CYCLE STEAL STATUS SVC
3038 PREP EQU 12 PREPARE DEVICE SVC
3039 READ0 EQU 13 READ WITH FUNCTION BIT 3 OFF SVC
3040 READ1 EQU 14 READ WITH FUNCTION BIT 3 ON SVC
3041 RSTAT EQU 15 READ STATUS SVC
3042 WRIT0 EQU 16 WRITE WITH FUNCTION BIT 3 OFF SVC
3043 WRIT1 EQU 17 WRITE WITH FUNCTION BIT 3 ON SVC
3044 CTRL EQU 18 CONTROL SVC
3045 RICB EQU 19 RELEASE INTERRUPT CONTROL BLOCK SVC
3046 CICB EQU 20 CONNECT INTERRUPT CONTROL BLOCK SVC
3047 HIO EQU 21 HALT ALL I/O
3048 REOSD EQU 22 REQUEST USE OF DCP DISK SVC
3049 RELSD EQU 23 RELEASE USE OF DCP DISK SVC

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
000018 3050 HALT EQU 24 HALT SVC
000019 3051 ETOH EQU 25 EBCDIC TO HEX SVC (STRING)
00001A 3052 HTOE EQU 26 HEX TO EBCDIC SVC (STRING)
00001B 3053 ATOH EQU 27 ASCII TO HEX SVC (STRING)
00001C 3054 HTOA EQU 28 HEX TO ASCII SVC (STRING)
00001D 3055 ETOA EQU 29 EBCDIC TO ASCII SVC (STRING)
00001E 3056 ATOE EQU 30 ASCII TO EBCDIC SVC (STRING)
00001F 3057 READI EQU 31 READ DATA SETS FOR MDI/UTIL
000020 3058 WRITI EQU 32 WRITE DATA SETS FOR UTIL
3059 *****
3061 *
3062 * EQUATES USED BY TU'S AS CONSTANTS *
3063 *
3064 *****
00004E 3065 PLUS EQU C'+ ' PLUS CHAR
000060 3066 MINUS EQU C'- ' MINUS CHAR
000000 3068 ZERO EQU 0
000001 3069 ONE EQU 1
000002 3070 TWO EQU 2
000003 3071 THREE EQU 3
000004 3072 FOUR EQU 4
000005 3073 FIVE EQU 5
000006 3074 SIX EQU 6
000007 3075 SEVEN EQU 7
000008 3076 EIGHT EQU 8
000009 3077 NINE EQU 9
00000A 3078 TEN EQU 10
00000B 3079 ELEVN EQU 11
00000C 3080 TWELV EQU 12
00000D 3081 THRTN EQU 13
00000E 3082 FIVTN EQU 15
000010 3083 SIXTN EQU 16
000020 3084 THRY2 EQU 32
000040 3085 SIXTY2 EQU 64
000080 3086 ONE28 EQU 128
000100 3087 TWO56 EQU 256
000400 3088 ONEK EQU 1024
000800 3089 TWOK EQU 2048
000C00 3090 THREK EQU 3072
001000 3091 FOURK EQU 4096
001000 3093 M1 EQU -1
001000 3094 M2 EQU -2
001000 3095 M3 EQU -3
001000 3096 M4 EQU -4
001000 3098 *****
3100 * THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE *
3101 * BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES. *
3102 *
3103 *****
000000 3104 BS0 EQU 0
000001 3105 BS1 EQU 1
000002 3106 BS2 EQU 2
000003 3107 BS3 EQU 3
000004 3108 BS4 EQU 4
000005 3109 BS5 EQU 5
000006 3110 BS6 EQU 6
000007 3111 BS7 EQU 7
000008 3112 BS8 EQU 8
000009 3113 BS9 EQU 9
00000A 3114 BS10 EQU 10
00000B 3115 BS11 EQU 11
00000C 3116 BS12 EQU 12
00000D 3117 BS13 EQU 13
00000E 3118 BS14 EQU 14
00000F 3119 BS15 EQU 15
3121 COPY T7AXEQ 16MAR78
3122 PRINT OFF
3686 T7AXEQ
3687 *****29JUL76**
3688**
3689** SUB-ROUTINE
3690**
3691** EXECUTE INPUT AND OUTPUT COMMANDS
3692**
3693** PURPOSE
3694**
3695** TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
3696** THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
3697**
3698** 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
3700** THE I/O COMMAND.
3701** 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
3702** ISSUED BY THIS SUBROUTINE.
3703** 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
3704** START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
3705** 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
3706** SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
3707** MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
3708** 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
3709** EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
3710** 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
3711** STARTS TO DETERMINE A LOST INTERRUPT.
3712** 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
3713** HAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
3714** 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
3715** 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
3716** 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
3717** 11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
3718** 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
3719** ISSUED BY THIS SUBROUTINE.
3720** 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
3721** CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
3722** COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
3723**
3724** CALLING SEQUENCE
3725** THIS ROUTINE HAS THE FOLLOWING ENTRIES:
3726**
3727** --> BAL XIO OR XEQ ANY CYCLE STEAL COMMAND, MOD=0
3728** --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
3729** --> BAL XIOCS,R6 OR XEQ START CYCLE STEAL STATUS, MOD=F
3730** --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
3731** AND DOES NOT POST INTERRUPT STATUS)

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
3732**
3733** RETURN CONTROL
3734**
3735** BXS (R6,2) RETURN TO USER NO ERROR
3736** OR B (R6)* RETURN AND RETRY ON ERROR
3737*****
00372E CB25 3842 3738**XIO MVWZ IOMOD,R3 SET MOP OF 0 FOR CYCLE STEAL OP
003732 500E J XIO1 CS I/O'S ARE NOT RETRIED
3740**
3741**
003734 4020 3842 000D 3742**XIODG HWVI X'000D',IOMOD SET MODIFIER FOR DIAGNOSTIC OPS
00373A 500A J XIO1 GO TO CS OPS
3743**
3744**
00373C 4CAA 3745** TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
00373E 4C68 3746** TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
003740 4020 3840 356E 3747**XIOCS HVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003746 4020 3842 000F 3748** MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
00374C 4C28 3749** TBTR (R4,CS) IS CS IN PROGRESS ERROR CONDITION
00374E 1213 3750** JON XIO2 * YES, BYPASS SAVING I/O ADRS
003750 680D 34D2 3751**XIO1 MVH R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
003754 4324 34DC 3752** HVA DCBUF,R3 SET UP TO ADRS TO MOVE DCB TABLE
003758 6D08 3840 3753** MVH IODCB,R5 * AND THE FROM ADRS ALONG WITH
00375C 0F1A 3754** MVBI 26,R7 * THE NUMBER OF MOVES
00375E 2D64 3755** MVFN (R5),(R3) MOVE 1 STATUS WORD AND ADJUST
003760 0BFF 3756** MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
003762 4524 34EC 3757** MVA CSBUF,R5 * TO ALL ONES *
003766 0F1A 3758** MVBI 26,R7 *
003768 2BAC 3759** PFN R3,(R5) *
00376A 4020 34CE 0708 3760** MVWI X'0708',XIOIN OVERLAY OLD CONDITION CODES
003770 CB25 34D0 3761** MVWZ $ISB,R3 ZERO OUT OLD ISB VALUE
3762**
003774 4CA1 3763** TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
003776 4CA3 3764**XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
003778 4724 383C 3765** HVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
00377C 4CA6 3766** TBTR (R4,$IE) RESET LEVEL ERROR INDICATOR
00377E 4C62 3767** TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
003780 600A 3768** SVC START CALL SUPVR FOR I/O COMMAND
3769**
003782 4CA7 3770** TBTR (R4,NI) IS AN INTR EXPECTED
003784 6AC0 0002 3771** BN (R6,2) * NO, RETURN TO USER
3772**
3773** THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
3774**
003788 4524 0000 3775** MVWI 0,R5 SET UP WORK REG FOR 'LOST INTR'
00378C 4CA3 3776**XIO8 TBTR (R4,IN) CLEAR INTERRUPT BEEN RECEIVED
00378E 1239 3777** JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
003790 6002 3778** SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
3779**
003792 6002 3779** SVC IDLE SUPVR WILL RETURN HERE
3780**
3781** ALLOW ANOTHER PROGRAM A CHANCE TO RUN
3782** SUPVR WILL RETURN HERE
3783** ADVANCE TIME OUT COUNT
003794 18F9 3784** JNZ XIO8 BCH IF TIME OUT NOT REACHED
003796 4C61 3785** TBTS (R4,ER) SET ON ERROR CONTROL BIT
00379C 68D2 0000 3786** B (R6)* ERR 'NO INTERRUPT'
3787*****03FEB76**
3788**
3789** SUBROUTINE
3790**
3791** I/O EXECUTE ERROR HANDLING ROUTINE
3792**
3793** PURPOSE
3794**
3795** THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
3796** PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
3797** SUPERVISOR AND IT WAS NOT ACCEPTED.
