

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
3 \*\*\*\*\* COPY LOG7A01 \*\* MAP EC HISTORY \*\*
4 \*\*\*\*\*
5 \*
6 \* \*\* PREREQUISITES \*\*
7 \*
8 \* NONE
9 \*
10 \*\*\*\*\*
11 \*
12 \* \*\* MODIFICATIONS \*\*
13 \*
14 \* CHANGES MADE TO CORRECT ERRORS FOUND WHILE IN TEST
15 \*
16 \*\*\*\*\*
17 \*
18 \* \*\* REA'S INCORPORATED \*\*
19 \*
20 \* NONE
21 \*
22 \*\*\*\*\*
23 \*
24 \* \*\* SPECIAL INSTRUCTIONS \*\*
25 \*
26 \* NONE
27 \*
28 \*\*\*\*\*
29 \*
30 \* \*\* E. C. HISTORY \*\*
31 \*
32 \* DATE 17AUG78 DATE 10JAN79 DATE
33 \* E.C. 755391 E.C. 375222 E.C.
34 \*
35 \*\*\*\*\*
37 I7A01 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 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'0002' EQUATE FOR UNIT ADDRESS
67 DUMMY EQU X'0000' DUMMY EQUATE
69 PID EQU \*-X'0D00' ADDRESS OF MDI HEADER
70 PTYPE EQU \*-X'22C0' ADDRESS OF PROCESSOR TYPE FIELD
71 STEPNUM EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
72 OPWD1 EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
73 OPWD2 EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
74 TUSTATUS EQU PID+X'0018' ADDRESS OF TU STATUS WORD
75 TUWORK EQU PID+X'001A' ADDRESS OF TU WORK AREA
76 TUPARM1 EQU PID+X'009A' ADDRESS OF PARM 1 POINTER
77 TUPARM2 EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
78 TUPARM3 EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
79 TUPARM4 EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
80 TUPARM5 EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
81 TUPARM6 EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
82 TUPARM7 EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
83 TUPARM8 EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
84 TUPARM9 EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
85 TUPARM10 EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
86 TUPARM11 EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
87 TUPARM12 EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
88 TUPARM13 EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
89 TUPARM14 EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
90 TUPARM15 EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
91 TUPARM16 EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
92 TUMSGWTR EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
93 TUA EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
94 TUDA EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
95 TUBUFF EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
96 TULAST EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
97 TURESULN EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
98 TURESUL EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
99 MAPNAME EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
100 TUINPT EQU PID+X'0148' ADDRESS OF SINPT DATA
101 PARMARA EQU PID+X'016E' ADDRESS OF SINPT INPUT AREA
102 @DCADD1 EQU PID+X'01B8' MDI POINTER
103 @DCADD2 EQU PID+X'01BA' 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

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002500 293C
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 \*\*\*\*\*

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for STEP AND RULE ADDRESS TABLE.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code including RULE INFORMATION TABLE and various EQU/DC/XL2 instructions.

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
002622	0006	536+	ALIGN WORD	
002624	F6C6 F0F0F0F0	537+	DC AL2(6)	
00262A	196E	538+	DC C*F0000*	
00262C	0500	539+	ALIGN WORD	
00262E	2642	540+	DC AL2(PARMARA)	
002630	2C34	541 N00004	STUXX T7A02,02,0008,EQ,,QT=(Q00048),YES=N00006	
002632	0000	542+N00004	DC A(@TUXX)	
002634	0002	543+	DC AL2(N00006)	
002636	0008	544+	DC A(T7A02)	
002638	0000	545+	DC AL2(EQ)	
00263A	C1C1	546+	DC AL2(02)	
00263C	196E	547+	DC X*0008*	
00263E	0101	548+	ALIGN WORD	
002640	2970	549+	DC AL2(0)	
002642	0500	550+	DC C*AA*	
002644	265C	551+	ALIGN WORD	
002646	3178	552+	DC AL2(PARMARA)	
002648	0000	553 N00005	\$FIXT FT=(F00017)	
00264A	0002	554+N00005	DC A(@FIXT)	
00264C	0008	555+	DC A(F00017)	
00264E	0006	556 N00006	STUXX T7A01,02,0008,EQ,PLNG=6,PARM=200000,QT=(Q00053),	X
002650	F2F0F0F0F0F0	557+N00006	DC A(@TUXX)	
002652	196E	558+	DC AL2(N00008)	
002654	0101	559+	DC A(T7A01)	
002656	2970	560+	DC AL2(EQ)	
002658	0500	561+	DC AL2(02)	
00265A	26DA	562+	DC X*0008*	
00265C	0101	563+	ALIGN WORD	
00265E	2996	564+	DC AL2(6)	
002660	0500	565+	DC C*200000*	
002662	26DE	566+	ALIGN WORD	
002664	3178	567+	DC AL2(PARMARA)	
002666	0000	568 N00007	\$FIXT FT=(F00017)	
002668	0002	569+N00007	DC A(@FIXT)	
00266A	0708	570+	DC A(F00017)	
00266C	0006	571 N00008	STUXX T7A01,02,0708,EQ,PLNG=6,PARM=200000,QT=(Q00065),	X
00266E	F2F0F0F0F0F0	572+N00008	DC A(@TUXX)	
002670	196E	573+	DC AL2(N00019)	
002672	0500	574+	DC A(T7A01)	
002674	26DA	575+N00009	DC AL2(EQ)	
002676	2C34	576+	DC AL2(02)	
002678	0000	577+	DC X*0708*	
00267A	0000	578+	ALIGN WORD	
00267C	0002	579+	DC AL2(0)	
00267E	0508	580+	DC C*AA*	
002680	0000	581+	ALIGN WORD	
002682	C1C1	582+	DC AL2(PARMARA)	
002684	196E	583+	DC AL2(6)	
002686	0500	584+	DC C*200000*	
002688	26DA	585+	ALIGN WORD	
00268A	2C34	586+	DC AL2(PARMARA)	
00268C	0000	587+N00010	STUXX T7A02,02,0508,EQ,QT=(Q00068),YES=N00018,ST=(S00032)	
00268E	0002	588+	DC A(@TUXX)	
002690	0308	589+	DC AL2(N00018)	
002692	0000	590+	DC A(T7A02)	
002694	C1C1	591+	DC AL2(EQ)	
002696	196E	592+	DC AL2(02)	
002698	0500	593+	DC X*0508*	
00269A	26B0	594+	ALIGN WORD	
00269C	2C34	595+	DC AL2(0)	
00269E	0000	596+	DC C*AA*	
0026A0	0000	597+	ALIGN WORD	
0026A2	0002	598 N00011	STUXX T7A01,02,0308,EQ,QT=(Q00071),YES=N00017,ST=(S00032)	
0026A4	0208	599+N00011	DC A(@TUXX)	
0026A6	0000	600+	DC AL2(N00017)	
0026A8	C1C1	601+	DC A(T7A02)	
0026AA	196E	602+	DC AL2(EQ)	
0026AC	0101	603+	DC AL2(02)	
0026AE	2970	604+	DC X*0308*	
0026B0	0500	605+	ALIGN WORD	
0026B2	26CA	606+	DC AL2(0)	
0026B4	3178	607+	DC C*AA*	
0026B6	0000	608+	ALIGN WORD	
0026B8	0002	609+	DC AL2(PARMARA)	
0026BA	0708	610 N00012	STUXX T7A02,02,0208,EQ,QT=(Q00074),YES=N00014,ST=(S00032)	
0026BC	0006	611+N00012	DC A(@TUXX)	
0026BE	F2F0F0F0F0F0	612+	DC AL2(N00014)	
0026C0	196E	613+	DC A(T7A02)	
0026C2	0101	614+	DC AL2(EQ)	
0026C4	2970	615+	DC AL2(02)	
0026C6	0500	616+	DC X*0208*	
0026C8	2A38	617+	ALIGN WORD	
0026CA	F3C3F0F0	618+	DC AL2(0)	
0026CC	C340	619+	DC C*AA*	
0026CE	0000	620+	ALIGN WORD	
0026D0	0101	621+	DC AL2(PARMARA)	
0026D2	2A58	622+N00013	\$FIXT FT=(F00017)	
0026D4	0000	623+N00013	DC A(@FIXT)	
0026D6	0101	624+	DC A(F00017)	
0026D8	2A58	625 N00014	STUXX T7A01,02,0708,EQ,PLNG=6,PARM=200000,QT=(Q00080),	X
		626+N00014	DC A(@TUXX)	
		627+	DC AL2(N00016)	
		628+	DC A(T7A01)	
		629+	DC AL2(EQ)	
		630+	DC AL2(02)	
		631+	DC X*0708*	
		632+	ALIGN WORD	
		633+	DC AL2(6)	
		634+	DC C*200000*	
		635+	ALIGN WORD	
		636+	DC AL2(PARMARA)	
		637 N00015	\$FIXT FT=(F00017)	
		638+N00015	DC A(@FIXT)	
		639+	DC A(F00017)	
		640 N00016	\$GOTO TYPE=INTRNL,EP=C,FT=(F00085),GTO=(N00019)	
		641+N00016	DC A(@GOTO)	
		642+	DC A(F00085)	
		643+	DC CL4*3C00*	
		644+	DC CL2 C*	
		645+	DC AL2(INTRNL)	
		646 N00017	\$FIXT FT=(F00008),CT=(C00036)	
		647+N00017	DC A(@FIXT)	
		648+	DC A(F00008)	
		649 N00018	\$FIXT FT=(F00010),CT=(C00036)	

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
0026DA	0101	650+N00018	DC A(@FIXT)	
0026DC	2A8A	651+	DC A(F00010)	
0026DE	0500	652 N00019	STUXX T7A02,04,07083006,ON,QT=(Q00094),YES=N00021,ST=(S00032)	
0026E0	26F6	653+N00019	DC A(@TUXX)	
0026E2	2C34	654+	DC AL2(N00021)	
0026E4	0200	655+	DC A(T7A02)	
0026E6	0004	656+	DC AL2(ON)	
0026E8	07083006	657+	DC AL2(04)	
0026EA	0000	658+	DC X*07083006*	
0026EC	0000	659+	ALIGN WORD	
0026EE	C1C1	660+	DC AL2(0)	
0026F0	196E	661+	DC C*AA*	
0026F2	0101	662+	ALIGN WORD	
0026F4	2AC4	663+	DC AL2(PARMARA)	
0026F6	0500	664 N00020	\$FIXT FT=(F00097)	
0026F8	2710	665+N00020	DC A(@FIXT)	
0026FA	3178	666+	DC A(F00097)	
0026FC	0000	667 N00021	STUXX T7A01,02,0308,EQ,PLNG=6,PARM=000000,QT=(Q00105),	X
0026FE	0002	668+N00021	DC A(@TUXX)	
002700	0308	669+	DC AL2(N00023)	
002702	0006	670+	DC A(T7A01)	
002704	F0F0F0F0F0F0	671+	DC AL2(EQ)	
00270A	196E	672+	DC AL2(02)	
00270C	0101	673+	DC X*0308*	
00270E	2970	674+	ALIGN WORD	
002710	0500	675+	DC AL2(6)	
002712	272A	676+	DC C*000000*	
002714	3178	677+	ALIGN WORD	
002716	0000	678+	DC AL2(PARMARA)	
002718	0002	679 N00022	\$FIXT FT=(F00017)	
00271A	0308	680+N00022	DC A(@FIXT)	
00271C	0006	681+	DC A(F00017)	
00271E	F1F0F0F0F0F0	682 N00023	STUXX T7A01,02,0308,EQ,PLNG=6,PARM=100000,QT=(Q00112),	X
002720	196E	683+N00023	DC A(@TUXX)	
002722	0500	684+	DC AL2(N00025)	
002724	0101	685+	DC A(T7A01)	
002726	0101	686+	DC AL2(EQ)	
002728	2970	687+	DC AL2(02)	
00272A	0500	688+	DC X*0308*	
00272C	2744	689+	ALIGN WORD	
00272E	3178	690+	DC AL2(6)	
002730	0000	691+	DC C*100000*	
002732	0002	692+	ALIGN WORD	
002734	0308	693+	DC AL2(PARMARA)	
002736	0006	694 N00024	\$FIXT FT=(F00017)	
002738	F2F7F0F0F0F0	695+N00024	DC A(@FIXT)	
00273A	0000	696+	DC A(F00017)	
00273C	0000	697 N00025	STUXX T7A01,02,0308,EQ,PLNG=6,PARM=270000,QT=(Q00119),	X
00273E	196E	698+N00025	DC A(@TUXX)	
002740	0101	699+	DC AL2(N00027)	
002742	2970	700+	DC A(T7A01)	
002744	0500	701+	DC AL2(EQ)	
002746	275E	702+	DC AL2(02)	
002748	3178	703+	DC X*0308*	
00274A	0000	704+	ALIGN WORD	
00274C	0002	705+	DC AL2(6)	
00274E	0708	706+	DC C*270000*	
002750	0006	707+	ALIGN WORD	
002752	F6F0F0F0F0F0	708+	DC AL2(PARMARA)	
002754	196E	709 N00026	\$FIXT FT=(F00017)	
002756	0101	710+N00026	DC A(@FIXT)	
002758	2970	711+	DC A(F00017)	
00275A	0500	712 N00027	STUXX T7A01,02,0708,EQ,PLNG=6,PARM=600000,QT=(Q00126),	X
00275C	0101	713+N00027	DC A(@TUXX)	
00275E	2970	714+	DC AL2(N00029)	
002760	0500	715+	DC A(T7A01)	
002762	2778	716+	DC AL2(EQ)	
002764	0000	717+	DC AL2(02)	
002766	0002	718+	DC X*0708*	
002768	0708	719+	ALIGN WORD	
00276A	0006	720+	DC AL2(6)	
00276C	F6F0F2F2F2F2	721+	DC C*600000*	
00276E	0000	722+	ALIGN WORD	
002770	196E	723+	DC AL2(PARMARA)	
002772	0101	724 N00028	\$FIXT FT=(F00017)	
002774	2970	725+N00028	DC A(@FIXT)	
002776	0500	726+	DC A(F00017)	
002778	0500	727 N00029	STUXX T7A01,02,0708,EQ,PLNG=6,PARM=602222,QT=(Q00133),	X
00277A	2792	728+N00029	DC A(@TUXX)	
00277C	3178	729+	DC AL2(N00031)	
00277E	0000	730+	DC A(T7A01)	
002780	0002	731+	DC AL2(EQ)	
002782	0708	732+	DC AL2(02)	
002784	0006	733+	DC X*0708*	
002786	F6F0C6C6C6C5	734+	ALIGN WORD	
002788	196E	735+	DC AL2(6)	
00278A	0101	736+	DC C*602222*	
00278C	2970	737+	ALIGN WORD	
00278E	0500	738+	DC AL2(PARMARA)	
002790	27AC	739 N00030	\$FIXT FT=(F00017)	
002792	3178	740+N00030	DC A(@FIXT)	
002794	0000	741+	DC A(F00017)	
002796	0000	742 N00031	STUXX T7A01,02,0708,EQ,PLNG=6,PARM=60FFFE,QT=(Q00140),	X
002798	0002	743+N00031	DC A(@TUXX)	
00279A	0308	744+	DC AL2(N00033)	
00279C	0000	745+	DC A(T7A01)	
00279E	0000	746+	DC AL2(EQ)	
002798	0000	747+	DC AL2(02)	
00279A	0002	748+	DC X*0708*	
00279C	0308	749+	ALIGN WORD	
00279E	0000	750+	DC AL2(6)	
002798	0000	751+	DC C*60FFFE*	
00279A	0002	752+	ALIGN WORD	
00279C	0308	753+	DC AL2(PARMARA)	
00279E	0500	754 N00032	\$FIXT FT=(F00017)	
002798	27AC	755+N00032	DC A(@FIXT)	
00279A	3178	756+	DC A(F00017)	
00279C	0000	757 N00033	STUXX T7A01,02,0308,EQ,PLNG=6,PARM=650000,QT=(Q00147),	X
00279E	0000	758+N00033	DC A(@TUXX)	
002798	0000	759+	DC AL2(N00035)	
00279A	0002	760+	DC A(T7A01)	
00279C	0308	761+	DC AL2(EQ)	
00279E	0000	762+	DC AL2(02)	
002798	0000	763+	DC X*0308*	