3798**
3799** CALLING SEQUENCE
3800**
3801** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
3802**
3803** RETURN CONTROL
3804**
3805** B (R6)* RETURN TO USERS ERROR HANDLER
3806**
3807*****14APR76**
3808**
3809** CC 0= DEVICE NOT ATTACHED
3810** FOR 1= DEVICE BUSY
3811** I/O 2= DEVICE BUSY AFTER RESET
3812** 3= COMMAND REJECT
3813** 4= INTERRUPT REQUIRED
3814** 5= INTERFACE DATA CHECK
3815** 6= CONTROLLER BUSY
3816** 7= I/O COMMAND EXCEPTED
3817**
0037A0 706E 3818**XIOER CPLSR R3 COPY STATUS ANY LEVEL INTO R3
0037A2 336A 3819** SRL 13,R3 POSITION CC CODE TO BITS 13-15
0037A4 C328 34CE 3820** MVB R3,$IOIN * PUT IN LOG OUT AREA
0037A8 68D2 0000 3821** B (R6)* RETURN TO USER ERROR HANDLER
3822**
3823*****
3824** SUB-ROUTINE
3825**
3826**
3827** ERROR INTERRUPT RUNS ON INTERRUPT LEVEL '$INTL'
3828**
3829** PURPOSE
3830**
3831** THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR
3832** OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
3833** EXPECTED CODE.
3834**
3835** CALLING SEQUENCE
3836**
3837** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT
3838**
3839** RETURN CONTROL
3840**
3841** SVC EXIT RETURN TO USER VIA SUPVR
3842**
3843*****
3844**
3845** CC 0= CONTROLLER END ISB 0= ADD STATUS
3846** FOR 1= PROGRAM CONTROL INTERRUPT BITS 1= COMD REJECT
3847** INTR 2= EXCEPTION INTERRUPT FOR 2= INCR LENGTH
3848** 3= DEVICE END INTERRUPT INTR 3= DCB SPEC CK

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3849\*\* 4= ATTENTION INTERRUPT 4= STG DATA CK IL
3850\*\* 5= ATTENTION / PROGRAM CNTL INTR 5= INV STG ADRS IL
3851\*\* 6= ATTENTION / EXCEPTION INTR 6= PROTRCT CK IL
3852\*\* 7= ATTENTION / DEVICE END INTR 7= I-FACE DATA IL
3853\*\* IL
3854+INTER CPLSR R3 COPY STATUS ANY LEVEL INTO R3 IL
3855+ SRL 13,R3 POSITION INDICATORS IN R3 IL
3856+ MVA OPN1,R4 SET UP BASE ADRS IL
3857+ TBT (R4,CS) IS CS IN PROGRESS IL
3858+ JOFF INTES \* NO IL
3859+ TBT (R4,CE) TURN ON CYCLE STEAL INTER ERROR IL
3860+ MVB R7,DEV4 SAVE CS ERR ISB VALUE, BITS 0-7 IL
3861+ MVB R3,DEV4+1 \* AND THE COND CODE IL
3862+ J INTR1 IL
3863+INTES TBT (R4,XE) TEST EXPECTED ATTN / ERROR IND IL
3864+ JOFF INTET BCH IF NOT EXPECTED IL
3865+ CBI 4,R3 IS THIS AN 'ATTENTION' INTR IL
3866+ JE INTR1 \* YES, BCH TO END INTR SEQUENCE IL
3867+INTET TBT (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT IL
3868+ J INTR1 IL
3869+ IL
3870+ THE ERROR INTERRUPT USES THE SAME IL
3871+ ENDING SEQUENCE AS THE NORMAL INTR IL
3872+\*\*\*\*\*14APR76\*\*\*\*\* IL
3873+ IL
3874+ SOUBROUTINE IL
3875+ IL
3876+ OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL' IL
3877+ IL
3878+ PURPOSE IL
3879+ IL
3880+ TO CHECK THE INTERRUPT AND CONTINUE THE TEST IL
3881+ IL
3882+ CALLING SEQUENCE IL
3883+ IL
3884+ SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED IL
3885+ THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE IL
3886+ AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE IL
3887+ COMMON SECTION IS HANDLED HERE. IL
3888+ IL
3889+ RETURN CONTROL IL
3890+ IL
3891+ SVC EXIT RETURN TO USER VIA SUPVR IL
3892+ IL
3893+\*\*\*\*\*03FEB76\*\*\*\*\* IL
3894+INTOK CPLSR R3 COPY STATUS ANY LEVEL INTO R3 IL
3895+ SRL 13,R3 POSITION INDICATORS IN R3 IL
3896+ MVA OPN1,R4 SET UP BASE ADRS IL
3897+INTR1 TBT (R4,IN) SET INTERRUPT RECEIVED IL
3898+ TBT (R4,CS) IS 'CS IN PROGRESS' ON IL
3899+ JON INTR2 \* YES, BCH AROUND UPDATE IL
3900+ MVB R3,\$IOIN+1 SAVE INTERRUPTING CC CODE IL
3901+ MVB R7,\$ISB SAVE INTR STATUS AND DEV ADRS IL
3902+INTR2 EQU \* IL
3903+ CPCL R5 CURRENT LEVEL COPIED BY DCP IL
3904+ SLL 4,R5 POSITION INTR LEVEL AND PUT IL
3905+ ABI 1,R5 \* IN 'I' BIT IL
3906+ CW \$INTL,R5 IS THIS THE CORRECT INTR LEVEL IL
3907+ JE INTR3 \* YES, GO EXIT THIS LEVEL IL
3908+ TBT (R4,\$LE) SET INTR LEVEL ERROR CONTROL BIT IL
3909+ TBT (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT IL
3910+INTR3 TBT (R4,XI) WAS INTERRUPT EXPECTED IL
3911+ JON INTRX \* YES, EXIT ON THIS INTR LEVEL IL
3912+ TBT (R4,MI) \* NO, SET MYSTERY INTR CONTROL BIT IL
3913+ CBI 4,R3 ATTENTION INTERRUPT? IL
3914+ JE INTRX YES IL
3915+ TBT (R4,NG) ERROR, UNEXPECTED INTERRUPT IL
3916+INTRX SVC EXIT EXIT THIS LEVEL VIA SUPVR TO PGM IL
3917+\*\*\*\*\*03FEB76\*\*\*\*\* IL
3918+ IL
3919+ IL
3920+ THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT IL
3921+ HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN IL
3922+ RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS. IL
3923+ IL
3924+ IL
3925+XIOCK TBT (R4,XE) WAS AN ERROR EXPECTED IL
3926+ BN (R6,2) \* YES, EXIT THIS ROUTINE IL
3927+ TBT (R4,CS) WAS AUTO CS IN PROGRESS IL
3928+ JOFF XIOCV \* NO, CONTINUE CHECKING IL
3929+ TBT (R4,CE) IS CS IN AN ERR CONDITION IL
3930+ JOFF XIOCO \* NO, BCH IL
3931+ B (R6)\* CS ERROR IL
3932+XIOCO TBT (R4,CSA) TURN ON CS STATS AVAIL FLAG IL
3933+ BXS (R6,2) GO TO USER IL
3934+XIOCV TBT (R4,ER) WAS ERROR INTR CONTROL BIT ON IL
3935+ JOFF XIOCX \* NO, EXIT THIS ROUTINE IL
3936+ IL
3937+ MVB \$IOIN+1,R5 GET LAST INTR CC CODE IL
3938+ CBI 2,R5 IS THIS CC=2 IL
3939+ JE XIOCV YES IL
3940+ CBI 6,R5 IS THIS CC=6 IL
3941+ BNE (R6)\* \* NO, BCH TO ERROR HANDLER IL
3942+XIOCV MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS IL
3943+ BN XIOCS-4 \* AVAILABLE, GO AND GET IT IL
3944+ B (R6)\* ERROR IL
3945+XIOCV MVBZ OPTN3,R3 CLEAR OUT OPTION 3 CNTL BITS IL
3946+ BXS (R6,2) RETURN TO USER VIA REG 6 IL
3947+ IL
3948+ I/O PARAMETER LIST IL
3949+ IL
3950+IOBLK DC A(DEVADD) ADRS OF DEVICE ADRS IL
3951+ DC A(XIOER) ERROR ROUTINE ADRS IL
3952+IODCB DC A(\*-\*) DCB ADRS OR LEVEL & INTR IL
3953+IOMOD DC A(\*-\*) MODIFIER IL
3954+ DC A(\*-\*) ADRS OF LAST SVC CALL IL
3955+IORSR DC A(\*-\*) SECOND WORD OF LAST IDCB IL
3956+ IL
3957+ INTERRUPT CONTROL BLOCK FOR I/O COMMANDS IL
3958+ IL
3959+INTBL DC A(DEVADD) ADRS OF DEVICE ADRS IL
3960+ DC A(DEVADD) INTERRUPT OK RETURN ADRS IL
3961+ DC A(DEVADD) INTERRUPT FRMR ADRS IL
3962+INTCC DC X'0003' INTERRUPT CODE EXPECTED IL
3963+\*\*\*\*\*11MAY76\*\*\*\*\* IL
3964+ IL
3965+ IL

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3966\*\* SUBROUTINE
3967\*\*
3968\*\* CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
3969\*\*
3970\*\* PURPOSE
3971\*\* TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
3972\*\* PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
3973\*\* TO INTERRUPT.
3974\*\*
3975\*\* CALLING SEQUENCE
3976\*\* THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
3977\*\*
3978\*\* --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
3979\*\* --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
3980\*\*
3981\*\* RETURN CONTROL
3982\*\*
3983\*\* OR B (R6,2) RETURN TO USER VIA REG 6 IF OKAY
3984\*\* (R6)\* IF THE DEVICE COULD NOT BE CONNECTED
3985\*\*
3986\*\* \$CONC MVBI 6,R7 NUMBER OF BYTE TO CLEAR
3987\*\* \$CONP MVA 0,R3 \* AND THE DATA TO USE
3988\*\* MVA DEV1,R5 \* ALONG WITH THE ADRS TO USE
3989\*\* PFN R3,(R5) \*
3990\*\* MVWZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
3991\*\* MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
3992\*\* SVC CIBC \* CONNECT IT TO THIS DEVICE
3993\*\* BN (R6)\* ERROR RETURN TO USER
3994\*\*
3995\*\* \$CONP MVW \$INTL,IODCB PUT IN LEVEL & INTR PARAMETER
3996\*\* MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
3997\*\* MVWI X'0705',IOIN INITIALIZE CONDITION CODE STORAGE
3998\*\* MVWZ \$ISB,R3 \* AND CLEAR OLD ISB VALUE
3999\*\* MVB R6,LSTIO SET UP ADDRESS THAT STARTED LAST I/O
4000\*\* SVC PREP \* AND CALL ON SUPVR
4001\*\* BXS (R6,2) RETURN TO USER
4002\*\*
4003+\*\*\*\*\*06APR76\*\*\*\*\*
4004\*\* SUBROUTINE
4005\*\*
4006\*\* DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
4007\*\*
4008\*\* PURPOSE
4009\*\* DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
4010\*\* SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
4011\*\* BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
4012\*\*
4013\*\* CALLING SEQUENCE
4014\*\* THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
4015\*\*
4016\*\* --> B \$ERR\$ SET 'NG' BIT AND CONVERT DATA TO LOG
4017\*\* --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
4018\*\*
4019\*\* RETURN CONTROL
4020\*\*
4021\*\* OR B TURTN\* RETURN TO MDI
4022\*\* (R6)\* IF THE DEVICE COULD NOT BE CONNECTED
4023\*\*
4024\*\* \$ERR\$ MVWI X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
4025\*\* MVA HEBLK,R7 GET ADRS OF CONTROL BLOCK
4026\*\* SVC HTOE CONVERT HEX TO EBC VIS DCP
4027\*\*
4028\*\* MVWI X'4040',TUWORK+116
4029\*\* MVWI X'4040',TUWORK+118
4030\*\* MVWI X'4040',TUWORK+120
4031\*\* \$SPRNT MVA TWORK,R3 SET UP BUFFER STORAGE
4032\*\* MVA R3,BUFFT
4033\*\* MVA LINE1,R1
4034\*\* MVBI 4,R7
4035\*\* MVBI 8,R6
4036\*\* MVFN (R3),(R1)
4037\*\* MVBI 4,R7
4038\*\* MVBI X'40',R2
4039\*\* MVB R2,(R1)+
4040\*\* JCT MVBUF,R6
4041\*\* MVBI 8,R1
4042\*\* MVA R1,R1
4043\*\* MVWZ R5
4044\*\* MVWI PIDMSG10,PID+2
4045\*\* MVA FAKETU,@DCADD1
4046\*\* MVA DC2PT,@DCADD2
4047\*\* OWI BIT0080,SUPSTAT
4048\*\* MVA \$TUID,R3 SET UP BUFFER STORAGE
4049\*\* BAL TUMSG@TR\*,R7 GO TO MESSAGE WRITER
4050\*\*
4051\*\* \$CONX EQU \*
4052\*\* MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
4053\*\* SVC RICE RELEASE INTERRUPT CONTROL BLOCK
4054\*\* B TURTN\* RETURN TO MDI SUPERVISOR
4055\*\*
4056\*\* BEGIN DC A(0009) NUMBER OF LINES TO PRINT
4057\*\* DC A(0008) LINE LENGTH = 8 CHAR
4058\*\* DC C'\*\*\* ABORT'
4059\*\* DC A(0040) LINE LENGTH = 40 CHAR
4060\*\* DC C'TUID IOIN ISB INST SECT ID DATA CSCC '
4061\*\* DC A(0040) LINE LENGTH = 40 CHAR
4062\*\* DC C'
4063\*\* DC A(0040) LINE LENGTH = 40 CHAR
4064\*\* DC C'CNL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS '
4065\*\* DC A(0040) LINE LENGTH = 40 CHAR
4066\*\* DC C'
4067\*\* DC A(0040) LINE LENGTH = 40 CHAR
4068\*\* DC C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 '
4069\*\* DC A(0040) LINE LENGTH = 40 CHAR
4070\*\* DC C'
4071\*\* DC A(0040) LINE LENGTH = 40 CHAR
4072\*\* DC C'CS-8 CS-9 CS-A CS-B CS-C '
4073\*\* DC A(0040) LINE LENGTH = 40 CHAR
4074\*\* DC A(0040) LINE LENGTH = 40 CHAR
4075\*\* DC A(0040) LINE LENGTH = 40 CHAR
4076\*\* DC A(0040) LINE LENGTH = 40 CHAR
4077\*\* DC A(0040) LINE LENGTH = 40 CHAR
4078\*\* DC A(0040) LINE LENGTH = 40 CHAR
4079\*\* DC A(0040) LINE LENGTH = 40 CHAR
4080\*\* DC A(0040) LINE LENGTH = 40 CHAR

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003A24 40404040404040404 4081+LINE4 DC C'
4082+*
003A4C 0000 4083+BUFPT DC A(*-*)
003A4E 38F0 4084+DC2PT DC A(BEGIN)
003A50 0101 4085+FIXTU DC X'0101'
003A52 0101 4086+PAKETU DC X'0101'
00F1F0 4087+PIDMSG10 EQU X'F1F0'
000080 4088+BIT0080 EQU X'0080'
4089+*
4090+* DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
4091+*
4092+HEBLK DC A(58) NUMBER OF BYTES TO CONVERT
4093+ DC A($TUID) FROM ADRS
4094+ DC A(TUWORK) AND THE TO ADRS
4095 COPY T7A10 23JAN78
4096 T7A10 TUIT
4097+*****06FEB76**
4098+*
4099+* TEST UNIT
4100+*
4101+* ERROR HALT CODE/DIAG SENSE BYTE CHECK
4102+*
4103+* PURPOSE
4104+*
4105+* TO MOVE THE ERROR HALT CODE, STATUS BYTE, AND DIAG BYTES 1,2 3
4106+* TO THE TU RESULTS BUFFER (TURESUL) .