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
00279E	0006	764+	ALIGN WORD	
0027A0	F6F5F0F0F0F0	765+	DC AL2(6)	
		766+	DC C'650000'	
0027A6	196E	767+	ALIGN WORD	
		768+	DC AL2(PARMARA)	
0027A8	0101	769 N00034	\$FIXT FT=(P00017)	
0027AA	2970	770 N00034	DC A(@FIXT)	
		771+	DC A(F00017)	
		772 N00035	\$TUXX T7A01,02,0708,EQ,PLNG=6,PARM=6F0000,QT=(Q00153),	X
0027AC	0500	773 N00035	DC A(@TUXX)	
0027AE	27C6	774+	DC AL2(N00037)	
0027B0	3178	775+	DC A(T7A01)	
0027B2	0000	776+	DC AL2(EQ)	
0027B4	0002	777+	DC AL2(O2)	
0027B6	0708	778+	DC X'0708'	
		779+	ALIGN WORD	
0027B8	0006	780+	DC AL2(6)	
0027BA	F6C6F0F0F0F0	781+	DC C'6F0000'	
		782+	ALIGN WORD	
0027C0	196E	783+	DC AL2(PARMARA)	
		784 N00036	\$FIXT FT=(P00017)	
0027C2	0101	785 N00036	DC A(@FIXT)	
0027C4	2970	786+	DC A(F00017)	
		787 N00037	\$TUXX T7A01,02,0708,EQ,PLNG=6,PARM=600001,QT=(Q00160),	X
0027C6	0500	788 N00037	DC A(@TUXX)	
0027C8	27E0	789+	DC AL2(N00039)	
0027CA	3178	790+	DC A(T7A01)	
0027CC	0000	791+	DC AL2(EQ)	
0027CE	0002	792+	DC AL2(O2)	
0027D0	0708	793+	DC X'0708'	
		794+	ALIGN WORD	
0027D2	0006	795+	DC AL2(6)	
0027D4	F6F0F0F0F0F1	796+	DC C'600001'	
		797+	ALIGN WORD	
0027DA	196E	798+	DC AL2(PARMARA)	
		799 N00038	\$FIXT FT=(P00017)	
0027DC	0101	800 N00038	DC A(@FIXT)	
0027DE	2970	801+	DC A(F00017)	
		802 N00039	\$TUXX T7A02,02,0708,EQ,QT=(Q00165),YES=N00041,ST=(S00032)	
0027E0	0500	803 N00039	DC A(@TUXX)	
0027E2	27F6	804+	DC AL2(N00041)	
0027E4	2C34	805+	DC A(T7A02)	
0027E6	0000	806+	DC AL2(EQ)	
0027E8	0002	807+	DC AL2(O2)	
0027EA	0708	808+	DC X'0708'	
		809+	ALIGN WORD	
0027EC	0000	810+	DC AL2(O)	
0027EE	C1C1	811+	DC C'AA'	
		812+	ALIGN WORD	
0027F0	196E	813+	DC AL2(PARMARA)	
		814 N00040	\$FIXT FT=(P00017)	
0027F2	0101	815 N00040	DC A(@FIXT)	
0027F4	2970	816+	DC A(F00017)	
		817 N00041	\$TUXX T7A03,02,0702,EQ,PLNG=6,PARM=4D0000,QT=(Q00173),	X
0027F6	0500	818 N00041	DC A(@TUXX)	
0027F8	2810	819+	DC AL2(N00043)	
0027FA	31DE	820+	DC A(T7A03)	
0027FC	0000	821+	DC AL2(EQ)	
0027FE	0002	822+	DC AL2(O2)	
002800	0702	823+	DC X'0702'	
		824+	ALIGN WORD	
002802	0006	825+	DC AL2(6)	
002804	F4C4F0F0F0F0	826+	DC C'4D0000'	
		827+	ALIGN WORD	
00280A	196E	828+	DC AL2(PARMARA)	
		829 N00042	\$FIXT FT=(P00017)	
00280C	0101	830 N00042	DC A(@FIXT)	
00280E	2970	831+	DC A(F00017)	
		832 N00043	\$TUXX T7A02,03,070240,ON,QT=(Q00184),YES=N00045,CT=(C00178),	X
002810	0500	833 N00043	DC A(@TUXX)	
002812	2828	834+	DC AL2(N00045)	
002814	2C34	835+	DC A(T7A02)	
002816	0200	836+	DC AL2(ON)	
002818	0003	837+	DC AL2(O3)	
00281A	070240	838+	DC X'070240'	
00281D	00	839+	ALIGN WORD	
00281E	0000	840+	DC AL2(O)	
002820	C1C1	841+	DC C'AA'	
		842+	ALIGN WORD	
002822	196E	843+	DC AL2(PARMARA)	
		844 N00044	\$FIXT FT=(P00017)	
002824	0101	845 N00044	DC A(@FIXT)	
002826	2970	846+	DC A(F00017)	
		847 N00045	\$TUXX T7A01,02,0708,EQ,PLNG=6,PARM=600003,QT=(Q00190),	X
002828	0500	848 N00045	DC A(@TUXX)	
00282A	2842	849+	DC AL2(N00047)	
00282C	3178	850+	DC A(T7A01)	
00282E	0000	851+	DC AL2(EQ)	
002830	0002	852+	DC AL2(O2)	
002832	0708	853+	DC X'0708'	
		854+	ALIGN WORD	
002834	0006	855+	DC AL2(6)	
002836	F6F0F0F0F0F3	856+	DC C'600003'	
		857+	ALIGN WORD	
00283C	196E	858+	DC AL2(PARMARA)	
		859 N00046	\$FIXT FT=(P00017)	
00283E	0101	860 N00046	DC A(@FIXT)	
002840	2970	861+	DC A(F00017)	
		862 N00047	\$TUXX T7A02,02,0708,EQ,QT=(Q00195),YES=N00049,ST=(S00032)	
002842	0500	863 N00047	DC A(@TUXX)	
002844	2858	864+	DC AL2(N00049)	
002846	2C34	865+	DC A(T7A02)	
002848	0000	866+	DC AL2(EQ)	
00284A	0002	867+	DC AL2(O2)	
00284C	0708	868+	DC X'0708'	
		869+	ALIGN WORD	
00284E	0000	870+	DC AL2(O)	
002850	C1C1	871+	DC C'AA'	
		872+	ALIGN WORD	
002852	196E	873+	DC AL2(PARMARA)	
		874 N00048	\$FIXT FT=(P00017)	
002854	0101	875 N00048	DC A(@FIXT)	
002856	2970	876+	DC A(F00017)	
		877 N00049	\$TUXX T7A03,02,0702,EQ,PLNG=6,PARM=4C0000,QT=(Q00203),	X