4107+*
4108+* MDI=$TUXX,T7A10,01,0708,EQ
4109+*
4110+* TURESUL BIT(S) 0-7 ..... ERROR HALT CODE
4111+* 8-15 ..... STATUS (SENSE) BYTE
4112+* 16-23 ..... SINGLE SHOT BYTE 1 (5-HURSLEY)
4113+* 24-31 ..... SINGLE SHOT BYTE 2 (6-HURSLEY)
4114+* 32-39 ..... SINGLE SHOT BYTE 3 (7-HURSLEY)
4115+* 40-47 ..... NOT USED
4116+* 48-55 ..... MULTISAMPLE BYTE 1 (5-HURSLEY)
4117+* 56-63 ..... MULTISAMPLE BYTE 2 (6-HURSLEY)
4118+* 64-71 ..... MULTISAMPLE BYTE 3 (7-HURSLEY)
4119+* 72-79 ..... MULTISAMPLE BYTE 3 (7-HURSLEY)
4120+* 80-87 ..... WRAP BYTE
4121+*
4122+* CALLING SEQUENCE
4123+*
4124+* MVW TUWORK,TURESUL MOVE ERROR HALT CODE & STATUS BYTES
4125+* MVD TUWORK+6,TURESUL+2 SINGLE SHOT BYTES 1, 2, AND 3
4126+* MVD TUWORK+10,TURESUL+6 MULTISAMPLE BYTES 1, 2, AND 3
AND WRAP BYTE
4127+*
4128+* RETURN CONTROL
4129+* B TURTN* RETURN TO MDI SUPERVISOR
4130+*
4131+*****
4132+T7A10 MVW R7,TURTN SAVE RETURN ADDRESS
4133+ MVWI X'7A10', $TUID SAVE TU ID FOR DISPLAY
4134+ MVA OPTN1,R4 SET UP POINTER ADRS IN R4
4135+ BAL $CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
4136+ DC A($ERR$) ERROR ADRS FOR INVALID PREP
4137+*
4138+ MVD TUWORK+2,TURESUL+10 MOVE ERROR WORDS 4,5
4139+ MVB TUWORK+13,TURESUL+5 MOVE WRAP CHECK RESULTS
4140+
4141+ B $CONX RETURN TO MDI CONTROLLER
4142+*****
4144 END

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
3989	\$CONC	ADDRESS. HEX LOCATION (00003850) IN CSECT (I7A23 ) LENGTH (2)
4058	\$CONX	ADDRESS. HEX LOCATION (000038E6) IN CSECT (I7A23 ) LENGTH (1)
4031	\$ERR\$	ADDRESS. HEX LOCATION (00003884) IN CSECT (I7A23 ) LENGTH (6)
2695	\$INTL	ADDRESS. HEX LOCATION (0000350C) IN CSECT (I7A23 ) LENGTH (2)
2660	\$IOIN	ADDRESS. HEX LOCATION (000034CE) IN CSECT (I7A23 ) LENGTH (2)
2661	\$ISB	ADDRESS. HEX LOCATION (000034D0) IN CSECT (I7A23 ) LENGTH (2)
2645	\$LE	ABSOLUTE. HEX VALUE (00000026)
2659	\$TUID	ADDRESS. HEX LOCATION (000034CC) IN CSECT (I7A23 ) LENGTH (2)
3007	\$WRT1	ADDRESS. HEX LOCATION (00003708) IN CSECT (I7A23 ) LENGTH (2)
102	@DCADD1	ADDRESS. HEX LOCATION (000019B8) IN CSECT (I7A23 ) LENGTH (1)
103	@DCADD2	ADDRESS. HEX LOCATION (000019BA) IN CSECT (I7A23 ) LENGTH (1)
39	@FIXT	ABSOLUTE. HEX VALUE (00000101)
41	@GOTO	ABSOLUTE. HEX VALUE (00000200)
45	@TUXX	ABSOLUTE. HEX VALUE (00000500)
4063	BEGIN	ADDRESS. HEX LOCATION (000038F0) IN CSECT (I7A23 ) LENGTH (2)
4088	BIT0080	ABSOLUTE. HEX VALUE (00000080)
4083	BUFPT	ADDRESS. HEX LOCATION (00003A4C) IN CSECT (I7A23 ) LENGTH (2)
2649	CE	ABSOLUTE. HEX VALUE (0000002A)
3046	CICB	ABSOLUTE. HEX VALUE (00000014)
2730	CLDCB	ADDRESS. HEX LOCATION (0000352E) IN CSECT (I7A23 ) LENGTH (2)
2647	CS	ABSOLUTE. HEX VALUE (00000028)
2648	CSA	ABSOLUTE. HEX VALUE (00000029)
2678	CSBUF	ADDRESS. HEX LOCATION (000034EC) IN CSECT (I7A23 ) LENGTH (1)
2768	CSDCB	ADDRESS. HEX LOCATION (0000356E) IN CSECT (I7A23 ) LENGTH (2)
2668	DCBUF	ADDRESS. HEX LOCATION (000034DC) IN CSECT (I7A23 ) LENGTH (1)
4084	DC2PT	ADDRESS. HEX LOCATION (00003A4E) IN CSECT (I7A23 ) LENGTH (2)
105	DEVADD	ADDRESS. HEX LOCATION (000019D0) IN CSECT (I7A23 ) LENGTH (1)
2663	DEV1	ADDRESS. HEX LOCATION (000034D4) IN CSECT (I7A23 ) LENGTH (2)
2666	DEV4	ADDRESS. HEX LOCATION (000034DA) IN CSECT (I7A23 ) LENGTH (2)
2719	DGDCB	ADDRESS. HEX LOCATION (0000351E) IN CSECT (I7A23 ) LENGTH (2)
67	DUMMY	ABSOLUTE. HEX VALUE (00000000)
2499	ENTPT	ADDRESS. HEX LOCATION (000033A4) IN CSECT (I7A23 ) LENGTH (1)
2640	ER	ABSOLUTE. HEX VALUE (00000021)
3032	EXIT	ABSOLUTE. HEX VALUE (00000006)
4086	PAKETU	ADDRESS. HEX LOCATION (00003A52) IN CSECT (I7A23 ) LENGTH (2)
2534	F00018	ADDRESS. HEX LOCATION (000033DC) IN CSECT (I7A23 ) LENGTH (1)
2530	F00034	ADDRESS. HEX LOCATION (000033CE) IN CSECT (I7A23 ) LENGTH (1)
2546	F00046	ADDRESS. HEX LOCATION (0000341A) IN CSECT (I7A23 ) LENGTH (1)
2574	F00048	ADDRESS. HEX LOCATION (00003470) IN CSECT (I7A23 ) LENGTH (1)
2542	F00053	ADDRESS. HEX LOCATION (0000340C) IN CSECT (I7A23 ) LENGTH (1)
2518	F00075	ADDRESS. HEX LOCATION (000033AA) IN CSECT (I7A23 ) LENGTH (1)
2598	F00077	ADDRESS. HEX LOCATION (000034BA) IN CSECT (I7A23 ) LENGTH (1)
2578	F00078	ADDRESS. HEX LOCATION (0000347E) IN CSECT (I7A23 ) LENGTH (1)
2566	F00080	ADDRESS. HEX LOCATION (00003458) IN CSECT (I7A23 ) LENGTH (1)



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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2522	F00081	ADDRESS. HEX LOCATION(000033B6) IN CSECT(I7A23 ) LENGTH(1)
2594	F00083	ADDRESS. HEX LOCATION(000034AE) IN CSECT(I7A23 ) LENGTH(1)
2558	F00085	ADDRESS. HEX LOCATION(00003440) IN CSECT(I7A23 ) LENGTH(1)
2550	F00086	ADDRESS. HEX LOCATION(00003428) IN CSECT(I7A23 ) LENGTH(1)
2582	F00087	ADDRESS. HEX LOCATION(0000348A) IN CSECT(I7A23 ) LENGTH(1)
2562	F00088	ADDRESS. HEX LOCATION(0000344C) IN CSECT(I7A23 ) LENGTH(1)
2586	F00089	ADDRESS. HEX LOCATION(00003496) IN CSECT(I7A23 ) LENGTH(1)
2590	F00090	ADDRESS. HEX LOCATION(000034A2) IN CSECT(I7A23 ) LENGTH(1)
2570	F00091	ADDRESS. HEX LOCATION(00003464) IN CSECT(I7A23 ) LENGTH(1)
2538	F00092	ADDRESS. HEX LOCATION(00003400) IN CSECT(I7A23 ) LENGTH(1)
2526	F00093	ADDRESS. HEX LOCATION(000033C2) IN CSECT(I7A23 ) LENGTH(1)
2554	F00094	ADDRESS. HEX LOCATION(00003434) IN CSECT(I7A23 ) LENGTH(1)
4092	HEBLK	ADDRESS. HEX LOCATION(00003A54) IN CSECT(I7A23 ) LENGTH(2)
3052	HTOE	ABSOLUTE. HEX VALUE(0000001A)
3028	IDLE	ABSOLUTE. HEX VALUE(00000002)
2860	ID00	ADDRESS. HEX LOCATION(00003608) IN CSECT(I7A23 ) LENGTH(2)
2642	IN	ABSOLUTE. HEX VALUE(00000023)
3959	INTBL	ADDRESS. HEX LOCATION(00003848) IN CSECT(I7A23 ) LENGTH(2)
3854	INTER	ADDRESS. HEX LOCATION(000037AC) IN CSECT(I7A23 ) LENGTH(2)
3863	INTES	ADDRESS. HEX LOCATION(000037C4) IN CSECT(I7A23 ) LENGTH(2)
3867	INTET	ADDRESS. HEX LOCATION(000037CC) IN CSECT(I7A23 ) LENGTH(2)
3894	INTOK	ADDRESS. HEX LOCATION(000037D0) IN CSECT(I7A23 ) LENGTH(2)
3916	INTRX	ADDRESS. HEX LOCATION(00003800) IN CSECT(I7A23 ) LENGTH(2)
3897	INTR1	ADDRESS. HEX LOCATION(000037D8) IN CSECT(I7A23 ) LENGTH(2)
3902	INTR2	ADDRESS. HEX LOCATION(000037E6) IN CSECT(I7A23 ) LENGTH(1)
3910	INTR3	ADDRESS. HEX LOCATION(000037F4) IN CSECT(I7A23 ) LENGTH(2)
3950	IOBLK	ADDRESS. HEX LOCATION(0000383C) IN CSECT(I7A23 ) LENGTH(2)
3952	IODCB	ADDRESS. HEX LOCATION(00003840) IN CSECT(I7A23 ) LENGTH(2)
3953	IOMOD	ADDRESS. HEX LOCATION(00003842) IN CSECT(I7A23 ) LENGTH(2)
37	I7A23	CSECT. START(00002500) LENGTH(5502) ESDID(1)
4069	LINE1	ADDRESS. HEX LOCATION(00003928) IN CSECT(I7A23 ) LENGTH(40)
2662	LSTIO	ADDRESS. HEX LOCATION(000034D2) IN CSECT(I7A23 ) LENGTH(2)
2639	MI	ABSOLUTE. HEX VALUE(00000020)
4043	MVBUF	ADDRESS. HEX LOCATION(000038B4) IN CSECT(I7A23 ) LENGTH(2)
2651	NG	ABSOLUTE. HEX VALUE(0000002C)
2646	NI	ABSOLUTE. HEX VALUE(00000027)
945	N00001	ADDRESS. HEX LOCATION(00002840) IN CSECT(I7A23 ) LENGTH(2)
957	N00002	ADDRESS. HEX LOCATION(00002852) IN CSECT(I7A23 ) LENGTH(2)
963	N00003	ADDRESS. HEX LOCATION(0000285E) IN CSECT(I7A23 ) LENGTH(2)
975	N00004	ADDRESS. HEX LOCATION(00002870) IN CSECT(I7A23 ) LENGTH(2)
987	N00005	ADDRESS. HEX LOCATION(00002888) IN CSECT(I7A23 ) LENGTH(2)
990	N00006	ADDRESS. HEX LOCATION(0000288C) IN CSECT(I7A23 ) LENGTH(2)
1002	N00007	ADDRESS. HEX LOCATION(000028A6) IN CSECT(I7A23 ) LENGTH(2)
1014	N00008	ADDRESS. HEX LOCATION(000028C0) IN CSECT(I7A23 ) LENGTH(2)
1026	N00009	ADDRESS. HEX LOCATION(000028D8) IN CSECT(I7A23 ) LENGTH(2)
1038	N00010	ADDRESS. HEX LOCATION(000028F0) IN CSECT(I7A23 ) LENGTH(2)
1050	N00011	ADDRESS. HEX LOCATION(00002908) IN CSECT(I7A23 ) LENGTH(2)
1062	N00012	ADDRESS. HEX LOCATION(00002920) IN CSECT(I7A23 ) LENGTH(2)
1074	N00013	ADDRESS. HEX LOCATION(00002938) IN CSECT(I7A23 ) LENGTH(2)
1077	N00014	ADDRESS. HEX LOCATION(0000293C) IN CSECT(I7A23 ) LENGTH(2)
1089	N00015	ADDRESS. HEX LOCATION(00002954) IN CSECT(I7A23 ) LENGTH(2)
1101	N00016	ADDRESS. HEX LOCATION(0000296C) IN CSECT(I7A23 ) LENGTH(2)
1104	N00017	ADDRESS. HEX LOCATION(00002970) IN CSECT(I7A23 ) LENGTH(2)
1116	N00018	ADDRESS. HEX LOCATION(00002988) IN CSECT(I7A23 ) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
1128	N00019	ADDRESS. HEX LOCATION(000029A2) IN CSECT(I7A23 ) LENGTH(2)
1131	N00020	ADDRESS. HEX LOCATION(000029A6) IN CSECT(I7A23 ) LENGTH(2)
1143	N00021	ADDRESS. HEX LOCATION(000029BE) IN CSECT(I7A23 ) LENGTH(2)
1155	N00022	ADDRESS. HEX LOCATION(000029D6) IN CSECT(I7A23 ) LENGTH(2)