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
002858	0500	878+N00049	DC A(@TUXX)	
00285A	2872	879+	DC AL2(N00051)	
00285C	31DE	880+	DC A(T7A03)	
00285E	0000	881+	DC AL2(EQ)	
002860	0002	882+	DC AL2(O2)	
002862	0702	883+	DC X'0702'	
		884+	ALIGN WORD	
002864	0006	885+	DC AL2(6)	
002866	F4C3F0F0F0F0	886+	DC C'4C0000'	
		887+	ALIGN WORD	
00286C	196E	888+	DC AL2(PARMARA)	
		889 N00050	\$FIXT FT=(P00017)	
00286E	0101	890 N00050	DC A(@FIXT)	
002870	2970	891+	DC A(F00017)	
		892 N00051	\$TUXX T7A02,03,070240,ON,QT=(Q00214),YES=N00053,CT=(C00208),	X
002872	0500	893 N00051	DC A(@TUXX)	
002874	288A	894+	DC AL2(N00053)	
002876	2C34	895+	DC A(T7A02)	
002878	0200	896+	DC AL2(ON)	
00287A	0003	897+	DC AL2(O3)	
00287C	070240	898+	DC X'070240'	
00287E	00	899+	ALIGN WORD	
002880	0000	900+	DC AL2(O)	
002882	C1C1	901+	DC C'AA'	
		902+	ALIGN WORD	
002884	196E	903+	DC AL2(PARMARA)	
		904 N00052	\$FIXT FT=(P00017)	
002886	0101	905 N00052	DC A(@FIXT)	
002888	2970	906+	DC A(F00017)	
		907 N00053	\$TUXX T7A01,02,0708,EQ,PLNG=6,PARM=600005,QT=(Q00220),	X
00288A	0500	908 N00053	DC A(@TUXX)	
00288C	28A4	909+	DC AL2(N00055)	
00288E	3178	910+	DC A(T7A01)	
002890	0000	911+	DC AL2(EQ)	
002892	0002	912+	DC AL2(O2)	
002894	0708	913+	DC X'0708'	
		914+	ALIGN WORD	
002896	0006	915+	DC AL2(6)	
002898	F6F0F0F0F0F5	916+	DC C'600005'	
		917+	ALIGN WORD	
00289E	196E	918+	DC AL2(PARMARA)	
		919 N00054	\$FIXT FT=(P00017)	
0028A0	0101	920 N00054	DC A(@FIXT)	
0028A2	2970	921+	DC A(F00017)	
		922 N00055	\$TUXX T7A02,02,0708,EQ,QT=(Q00225),YES=N00057,ST=(S00032)	
0028A4	0500	923 N00055	DC A(@TUXX)	
0028A6	28BA	924+	DC AL2(N00057)	
0028A8	2C34	925+	DC A(T7A02)	
0028AA	0000	926+	DC AL2(EQ)	
0028AC	0002	927+	DC AL2(O2)	
0028AE	0708	928+	DC X'0708'	
		929+	ALIGN WORD	
0028B0	0000	930+	DC AL2(O)	
0028B2	C1C1	931+	DC C'AA'	
		932+	ALIGN WORD	
0028B4	196E	933+	DC AL2(PARMARA)	
		934 N00056	\$FIXT FT=(P00017)	
0028B6	0101	935 N00056	DC A(@FIXT)	
0028B8	2970	936+	DC A(F00017)	
		937 N00057	\$TUXX T7A03,02,0702,EQ,PLNG=6,PARM=500000,QT=(Q00233),	X
0028BA	0500	938 N00057	DC A(@TUXX)	
0028BC	28D4	939+	DC AL2(N00059)	
0028BE	31DE	940+	DC A(T7A03)	
0028C0	0000	941+	DC AL2(EQ)	
0028C2	0002	942+	DC AL2(O2)	
0028C4	0702	943+	DC X'0702'	
		944+	ALIGN WORD	
0028C6	0006	945+	DC AL2(6)	
0028C8	F5F0F0F0F0F0	946+	DC C'500000'	
		947+	ALIGN WORD	
0028CE	196E	948+	DC AL2(PARMARA)	
		949 N00058	\$FIXT FT=(P00017)	
0028D0	0101	950 N00058	DC A(@FIXT)	
0028D2	2970	951+	DC A(F00017)	
		952 N00059	\$TUXX T7A02,03,070240,ON,QT=(Q00243),YES=N00061,CT=(C00238),	X
0028D4	0500	953 N00059	DC A(@TUXX)	
0028D6	28EC	954+	DC AL2(N00061)	
0028D8	2C34	955+	DC A(T7A02)	
0028DA	0200	956+	DC AL2(ON)	
0028DC	0003	957+	DC AL2(O3)	
0028DE	070240	958+	DC X'070240'	
0028E0	00	959+	ALIGN WORD	
0028E2	0000	960+	DC AL2(O)	
0028E4	C1C1	961+	DC C'AA'	
		962+	ALIGN WORD	
0028E6	196E	963+	DC AL2(PARMARA)	
		964 N00060	\$FIXT FT=(P00017)	
0028E8	0101	965 N00060	DC A(@FIXT)	
0028EA	2970	966+	DC A(F00017)	
		967 N00061	\$TUXX T7A04,02,0007,OF,QT=(Q00250),YES=N00063,CT=(C00248)	
0028EC	0500	968 N00061	DC A(@TUXX)	
0028EE	2902	969+	DC AL2(N00063)	
0028F0	3252	970+	DC A(T7A04)	
0028F2	0202	971+	DC AL2(OF)	
0028F4	0002	972+	DC AL2(O2)	
0028F6	0007	973+	DC X'0007'	
		974+	ALIGN WORD	
0028F8	0000	975+	DC AL2(O)	
0028FA	C1C1	976+	DC C'AA'	
		977+	ALIGN WORD	
0028FC	196E	978+	DC AL2(PARMARA)	
		979 N00062	\$FIXT FT=(P00017)	
0028FE	0101	980 N00062	DC A(@FIXT)	
002900	2970	981+	DC A(F00017)	
		982 N00063	\$TUXX T7A02,02,0008,OF,QT=(Q00254),YES=N00065,ST=(S00032)	
002902	0500	983 N00063	DC A(@TUXX)	
002904	2920	984+	DC AL2(N00065)	
002906	2C34	985+	DC A(T7A02)	
002908	0202	986+	DC AL2(OF)	
00290A	0002	987+	DC AL2(O2)	
00290C	0008	988+	DC X'0008'	
		989+	ALIGN WORD	
00290E	0000	990+	DC AL2(O)	
002910	C1C1	991+	DC C'AA'	

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922+ ALIGN WORD
934+ DC AL2 (PARMARA)
944 N00064 \$CALL TYPE=XTRNL,MAP=7A78,EP=E,FT=(F00257),GTO=((7A78,E))
954 N00064 DC A(@CALL)

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1107\*\* BIT HEX
1108+B48 EQU 16 8
1109+B49 EQU 17 4
1110+B50 EQU 18 2
1111+B51 EQU 19 1
1112+B52 EQU 20 4
1113+B53 EQU 21 5
1114+B54 EQU 22 6
1115+B55 EQU 23 7
1116+B56 EQU 24 8
1117+B57 EQU 25 9
1118+B58 EQU 26 10
1119+B59 EQU 27 11
1120+B60 EQU 28 12
1121+B61 EQU 29 13
1122+B62 EQU 30 14
1123+B63 EQU 31 15
1124+CH EQU 30 14
1125+CMP EQU 31 15
1127+OPTN3 DC X'0000'



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002D14 0000 1457 RSBA DC X'0000'
002D16 0000000000000000 1458 DC 6A(\*-\*) RESIDUAL STATUS BLOCK
002D22 0000 1459 CTRO2 DC X'0000' COUNTER
002D24 0000 1460 CTRO3 DC X'0000' COUNTER
002D26 0000 1461 ID00 DC X'0000' ID ADDRESS TO BE SET BY USER
002D28 1010 1462 PDATA DC X'1010' WRITE DIAG WORD 1 DATA PATTERNS
002D2A 5555 1463 DC X'5555' \*
002D2C AAAA 1464 DC X'AAAA' \*
002D2E FFFF 1465 DC X'FFFF' \*
1466 \*
1467 \*\*\*\*\*4/06/77\*\*\*\*\*
1468 \*
1469 \* SUBROUTINE
1470 \*
1471 \* PURPOSE
1472 \*
1473 \* COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
1474 \*
1475 \* CALLING SEQUENCE
1476 \*
1477 \* BAL CMPRW,R6 (NORMAL)
1478 \*
1479 \* RETURN
1480 \*
1481 \* BXS (R6,2) - NORMAL
1482 \*
1483 \*
1484 \*\*\*\*\*
1485 \*
1486 CMPRW MVWI 4,R7 COMPARE BYTE COUNT
1487 MVA SCTID,R3 ADDR OF RD SEC ID DATA
1488 MVA WRSID,R5 ADDR OF WR SEC ID DATA
1489 CPMEN (R3),(R5) COMPARE ID DATA
1490 BE (R6,2) BCH IF WRITE ID DATA OK
1491 B (R6,2) COMPARE ERROR
1492 \*\*\*\*\*
1493 \*
1494 \* EXECUTE INPUT & OUTPUT COMMANDS
1495 \* TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1496 \* EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
1497 \* LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
1498 \* SUPVR CALL.
1499 \*
1500 \* THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
1501 \*
1502 \* 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
1503 \*
1504 \* 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
1505 \*
1506 \* THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1507 \*
1508 \* 1 BAL \$RKEW,R6 READ SECTOR ID SKEWED
1509 \*
1510 \* 2 BAL \$WKEW,R6 WRITE SECTOR ID SKEWED
1511 \*
1512 \* 3 BAL \$WSEC,R6 WRITE SECTOR ID
1513 \*
1514 \* 4 BAL \$DIAG,R6 DIAGNOSTIC
1515 \*
1516 \* 5 BAL \$XIOCS,R6 CYCLE STEAL STATUS
1517 \*
1518 \* 6 BAL \$SSEEK,R6 SEEK
1519 \*
1520 \* 7 BAL \$RECL,R6 RECALIBRATE
1521 \*
1522 \* 8 BAL \$RDID,R6 READ SECTOR ID
1523 \*
1524 \* 9 BAL \$RD,R6 READ
1525 \*
1526 \* 10 BAL \$RDVY,R6 READ VERIFY
1527 \*
1528 \* 11 BAL \$WRT,R6 WRITE
1529 \*
1530 \* 12 BAL \$RDIM,R6 READ MULTI SECTOR IDS
1531 \*
1532 \*\*\*\*\*
1533 \*
1534 \$SEEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1535 J XIO
1536 \*
1537 \$RECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
1538 J XIO
1539 \*
1540 \$RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
1541 MVBI X'BB',R3 SET BUFFER TO B'S
1542 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
1543 MVWI 4,R7 SETUP BUFFER LENGTH
1544 FFN R3,(R5) INIT READ SECTOR ID BUFFER
1545 MVA SCTID,RSDCB+14 DATA ADDR
1546 J XIO
1547 \*
1548 \$RDIM MVA RMDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1549 MVWI 132,R7 SET BUFFER LENGTH
1550 MVA ID00,R5 SET BUFFER ADDRESS
1551 MVBI X'BB',R3 SET CLEAR CHARACTERS
1552 FFN R3,(R5) CLEAR THE BUFFER
1553 J XIO
1554 \*
1555 \$RD MVBI X'FF',R3 SETRD BUFFER TO ALL F'S
1556 MVW RDCB+14,R5 SET UP READ BUFFER ADRS
1557 MVW RDCB+12,R7 SET UP BUFFER LENGTH
1558 FFN R3,(R5) CLEAR READ BUFFER
1559 \$RDS MVA RDCB,IODCB SET UP BLOCK FOR SVC CALL
1560 J XIO
1561 \*
1562 \$RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1563 J XIO
1564 \*
1565 \$WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1566 J XIO
1567 \*
1568 \$RKEW MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1569 MVBI X'BB',R3 SET BUFFER TO B'S
1570 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
1571 MVWI 4,R7 SETUP BUFFER LENGTH

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002DB8 2BAC 1572 FFN R3,(R5) INIT READ SECTOR ID BUFFER
002DBA 4020 1573 MVA SCTID,RKDCB+14 DATA ADDR
002DC0 5045 1574 J XIO
1575 \*
1576 \$WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1577 MVA WRSID,WKDCB+14 DATA ADDR
1578 J XIO
1579 \*
1580 \$WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1581 MVA WRSID,WSDCB+14 DATA ADDR
1582 J XIO
1583 \*
1584 \$DIAG MVA DGDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1585 J XIO
1586 \*
1587 \$WRT0 MVW R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
1588 MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
1589 MVA CSBUF,R5 \* TO ALL ONES \*
1590 MVBI 22,R7 \*
1591 FFN R3,(R5) \*
1592 MVA DCBUF,R5 CLEAR DCB BUFFER TO ALL ONES
1593 MVBI 16,R7 \*
1594 FFN R3,(R5) \*
1595 MVWI X'0708',XIOIN OVERLAY OLD CONDITION CODES
1596 MVWZ \$ISB,R3 ZERO OUT OLD ISB VALUE
1597 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
1598 TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
1599 TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
1600 MVA IOBLK,R7 SET UP CONTROL BLK FOR SUPR
1601 MVB IOHOD+1,R0 GET IDCB FUNC/MODIFIER
1602 RBTWI X'00F0',IOHOD REMOVE FUNCTION FROM 'IOMOD'
1603 CBL 4,R0 RGT JUSTIFY FUNCTION BITS IN R0
1604 J 5,R0 IDCB FUNCTION = 5?
1605 JE \$WRT1 YES - ISSUE 'SVC WRT1'
1606 SVC WRT0 ISSUE WRITE DPC '4X' OP
1607 B XIO8-4 GO WAIT FOR THE INTERRUPT
1608 \$WRT1 SVC WRT1 ISSUE WRITE DPC '5X' OP
1609 B XIO8-4 GO WAIT FOR THE INTERRUPT
1610 \*
1611 \$DGWR MVA WRDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
1612 B XIODG ISSUE START CS DIAG CMD
1613 \*
1614 \$DGRD MVA RDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
1615 MVA RDCB+12,R7 GET NO. OF BYTES TO CLEAR
1616 MVW RDCB+14,R5 ADDR OF READ BUFFER
1617 MVBI X'FF',R3 CLEAR TO F'S
1618 FFN R3,(R5) \*
1619 B XIODG ISSUE START CS DIAG CMD
1620 COPY T7AXEQ 09MAR78
1621 PRINT OFF
1622 T7AXEQ
1623 \*\*\*\*\*29JUL76\*\*
1624 \*
1625 \* SUB-ROUTINE
1626 \*
1627 \* EXECUTE INPUT AND OUTPUT COMMANDS
1628 \*
1629 \* PURPOSE
1630 \*
1631 \* TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1632 \* THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
1633 \*
1634 \* 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
1635 \* THE I/O COMMAND.
1636 \* 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
1637 \* ISSUED BY THIS SUBROUTINE.
1638 \* 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
1639 \* START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
1640 \* 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
1641 \* SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
1642 \* MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
1643 \* 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
1644 \* EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
1645 \* 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
1646 \* STARTS TO DETERMINE A LOST INTERRUPT.
1647 \* 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
1648 \* WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
1649 \* 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
1650 \* 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
1651 \* 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
1652 \* 11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
1653 \* 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
1654 \* ISSUED BY THIS SUBROUTINE.
1655 \* 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
1656 \* CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
1657 \* COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
1658 \*
1659 \* CALLING SEQUENCE
1660 \*
1661 \* THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1662 \*
1663 \* --> BAL XIO OR XEO ANY CYCLE STEAL COMMAND, MOD=0
1664 \* --> BAL XIO1 OR MOD PARAM PRELOADED IN 'IOHOD'
1665 \* --> BAL XIOCS,R6 OR XEO START CYCLE STEAL STATUS, MOD=F
1666 \* --> BAL XIOCS-4,R6 AUTO CS STATUS FOLLOWING OTHER XIO
1667 \* AND DOES NOT POST INTERRUPT STATUS)
1668 \*
1669 \* RETURN CONTROL
1670 \*
1671 \* BXS (R6,2) RETURN TO USER NO ERROR
1672 \* OR B (R6)\* RETURN AND RETRY ON ERROR
1673 \*\*\*\*\*
1674 \$XIO MVWZ IOHOD,R3 SET MOF OF 0 FOR CYCLE STEAL OP
1675 J XIO1 CS I/O'S ARE NOT RETRIED
1676 \*
1677 \$XIODG MVWI X'000D',IOMOD SET MODIFIER FOR DIAGNOSTIC OPS
1678 J XIO1 GO TO CS OPS
1679 \*
1680 TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
1681 TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
1682 MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1683 MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
1684 TBTR (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
1685 JON XIO2 \* YES, BYPASS SAVING I/O ADRS