1167	N00023	ADDRESS. HEX LOCATION(000029EE) IN CSECT(I7A23 ) LENGTH(2)
1170	N00024	ADDRESS. HEX LOCATION(000029F2) IN CSECT(I7A23 ) LENGTH(2)
1173	N00025	ADDRESS. HEX LOCATION(000029F6) IN CSECT(I7A23 ) LENGTH(2)
1185	N00026	ADDRESS. HEX LOCATION(00002A0E) IN CSECT(I7A23 ) LENGTH(2)
1188	N00027	ADDRESS. HEX LOCATION(00002A12) IN CSECT(I7A23 ) LENGTH(2)
1191	N00028	ADDRESS. HEX LOCATION(00002A16) IN CSECT(I7A23 ) LENGTH(2)
1194	N00029	ADDRESS. HEX LOCATION(00002A1A) IN CSECT(I7A23 ) LENGTH(2)
1197	N00030	ADDRESS. HEX LOCATION(00002A1E) IN CSECT(I7A23 ) LENGTH(2)
1200	N00031	ADDRESS. HEX LOCATION(00002A22) IN CSECT(I7A23 ) LENGTH(2)
1203	N00032	ADDRESS. HEX LOCATION(00002A26) IN CSECT(I7A23 ) LENGTH(2)
1206	N00033	ADDRESS. HEX LOCATION(00002A2A) IN CSECT(I7A23 ) LENGTH(2)
1218	N00034	ADDRESS. HEX LOCATION(00002A42) IN CSECT(I7A23 ) LENGTH(2)
1221	N00035	ADDRESS. HEX LOCATION(00002A46) IN CSECT(I7A23 ) LENGTH(2)
1224	N00036	ADDRESS. HEX LOCATION(00002A4A) IN CSECT(I7A23 ) LENGTH(2)
1236	N00037	ADDRESS. HEX LOCATION(00002A62) IN CSECT(I7A23 ) LENGTH(2)
1248	N00038	ADDRESS. HEX LOCATION(00002A7A) IN CSECT(I7A23 ) LENGTH(2)
1260	N00039	ADDRESS. HEX LOCATION(00002A92) IN CSECT(I7A23 ) LENGTH(2)
1263	N00040	ADDRESS. HEX LOCATION(00002A96) IN CSECT(I7A23 ) LENGTH(2)
1275	N00041	ADDRESS. HEX LOCATION(00002AAE) IN CSECT(I7A23 ) LENGTH(2)
1278	N00042	ADDRESS. HEX LOCATION(00002AB2) IN CSECT(I7A23 ) LENGTH(2)
1281	N00043	ADDRESS. HEX LOCATION(00002AB6) IN CSECT(I7A23 ) LENGTH(2)
1284	N00044	ADDRESS. HEX LOCATION(00002ABA) IN CSECT(I7A23 ) LENGTH(2)
1296	N00045	ADDRESS. HEX LOCATION(00002AD2) IN CSECT(I7A23 ) LENGTH(2)
1308	N00046	ADDRESS. HEX LOCATION(00002AEC) IN CSECT(I7A23 ) LENGTH(2)
1320	N00047	ADDRESS. HEX LOCATION(00002B06) IN CSECT(I7A23 ) LENGTH(2)
1332	N00048	ADDRESS. HEX LOCATION(00002B1E) IN CSECT(I7A23 ) LENGTH(2)
1335	N00049	ADDRESS. HEX LOCATION(00002B22) IN CSECT(I7A23 ) LENGTH(2)
1338	N00050	ADDRESS. HEX LOCATION(00002B26) IN CSECT(I7A23 ) LENGTH(2)
1341	N00051	ADDRESS. HEX LOCATION(00002B2A) IN CSECT(I7A23 ) LENGTH(2)
1344	N00052	ADDRESS. HEX LOCATION(00002B2E) IN CSECT(I7A23 ) LENGTH(2)
1347	N00053	ADDRESS. HEX LOCATION(00002B32) IN CSECT(I7A23 ) LENGTH(2)
1359	N00054	ADDRESS. HEX LOCATION(00002B4A) IN CSECT(I7A23 ) LENGTH(2)
1371	N00055	ADDRESS. HEX LOCATION(00002B62) IN CSECT(I7A23 ) LENGTH(2)
1374	N00056	ADDRESS. HEX LOCATION(00002B66) IN CSECT(I7A23 ) LENGTH(2)
1377	N00057	ADDRESS. HEX LOCATION(00002B6A) IN CSECT(I7A23 ) LENGTH(2)
1389	N00058	ADDRESS. HEX LOCATION(00002B82) IN CSECT(I7A23 ) LENGTH(2)
1392	N00059	ADDRESS. HEX LOCATION(00002B86) IN CSECT(I7A23 ) LENGTH(2)
1404	N00060	ADDRESS. HEX LOCATION(00002B9E) IN CSECT(I7A23 ) LENGTH(2)
1407	N00061	ADDRESS. HEX LOCATION(00002BA2) IN CSECT(I7A23 ) LENGTH(2)
1410	N00062	ADDRESS. HEX LOCATION(00002BA6) IN CSECT(I7A23 ) LENGTH(2)
1422	N00063	ADDRESS. HEX LOCATION(00002BBE) IN CSECT(I7A23 ) LENGTH(2)
1434	N00064	ADDRESS. HEX LOCATION(00002BD6) IN CSECT(I7A23 ) LENGTH(2)
1437	N00065	ADDRESS. HEX LOCATION(00002BDA) IN CSECT(I7A23 ) LENGTH(2)
1449	N00066	ADDRESS. HEX LOCATION(00002BF2) IN CSECT(I7A23 ) LENGTH(2)
1452	N00067	ADDRESS. HEX LOCATION(00002BF6) IN CSECT(I7A23 ) LENGTH(2)
1455	N00068	ADDRESS. HEX LOCATION(00002BFA) IN CSECT(I7A23 ) LENGTH(2)
1467	N00069	ADDRESS. HEX LOCATION(00002C14) IN CSECT(I7A23 ) LENGTH(2)
1479	N00070	ADDRESS. HEX LOCATION(00002C2C) IN CSECT(I7A23 ) LENGTH(2)
1482	N00071	ADDRESS. HEX LOCATION(00002C30) IN CSECT(I7A23 ) LENGTH(2)
1485	N00072	ADDRESS. HEX LOCATION(00002C34) IN CSECT(I7A23 ) LENGTH(2)
1497	N00073	ADDRESS. HEX LOCATION(00002C52) IN CSECT(I7A23 ) LENGTH(2)

DECLARED	NAME	ATTRIBUTES AND REFERENCES
1509	N00074	ADDRESS. HEX LOCATION(00002C6A) IN CSECT(I7A23 ) LENGTH(2)
1521	N00075	534 ADDRESS. HEX LOCATION(00002C82) IN CSECT(I7A23 ) LENGTH(2)
1524	N00076	537 ADDRESS. HEX LOCATION(00002C86) IN CSECT(I7A23 ) LENGTH(2)
1536	N00077	540 1510 ADDRESS. HEX LOCATION(00002C9E) IN CSECT(I7A23 ) LENGTH(2)
1539	N00078	543 ADDRESS. HEX LOCATION(00002CA2) IN CSECT(I7A23 ) LENGTH(2)
1542	N00079	546 1525 ADDRESS. HEX LOCATION(00002CA6) IN CSECT(I7A23 ) LENGTH(2)
1554	N00080	549 1498 ADDRESS. HEX LOCATION(00002CBE) IN CSECT(I7A23 ) LENGTH(2)
1557	N00081	552 ADDRESS. HEX LOCATION(00002CC2) IN CSECT(I7A23 ) LENGTH(2)
1569	N00082	555 1543 ADDRESS. HEX LOCATION(00002CDC) IN CSECT(I7A23 ) LENGTH(2)
1572	N00083	558 ADDRESS. HEX LOCATION(00002CE0) IN CSECT(I7A23 ) LENGTH(2)
1575	N00084	561 1558 ADDRESS. HEX LOCATION(00002CE4) IN CSECT(I7A23 ) LENGTH(2)
1587	N00085	564 1486 ADDRESS. HEX LOCATION(00002CFC) IN CSECT(I7A23 ) LENGTH(2)
1590	N00086	567 ADDRESS. HEX LOCATION(00002D00) IN CSECT(I7A23 ) LENGTH(2)
1593	N00087	570 1576 ADDRESS. HEX LOCATION(00002D04) IN CSECT(I7A23 ) LENGTH(2)
1605	N00088	573 964 ADDRESS. HEX LOCATION(00002D1E) IN CSECT(I7A23 ) LENGTH(2)
1617	N00089	576 ADDRESS. HEX LOCATION(00002D36) IN CSECT(I7A23 ) LENGTH(2)
1629	N00090	579 ADDRESS. HEX LOCATION(00002D50) IN CSECT(I7A23 ) LENGTH(2)
1641	N00091	582 ADDRESS. HEX LOCATION(00002D6A) IN CSECT(I7A23 ) LENGTH(2)
1653	N00092	585 ADDRESS. HEX LOCATION(00002D82) IN CSECT(I7A23 ) LENGTH(2)
1665	N00093	588 ADDRESS. HEX LOCATION(00002D9A) IN CSECT(I7A23 ) LENGTH(2)
1677	N00094	591 ADDRESS. HEX LOCATION(00002DB2) IN CSECT(I7A23 ) LENGTH(2)
1689	N00095	594 ADDRESS. HEX LOCATION(00002DCA) IN CSECT(I7A23 ) LENGTH(2)
1701	N00096	597 ADDRESS. HEX LOCATION(00002DE2) IN CSECT(I7A23 ) LENGTH(2)
1713	N00097	600 ADDRESS. HEX LOCATION(00002DFA) IN CSECT(I7A23 ) LENGTH(2)
1716	N00098	603 ADDRESS. HEX LOCATION(00002DFE) IN CSECT(I7A23 ) LENGTH(2)
1719	N00099	606 1702 ADDRESS. HEX LOCATION(00002E02) IN CSECT(I7A23 ) LENGTH(2)
1731	N00100	609 1690 ADDRESS. HEX LOCATION(00002E1A) IN CSECT(I7A23 ) LENGTH(2)
1734	N00101	612 ADDRESS. HEX LOCATION(00002E1E) IN CSECT(I7A23 ) LENGTH(2)
1746	N00102	615 1720 ADDRESS. HEX LOCATION(00002E36) IN CSECT(I7A23 ) LENGTH(2)
1749	N00103	618 ADDRESS. HEX LOCATION(00002E3A) IN CSECT(I7A23 ) LENGTH(2)
1752	N00104	621 1735 ADDRESS. HEX LOCATION(00002E3E) IN CSECT(I7A23 ) LENGTH(2)
1755	N00105	624 1678 ADDRESS. HEX LOCATION(00002E42) IN CSECT(I7A23 ) LENGTH(2)
1758	N00106	627 1666 ADDRESS. HEX LOCATION(00002E46) IN CSECT(I7A23 ) LENGTH(2)
1770	N00107	630 1654 ADDRESS. HEX LOCATION(00002E5E) IN CSECT(I7A23 ) LENGTH(2)
1773	N00108	633 ADDRESS. HEX LOCATION(00002E62) IN CSECT(I7A23 ) LENGTH(2)
1776	N00109	636 1759 ADDRESS. HEX LOCATION(00002E66) IN CSECT(I7A23 ) LENGTH(2)
1788	N00110	639 1642 ADDRESS. HEX LOCATION(00002E7C) IN CSECT(I7A23 ) LENGTH(2)
1791	N00111	642 ADDRESS. HEX LOCATION(00002E80) IN CSECT(I7A23 ) LENGTH(2)
1794	N00112	645 1777 ADDRESS. HEX LOCATION(00002E84) IN CSECT(I7A23 ) LENGTH(2)
1806	N00113	648 1630 ADDRESS. HEX LOCATION(00002E9C) IN CSECT(I7A23 ) LENGTH(2)
1809	N00114	651 ADDRESS. HEX LOCATION(00002EA0) IN CSECT(I7A23 ) LENGTH(2)
1821	N00115	654 1795 ADDRESS. HEX LOCATION(00002EBA) IN CSECT(I7A23 ) LENGTH(2)
1824	N00116	657 ADDRESS. HEX LOCATION(00002EBE) IN CSECT(I7A23 ) LENGTH(2)
1827	N00117	660 1810 ADDRESS. HEX LOCATION(00002EC2) IN CSECT(I7A23 ) LENGTH(2)
1839	N00118	663 1618 ADDRESS. HEX LOCATION(00002EDA) IN CSECT(I7A23 ) LENGTH(2)
1851	N00119	666 ADDRESS. HEX LOCATION(00002EF4) IN CSECT(I7A23 ) LENGTH(2)
1854	N00120	669 ADDRESS. HEX LOCATION(00002EF8) IN CSECT(I7A23 ) LENGTH(2)
1866	N00121	672 1840 ADDRESS. HEX LOCATION(00002F10) IN CSECT(I7A23 ) LENGTH(2)
1878	N00122	675 ADDRESS. HEX LOCATION(00002F28) IN CSECT(I7A23 ) LENGTH(2)
1890	N00123	678 ADDRESS. HEX LOCATION(00002F40) IN CSECT(I7A23 ) LENGTH(2)
1893	N00124	681 ADDRESS. HEX LOCATION(00002F44) IN CSECT(I7A23 ) LENGTH(2)
1905	N00125	684 1879 ADDRESS. HEX LOCATION(00002F5C) IN CSECT(I7A23 ) LENGTH(2)
1917	N00126	687 ADDRESS. HEX LOCATION(00002F74) IN CSECT(I7A23 ) LENGTH(2)
1929	N00127	690 ADDRESS. HEX LOCATION(00002F8C) IN CSECT(I7A23 ) LENGTH(2)
1932	N00128	693 ADDRESS. HEX LOCATION(00002F90) IN CSECT(I7A23 ) LENGTH(2)
1935	N00129	696 1918 ADDRESS. HEX LOCATION(00002F94) IN CSECT(I7A23 ) LENGTH(2)

DECLARED	NAME	ATTRIBUTES AND REFERENCES
1938	N00130	699 1906 ADDRESS. HEX LOCATION(00002F98) IN CSECT(I7A23 ) LENGTH(2)
1941	N00131	702 1894 ADDRESS. HEX LOCATION(00002F9C) IN CSECT(I7A23 ) LENGTH(2)
1944	N00132	705 1867 ADDRESS. HEX LOCATION(00002FA0) IN CSECT(I7A23 ) LENGTH(2)