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002E6E 6E0D 2BF0 2251+XIO1 MVW R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
002E72 4324 2BFA 2252+ MVA DCBUF,R3 SET UP TO ADRS TO MOVE DCB TABLE
002E76 6D08 2F5E 2253+ MVW IODCB,R5 \* AND THE FROM ADRS, ALONG WITH
002E7A 0F1A 2254+ MVBI 26,R7 \* THE NUMBER OF MOVES
002E7C 2D64 2255+ MVFN (R5),(R3) MOVE 1 STATUS WORD AND ADJUST
002E7E 0BFF 2256+ MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
002E80 4524 2C0A 2257+ MVA CSBUF,R5 \* TO ALL ONES \*
002E84 0F1A 2258+ MVBI 26,R7 \*
002E86 2BAC 2259+ FFW R3,(R5) \*
002E88 4020 2BEC 0708 2260+ MVWI X'0708',SIOIN OVERLAY OLD CONDITION CODES
002E8E CB25 2BEE 2261+ MVWZ \$ISB,R3 ZERO OUT OLD ISB VALUE
2262+
002E92 4CA1 2263+ TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
002E94 4CA3 2264+XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTRL BIT
002E96 4724 2F5A 2265+ MVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
002E9A 4CA6 2266+ TBTR (R4,\$LE) RESET LEVEL ERROR INDICATOR
002E9C 4C62 2267+ TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
002E9E 600A 2268+ SVC START CALL SUPVR FOR I/O COMMAND
2269+
002EA0 4CA7 2270+ TBTR (R4,NI) IS AN INTR EXPECTED
002EA2 6AC0 0002 2271+ BN (R6,2) \* NO, RETURN TO USER
2272+
2273+ THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
2274+
002EA6 4524 0000 2275+ MVWI 0,R5 SET UP WORK REG FOR 'LOST INTR'
002EAA 4CA3 2276+XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
002EAC 1239 2277+ JON XIOCK \* YES, CHECK IF ALL WAS SATISFACTORY
002EAE 6002 2278+ SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
2279+ SUPVR WILL RETURN HERE
002EB0 6002 2280+ SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
2281+ SUPVR WILL RETURN HERE
2282+ ADVANCE TIME OUT COUNT
002EB2 7DA1 0001 2283+ AWI 1,R5 BCH IF TIME OUT NOT REACHED
002EB6 1BF9 2284+ JNZ XIO8 SET ON ERROR CONTROL BIT
002EB8 4C61 2285+ TBTS (R4,ER) ERR 'NO INTERRUPT'
002EBA 68D2 0000 2286+ B (R6)\*
2287+\*\*\*\*\*03FEB76\*\*
2288+
2289+ SUBROUTINE
2290+
2291+ I/O EXECUTE ERROR HANDLING ROUTINE
2292+
2293+ PURPOSE
2294+
2295+ THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
2296+ PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
2297+ SUPERVISOR AND IT WAS NOT ACCEPTED.
2298+
2299+ CALLING SEQUENCE
2300+
2301+ SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
2302+
2303+ RETURN CONTROL
2304+
2305+ B (R6)\* RETURN TO USERS ERROR HANDLER
2306+
2307+\*\*\*\*\*
2308+
2309+ CC 0= DEVICE NOT ATTACHED
2310+ FOR 1= DEVICE BUSY
2311+ I/O 2= DEVICE BUSY AFTER RESET
2312+ 3= COMMAND REJECT
2313+ 4= INTERVENTION REQUIRED
2314+ 5= INTERFACE DATA CHECK
2315+ 6= CONTROLLER BUSY
2316+ 7= I/O COMMAND EXCEPTED
2317+
002EBE 706E 2318+XIOER CPLSR R3 COPY STATUS ANY LEVEL INTO R3
002EC0 336A 2319+ SRL 13,R3 POSITION CC CODE TO BITS 13-15
002EC2 C328 2BEC 2320+ MVB R3,\$IOIN \* PUT IN LOG OUT AREA
002EC6 68D2 0000 2321+ B (R6)\* RETURN TO USER ERROR HANDLER
2322+\*\*\*\*\*14APR76\*\*
2323+
2324+
2325+ SUB-ROUTINE
2326+
2327+ ERROR INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2328+
2329+ PURPOSE
2330+
2331+ THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR
2332+ OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
2333+ EXPECTED CODE.
2334+
2335+ CALLING SEQUENCE
2336+
2337+ SUPVR WILL ENTER WHEN AN ERROP OCCURS ON AN I/O INTERRUPT
2338+
2339+ RETURN CONTROL
2340+
2341+ SVC EXIT RETURN TO USER VIA SUPVR
2342+
2343+\*\*\*\*\*
2344+
2345+ CC 0= CONTROLLER END ISB 0= ADD STATUS
2346+ FOR 1= PROGRAM CONTROL INTERRUPT ISB 1= COMD REJECT
2347+ INTR 2= EXCEPTION INTERRUPT FOR 2= INCOR LENGTH
2348+ 3= DEVICE END INTERRUPT INTR 3= DCB SPEC CK
2349+ 4= ATTENTION INTERRUPT 4= STG DATA CK
2350+ 5= ATTENTION / PROGRAM CNTRL INTR 5= INV STG ADRS
2351+ 6= ATTENTION / EXCEPTION INTR 6= PROTRCT CK
2352+ 7= ATTENTION / DEVICE END INTR 7= I-FACE DATA
2353+
002ECA 706E 2354+XINTER CPLSR R3 COPY STATUS ANY LEVEL INTO R3
002ECC 336A 2355+ SRL 13,R3 POSITION INDICATORS IN R3
002ED0 4424 2BE4 2356+ MVA OPTN1,R4 SET UP BASE ADRS
002ED2 4C28 2357+ TBT (R4,CS) IS CS IN PROGRESS
002ED4 1006 2358+ JOFF INTES \* NO
002ED6 4C6A 2359+ TBTS (R4,CE) TURN ON CYCLE STEAL INTER ERROR
002ED8 6F0D 2BF8 2360+ MVW R7,DEV4 SAVE CS ERR ISB VALUE, BITS 0-7
002EDC C328 2BF9 2361+ MVB R3,DEV4+1 \* AND THE COND CODE
002EE0 500A 2362+ J INTR1
002EE2 4C24 2363+INTES TBT (R4,XE) TEST EXPECTED ATTEN / ERROR IND
002EE4 1002 2364+ JOFF INTET BCH IF NOT EXPECTED
002EE6 F304 2365+ CBI 4,R3 IS THIS AN 'ATTENTION' INTR
002EE8 1006 2366+ JE INTR1 \* YES, BCH TO END INTR SEQUENCE
IL

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002EEA 4C61 2367+INTET TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTRL BIT
002EEC 5004 2368+ J INTR1
2369+ THE ERROR INTERRUPT USES THE SAME
2370+ ENDING SEQUENCE AS THE NORMAL INTR
2371+\*\*\*\*\*14APR76\*\*
2372+
2373+ SOUBROUTINE
2374+
2375+ OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2376+
2377+ PURPOSE
2378+
2379+ TO CHECK THE INTERRUPT AND CONTINUE THE TEST
2380+
2381+ CALLING SEQUENCE
2382+
2383+ SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED
2384+ THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE
2385+ AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE
2386+ COMMON SECTION IS HANDLED HERE.
2387+
2388+ RETURN CONTROL
2389+
2390+ SVC EXIT RETURN TO USER VIA SUPVR
2391+
2392+\*\*\*\*\*
2393+XINTOK CPLSR R3 COPY STATUS ANY LEVEL INTO R3
2394+ SRL 13,R3 POSITION INDICATORS IN R3
2395+ MVA OPTN1,R4 SET UP BASE ADRS
2396+ TBTS (R4,IN) SET INTERRUPT RECEIVED
2397+ TBT (R4,CS) IS 'CS' IN PROGRESS ON
2398+ JON INTR2 \* YES, BCH AROUND UPDATE
2399+ MVB R3,\$IOIN+1 SAVE INTERRUPTING CC CODE
2400+ MVW R7,\$ISB SAVE INTR STATUS AND DEV ADRS
2401+ EQU \*
2402+XINTR2 EQU \*
2403+
2404+ CPCL R5 CURRENT LEVEL COPIED BY DCP
2405+ SL 4,R5 POSITION INTR LEVEL AND PUT
2406+ ABI 1,R5 \* IN 'I' BIT
2407+ CW \$INTL,R5 IS THIS THE CORRECT INTR LEVEL
2408+ JE INTR3 \* YES, GO EXIT THIS LEVEL
2409+ TBTS (R4,\$LE) SET INTR LEVEL ERROR CONTROL BIT
2410+ TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTRL BIT
2411+XINTR3 TBTR (R4,XI) WAS INTERRUPT EXPECTED
2412+ JON INTRX \* YES, EXIT OFF THIS INTR LEVEL
2413+ TBT (R4,MI) \* NO, SET MYSTERY INTR CONTROL BIT
2414+ CBI 4,R3 ATTENTION INTERRUPT?
2415+ JE INTRX YES
2416+ TBTS (R4,NG) ERROR,UNEXPECTED INTERRUPT
2417+XINTRX SVC EXIT EXIT THIS LEVEL VIA SUPVR TO PGM
2418+\*\*\*\*\*03FEB76\*\*
2419+
2420+ THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
2421+ HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
2422+ RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
2423+
2424+
2425+XIOCK TBTR (R4,XE) WAS AN ERROR EXPECTED
2426+ BN (R6,2) \* YES, EXIT THIS ROUTINE
2427+ TBTR (R4,CS) WAS AUTO CS IN PROGRESS
2428+ JOFF XIOCV \* NO, CONTINUE CHECKING
2429+ TBT (R4,CE) IS CS IN AN ERR CONDITION
2430+ JOFF XIOCO \* NO, BCH
2431+ B (R6)\* CS ERROR
2432+XIOCO TBTS (R4,CSA) TURN ON CS STAS AVAIL FLAG
2433+ BXS (R6,2) GO TO USER
2434+XIOCV TBT (R4,ER) WAS ERROR INTR CONTROL BIT ON
2435+ JOFF XIOCX \* NO, EXIT THIS ROUTINE
2436+
2437+ MVB \$IOIN+1,R5 GET LAST INTR CC CODE
2438+ CBI 2,R5 IS THIS CC=2
2439+ JE XIOCO YES
2440+ CBI 6,R5 IS THIS CC=6
2441+ BNE (R6)\* \* NO, BCH TO ERROR HANDLER
2442+XIOCV MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS
2443+ BN XIOCS-4 \* AVAILABLE, GO AND GET IT
2444+ B (R6)\* ERROR
2445+XIOCV MVWZ OPTN3,R3 CLEAR OUT OPTION 3 CNTRL BITS
2446+ BXS (R6,2) RETURN TO USER VIA REG 6
2447+
2448+ I/O PARAMETER LIST
2449+
002F5A 19D0 2450+IOBLK DC A (DEVADD) ADRS OF DEVICE ADRS
002F5C 2EBE 2451+ DC A (XIOER) ERROR ROUTINE ADRS
002F5E 0000 2452+IODCB DC A (\*-\*) DCB ADRS OR LEVEL & INTR
002F60 0000 2453+IOMOD DC A (\*-\*) MODIFIER
002F62 0000 2454+ DC A (\*-\*) ADRS OF LAST SVC CALL
002F64 0000 2455+IORSF DC A (\*-\*) SECOND WORD OF LAST IDCB
2456+
2457+ INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
2458+
002F66 19D0 2459+INTBL DC A (DEVADD) ADRS OF DEVICE ADRS
002F68 2EBE 2460+ DC A (INTOK) INTERRUPT OR RETURN ADRS
002F6A 2ECA 2461+ DC A (INTERR) INTERRUPT ERROR ADRS
002F6C 0003 2462+INTCC DC X'0003' INTERRUPT CODE EXPECTED
2463+\*\*\*\*\*11MAY76\*\*
2464+
2465+ SUBROUTINE
2466+
2467+ CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
2468+
2469+ PURPOSE
2470+
2471+ TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2472+ PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
2473+ TO INTERRUPT.
2474+
2475+ CALLING SEQUENCE
2476+
2477+ THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2478+
2479+
2480+ --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
2481+ --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
2482+
2483+ RETURN CONTROL
IL

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
2484\*\*
2485\*\* BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
2486\*\* OR B (R6)\* IF THE DEVICE COULD NOT BE CONNECTED
2487\*\*
2488\*\* \*\*\*\*\*
2489\*\* \$CONC MVB 6,R7 NUMBER OF BYTE TO CLEAR
2490\*\* MVA D,R7 \* AND THE DATA TO USE
2491\*\* MVA D,R7,R5 \* ALONG WITH THE ADRS TO USE
2492\*\* EFN R3 (R5) \*
2493\*\* MVBZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
2494\*\* MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
2495\*\* SVC CIBC \* CONNECT IT TO THIS DEVICE
2496\*\* BN (R6)\* ERROR RETURN TO USER
2497\*\*
2498\*\* \$CONP MVB \$INTL,IODCB PUT IN LEVEL 8 INTR PARAMETER
2499\*\* MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
2500\*\* MVBW X'0708', \$IOIN INITIALIZE CONDITION CODE STORAGE
2501\*\* MVBWZ \$ISB,R3 \* AND CLEAR OLD ISB VALUE
2502\*\* MVB R6,L\$TIO SET UP ADDRESS THAT STARTED LAST I/O
2503\*\* SVC PREP \* AND CALL ON SUPR
2504\*\* BXS (R6,2) RETURN TO USER
2506\*\* \*\*\*\*\*06APR76\*\*
2507\*\*
2508\*\* SUBROUTINE
2509\*\*
2510\*\* DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
2511\*\*
2512\*\* PURPOSE
2513\*\*
2514\*\* DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2515\*\* SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
2516\*\* BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERPOR CONDITION.
2517\*\*
2518\*\* CALLING SEQUENCE
2519\*\*
2520\*\* THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2521\*\*
2522\*\* --> B \$ERR\$ SET 'NG' BIT AND CONVERT DATA TO LOG
2523\*\* --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
2524\*\*
2525\*\* RETURN CONTROL
2526\*\*
2527\*\* OR B TURTN\* RETURN TO MDI
2528\*\* (R6)\* IF THE DEVICE COULD NOT BE CONNECTED
2529\*\*
2530\*\* \*\*\*\*\*
2531\*\* \$ERR\$ MVBW X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
2532\*\* MVA HEPLK,R7 GET ADRS OF CONTROL BLOCK
2533\*\* SVC HTOE CONVERT HEX TO EBC VIS DCP
2534\*\* MVBW X'4040',TWORK+116
2535\*\* MVBW X'4040',TWORK+118
2536\*\* MVBW X'4040',TWORK+120
2537\*\* \$PRNT MVB 4,R5
2538\*\* MVA TWORK,R3 SET UP BUFFER STORAGE
2539\*\* MVB R3,BUFPT
2540\*\* MVA LINE1,R1
2541\*\* MVB 4,R7
2542\*\* MVB 8,R6
2543\*\* MVBEN (R3), (R1)
2544\*\* MVB 4,R7
2545\*\* MVB X'40',R2
2546\*\* MVB R2,(R1)+
2547\*\* JCT MVBUP,R6
2548\*\* MVB 8,R6
2549\*\* AWI 44,R1
2550\*\* JCT MVBUP,R5
2551\*\* MVBW PIDMSG10,PID+2
2552\*\* MVA FAKETU,@DCADD1
2553\*\* MVA DC200,@DCADD2
2554\*\* MVA DC200,@DCADD2
2555\*\* MVA STUID,R5
2556\*\* BAL TUMSG#TR\*,R7 SET UP BUFFER STORAGE
2557\*\* GO TO MESSAGE WRITER
2558\*\* \$CONX EQU \*
2559\*\* MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
2560\*\* SVC RIBC RELEASE INTERRUPT CONTROL BLOCK
2561\*\* B TURTN\* RETURN TO MDI SUPERVISOR
2562\*\*
2563\*\* \$BEGIN DC A(0009) NUMBER OF LINES TO PRINT
2564\*\* DC A(0008) LINE LENGTH = 8 CHAR
2565\*\* DC C'\*\*\*ABORT'
2566\*\* DC A(0040)
2567\*\* DC C'TUID IOIN ISB INST SECT ID DATA C\$CC LINE LENGTH = 40 CHAR
2568\*\* DC A(0040)
2569\*\* \$LINE1 DC C'
2570\*\* DC A(0040) LINE LENGTH = 40 CHAR
2571\*\* DC C'CNL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS LINE LENGTH = 40 CHAR
2572\*\* DC A(0040)
2573\*\* \$LINE2 DC C'
2574\*\* DC A(0040) LINE LENGTH = 40 CHAR
2575\*\* DC C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 LINE LENGTH = 40 CHAR
2576\*\* DC A(0040)
2577\*\* \$LINE3 DC C'
2578\*\* DC A(0040) LINE LENGTH = 40 CHAR
2579\*\* DC C'CS-8 CS-9 CS-A CS-B CS-C LINE LENGTH = 40 CHAR
2580\*\* DC A(0040)
2581\*\* \$LINE4 DC C'
2582\*\*
2583\*\* \$BUFPT DC A(\*-\*)
2584\*\* \$DC2PT DC A(\$BEGIN)
2585\*\* \$FIXTU DC X'0101'
2586\*\* \$FAKETU DC X'0101'
2587\*\* \$PIDMSG10 EQU X'F1F0'
2588\*\* \$BIT0080 EQU X'0080'
2589\*\*
2590\*\* DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
2591\*\*
2592\*\* \$HEBLK DC A(58) NUMBER OF BYTES TO CONVERT
2593\*\* DC A(\$TUID) FROM ADRS
2594\*\* DC A(TWORK) AND THE TO ADRS
2595\*\* COPY T7A01 26OCT77
2596\*\* T7A01 TUIT
2597\*\* \*\*\*\*\*06FEB76\*\*
2598\*\*