1947	N00133	708 1855 ADDRESS. HEX LOCATION(00002FA4) IN CSECT(I7A23 ) LENGTH(2)
1959	N00134	711 1828 ADDRESS. HEX LOCATION(00002FBC) IN CSECT(I7A23 ) LENGTH(2)
1971	N00135	714 ADDRESS. HEX LOCATION(00002FD4) IN CSECT(I7A23 ) LENGTH(2)
1983	N00136	717 ADDRESS. HEX LOCATION(00002FEC) IN CSECT(I7A23 ) LENGTH(2)
1995	N00137	720 ADDRESS. HEX LOCATION(00003004) IN CSECT(I7A23 ) LENGTH(2)
2007	N00138	723 ADDRESS. HEX LOCATION(0000301C) IN CSECT(I7A23 ) LENGTH(2)
2010	N00139	726 ADDRESS. HEX LOCATION(00003020) IN CSECT(I7A23 ) LENGTH(2)
2013	N00140	729 1996 ADDRESS. HEX LOCATION(00003024) IN CSECT(I7A23 ) LENGTH(2)
2016	N00141	732 1984 ADDRESS. HEX LOCATION(00003028) IN CSECT(I7A23 ) LENGTH(2)
2028	N00142	735 1972 ADDRESS. HEX LOCATION(00003040) IN CSECT(I7A23 ) LENGTH(2)
2040	N00143	738 ADDRESS. HEX LOCATION(00003058) IN CSECT(I7A23 ) LENGTH(2)
2052	N00144	741 ADDRESS. HEX LOCATION(00003070) IN CSECT(I7A23 ) LENGTH(2)
2055	N00145	744 ADDRESS. HEX LOCATION(00003074) IN CSECT(I7A23 ) LENGTH(2)
2058	N00146	747 2041 ADDRESS. HEX LOCATION(00003078) IN CSECT(I7A23 ) LENGTH(2)
2061	N00147	750 2029 ADDRESS. HEX LOCATION(0000307C) IN CSECT(I7A23 ) LENGTH(2)
2073	N00148	753 2017 ADDRESS. HEX LOCATION(00003094) IN CSECT(I7A23 ) LENGTH(2)
2085	N00149	756 ADDRESS. HEX LOCATION(000030AC) IN CSECT(I7A23 ) LENGTH(2)
2088	N00150	759 ADDRESS. HEX LOCATION(000030B0) IN CSECT(I7A23 ) LENGTH(2)
2091	N00151	762 2074 ADDRESS. HEX LOCATION(000030B4) IN CSECT(I7A23 ) LENGTH(2)
2094	N00152	765 2062 ADDRESS. HEX LOCATION(000030B8) IN CSECT(I7A23 ) LENGTH(2)
2106	N00153	768 1960 ADDRESS. HEX LOCATION(000030D0) IN CSECT(I7A23 ) LENGTH(2)
2118	N00154	771 ADDRESS. HEX LOCATION(000030E8) IN CSECT(I7A23 ) LENGTH(2)
2121	N00155	774 ADDRESS. HEX LOCATION(000030EC) IN CSECT(I7A23 ) LENGTH(2)
2133	N00156	777 2107 ADDRESS. HEX LOCATION(00003104) IN CSECT(I7A23 ) LENGTH(2)
2145	N00157	780 ADDRESS. HEX LOCATION(0000311C) IN CSECT(I7A23 ) LENGTH(2)
2157	N00158	783 ADDRESS. HEX LOCATION(00003134) IN CSECT(I7A23 ) LENGTH(2)
2160	N00159	786 ADDRESS. HEX LOCATION(00003138) IN CSECT(I7A23 ) LENGTH(2)
2163	N00160	789 2146 ADDRESS. HEX LOCATION(0000313C) IN CSECT(I7A23 ) LENGTH(2)
2166	N00161	792 2134 ADDRESS. HEX LOCATION(00003140) IN CSECT(I7A23 ) LENGTH(2)
2169	N00162	795 2122 ADDRESS. HEX LOCATION(00003144) IN CSECT(I7A23 ) LENGTH(2)
2172	N00163	798 2095 ADDRESS. HEX LOCATION(00003148) IN CSECT(I7A23 ) LENGTH(2)
2184	N00164	801 1948 ADDRESS. HEX LOCATION(00003160) IN CSECT(I7A23 ) LENGTH(2)
2196	N00165	804 ADDRESS. HEX LOCATION(00003176) IN CSECT(I7A23 ) LENGTH(2)
2199	N00166	807 ADDRESS. HEX LOCATION(0000317A) IN CSECT(I7A23 ) LENGTH(2)
2202	N00167	810 2185 ADDRESS. HEX LOCATION(0000317E) IN CSECT(I7A23 ) LENGTH(2)
2205	N00168	813 2173 ADDRESS. HEX LOCATION(00003182) IN CSECT(I7A23 ) LENGTH(2)
2217	N00169	816 1606 ADDRESS. HEX LOCATION(0000319A) IN CSECT(I7A23 ) LENGTH(2)
2220	N00170	819 ADDRESS. HEX LOCATION(0000319E) IN CSECT(I7A23 ) LENGTH(2)
2223	N00171	822 2206 ADDRESS. HEX LOCATION(000031A2) IN CSECT(I7A23 ) LENGTH(2)
2235	N00172	825 1594 ADDRESS. HEX LOCATION(000031BA) IN CSECT(I7A23 ) LENGTH(2)
2247	N00173	828 ADDRESS. HEX LOCATION(000031D4) IN CSECT(I7A23 ) LENGTH(2)
2259	N00174	831 ADDRESS. HEX LOCATION(000031EC) IN CSECT(I7A23 ) LENGTH(2)
2271	N00175	834 ADDRESS. HEX LOCATION(00003206) IN CSECT(I7A23 ) LENGTH(2)
2274	N00176	837 ADDRESS. HEX LOCATION(0000320A) IN CSECT(I7A23 ) LENGTH(2)
2286	N00177	840 2260 ADDRESS. HEX LOCATION(00003222) IN CSECT(I7A23 ) LENGTH(2)
2289	N00178	843 ADDRESS. HEX LOCATION(00003226) IN CSECT(I7A23 ) LENGTH(2)
2301	N00179	846 2275 ADDRESS. HEX LOCATION(0000323E) IN CSECT(I7A23 ) LENGTH(2)
2304	N00180	849 ADDRESS. HEX LOCATION(00003242) IN CSECT(I7A23 ) LENGTH(2)
2316	N00181	852 2290 ADDRESS. HEX LOCATION(0000325A) IN CSECT(I7A23 ) LENGTH(2)
2328	N00182	855 ADDRESS. HEX LOCATION(00003270) IN CSECT(I7A23 ) LENGTH(2)
2331	N00183	858 ADDRESS. HEX LOCATION(00003274) IN CSECT(I7A23 ) LENGTH(2)
2334	N00184	861 2317 ADDRESS. HEX LOCATION(00003278) IN CSECT(I7A23 ) LENGTH(2)

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