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2599\*\* TEST UNIT
2600\*\*
2601\*\* DIRECT PROGRAM CONTROL TEST UNIT
2602\*\*
2603\*\* PURPOSE
2604\*\*
2605\*\* THREE PARAMETERS ARE NEEDED FOR THE EXECUTION OF THIS TU AND ARE
2606\*\*
2607\*\* 1. ONE BYTE OF FUNCTION-MODIFIER, IE, X'60' FOR PREPARE
2608\*\* 2. TWO BYTES OF DATA TO BE USED IN THE SECOND PART OF THE IDCB,
2609\*\* IE, X'0005' TO SELECT LEVEL 2 FOR AN INTERRUPT.
2610\*\*
2611\*\* CALLING SEQUENCE
2612\*\*
2613\*\* MDI=@TUXX,T7A01,2,0708,EQ,PLNG=6,PRAM=FMXXXX'
2614\*\*
2615\*\* TURESUL BIT(S) 0 - 15.....OIO CONDITION CODE
2616\*\* 16 - 21.....SECOND WORD OF IDCB
2617\*\*
2618\*\* RETURN CONTROL
2619\*\*
2620\*\* B TURTN\* RETURN TO MDI SUPERVISOR
2621\*\*
2622\*\* \*\*\*\*\*
2623\*\* T7A01 MVB R7,TURTN SAVE RETURN ADDRESS
2624\*\* MVBW X'7A01',STUID SAVE TU ID FOR DISPLAY
2625\*\* MVA OPTN1,R4 SET UP POINTER ADRS IN R4
2626\*\*
2627\*\* MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
2628\*\* SVC CIBC \* CONNECT IT TO THIS DEVICE
2629\*\* MVBW X'0708', \$IOIN INIT THE CONDITION CODES
2630\*\* MVB TUPARM1,R1 SET UP PARM ADRS
2631\*\* MVB (R1)+,T7A01I \* AND SET IN FUNCTION-MODIFIER
2632\*\* MVB DEVADD,T7A01I+1 \* FOLLOWED BY THE DEVICE ADRS
2633\*\* MVB (R1)+,T7A01I+2 \* AND LOAD IMMEDIATE DATA
2634\*\* MVB (R1)+,T7A01I+3
2635\*\* MVD T7A01I,R0 GET FUNCTION, MODIFIER AND DEV ADRS
2636\*\*
2637\*\* IO T7A01I ISSUE THE I/O COMMAND AND
2638\*\* CPLSR R5 \* GET THE I/O CONDITION CODE IN R5
2639\*\* SRL 13,R5 RIGHT-JUSTIFY CC AND SAVE IT
2640\*\* MVB R5,\$IOIN \* IN THE RESULTS FIELD
2641\*\* SRL 8,R0 POSITION FUNC/MOD IN RIGHTMOST BYTE
2642\*\* CBI X'6F',R0 WAS A DEVICE RESET DONE?
2643\*\* JNE DLYD+4 NO - SKIP DELAY
2644\*\* MVB -1,R5 SET UP DELAY COUNT
2645\*\* DLYD
2646\*\* JCT DLYD,R5 DELAY
2647\*\* SRL 4,R0
2648\*\* CBI X'02',R0 POSITION FUNC IN RIGHTMOST BYTE
2649\*\* JGT T7A01I WAS A READ OR READ STATUS OF EXEC?
2650\*\* MVB T7A01I+2,TURESUL+2 NO - SEND BACK ONLY OIO CC
2651\*\* MVBW X'0005',TURESUL LOAD DATA READ INTO RESULTS AREA
2652\*\* TXIT PUT ANY INTR COND CODE FOUND IN
2653\*\* B \$CONX \* RESULTS AND EXIT
2654\*\* \*\*\*\*\* RETURN TO MDI CONTROLLER
2655\*\*
2656\*\* IDCB FOR DIRECT PROGRAM CONTROL COMMAND
2657\*\*
2658\*\* T7A01I DC X'0000' FUNCTION-MODIFIER-DEVICE ADDRESS
2659\*\* DC X'0000' IMMEDIATE DATA BUFFER
2660\*\*
2661\*\* COPY T7A03 26OCT77
2662\*\* T7A03 TUIT
2663\*\* \*\*\*\*\*06FEB76\*\*
2664\*\*
2665\*\* TEST UNIT
2666\*\*
2667\*\* DIRECT PROGRAM CONTROL INTERRUPTING CMDS
2668\*\*
2669\*\* PURPOSE
2670\*\*
2671\*\* THREE PARAMETERS ARE NEEDED FOR THE EXECUTION OF THIS TU AND ARE:
2672\*\*
2673\*\* 1. ONE BYTE OF FUNCTION-MODIFIER, IE, X'4X' FOR DPC WRITE,
2674\*\* 2. TWO BYTES OF DATA TO BE USED IN THE SECOND PART OF THE IDCB,
2675\*\* IE, X'0005' TO BE SENT TO THE DEVICE.
2676\*\*
2677\*\* THIS TEST UNIT PREPARES THE DEVICE AND EXPECTS AN INTERRUPT
2678\*\* AND WILL SEND BACK THE CONDITION CODES OF THE I/O AND INTR.
2679\*\*
2680\*\* CALLING SEQUENCE
2681\*\*
2682\*\* MDI=@TUXX,T7A03,2,0708,EQ,PLNG=6,PRAM=FMXXXX'
2683\*\*
2684\*\* TURESUL BIT(S) 0 - 15.....OIO CC, INTR CC
2685\*\* 16 - 23.....INTERRUPT STATUS BYTE
2686\*\* 24 ..... CYCLE STEAL STATUS IO/INTR ERROR
2687\*\* 32 - 47.....CYCLE STEAL STATUS WORD 4
2688\*\* 48 - 63.....CYCLE STEAL STATUS WORD 5
2689\*\*
2690\*\* RETURN CONTROL
2691\*\*
2692\*\* B TURTN\* RETURN TO MDI SUPERVISOR
2693\*\*
2694\*\* \*\*\*\*\*
2695\*\* T7A03 MVB R7,TURTN SAVE RETURN ADDRESS
2696\*\* MVBW X'7A03',STUID SAVE TU ID FOR DISPLAY
2697\*\* MVA OPTN1,R4 SET UP POINTER ADRS IN R4
2698\*\* BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
2699\*\* DC A(\$ERR\$) ERROR ADRS FOR INVALID PREP
2700\*\*
2701\*\* MVA TURESUL,R2 LOAD ADDR TURESULS BUFF IN REG 2
2702\*\* MVBW X'0708', \$IOIN INIT THE CONDITION CODES
2703\*\* MVB TUPARM1,R1 SET UP PARM ADRS
2704\*\* MVB (R1)+,T7A03L \* AND SET IN FUNCTION-MODIFIER
2705\*\* MVB DEVADD,T7A03L+1 \* FOLLOWED BY THE DEVICE ADRS
2706\*\* MVB (R1)+,T7A03L+2 \* AND SET IN EVEN BYTE DATA
2707\*\* MVB (R1)+,T7A03L+3 \* AND SET IN ODD BYTE DATA
2708\*\* MVD T7A03L,R0 GET FUNCTION, MODIFIER AND DEV ADRS
2709\*\*
2710\*\* IO T7A03L ISSUE THE I/O COMMAND AND
2711\*\* CPLSR R5 \* GET THE I/O CONDITION CODE IN R5
2712\*\* SRL 13,R5 POSITION CC IN THE RESULTS FIELD
2713\*\* MVB R5,\$IOIN \* AND SAVE IT IN THE RESULTS

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
003222 0DFF 2714 MVTI -1,R5 SET UP FOR DELAY
003224 6002 2715 SVC T7A03K IDLE WAIT FOR INTERRUPT
003226 4CA3 2716 TBTR (R4,IN) HAS IT COME YET
003228 1201 2717 JN T7A03M \* YES, GET OUT OF DELAY
00322A BDFC 2718 JCT T7A03K,R5 \* NO, CHECK FOR TIME OUT
00322C 9028 2BEC 18C8 2719 MVD \$IOIN,TURESUL PUT ANY INTR COND CODE FOUND IN
003232 C025 18CB 2720 MVBZ TURESUL+3,R0 CLEAR BYTE 3 OF TURESULS BUFFER
003236 6E03 2E5E 2721 BAL XIOCS,R6 GET CYCLE STEAL STATUS
00323A 324A 2722 DC A(TO1ER) OIO ERROR
00323C 4C21 2723 TBT (R4,ER) EXCEPTION INTERRUPT OCCUR?
00323E 1205 2724 JON IO3ER YES - SET CSS INTR ERROR BIT ON
003240 9028 2C12 18CC 2725 MVD CSTL5,TURESUL+4 MOVE CSS WORD 4 & 5 IN RESULTS
\* RESULTS AND EXIT
003246 6802 3004 2726 X7A03 TXIT RETURN TO MDI CONTROLLER
2727 X7A03 B \$CONX \*\*\*\*\*
2728 \*\*\*\*\*
2729 \*
00324A 4A58 2730 IO3ER TBTS (R2,24) CYCLE STEAL STATUS OIO ERROR
00324C 50FC 2731 J X7A03 RETURN TO MDI
2732 \*
2733 \* IDCB FOR DIRECT PROGRAM CONTROL COMMAND
2734 \*
00324E 0000 2735 T7A03L DC X'0000' FUNCTION-MODIFIER-DEVICE ADDRESS
003250 0000 2736 DC X'0000' IMMEDIATE DATA BUFFER
2737 COPY T7A04 26OCT77
2738 T7A04 TUIT TO1ER
2739 \*\*\*\*\*
2740 \*\*\*\*\*06FEB76\*\*
2741\*\*
2742\*\* TEST UNIT
2743\*\*
2744\*\* CHANNEL INTERFACE TEST
2745\*\*
2746\*\* PURPOSE
2747\*\* TO VERIFY THE CHANNEL INTERFACE CAN INTERRUPT ON ALL LEVELS
2748\*\*
2749\*\* CALLING SEQUENCE
2750\*\*
2751\*\* THE HOST WILL PREPARE THE I/O DEVICE TO INTERRUPT ON LEVEL ZERO
2752\*\* AND CAUSE AN INTERRUPT WHEN THE INTERRUPT OCCURS, THE LEVEL IS
2753\*\* COMPARED TO THE EXPECTED LEVEL. THIS IS DONE ON ALL LEVELS.
2754\*\* LEVEL THREE WILL NOT OCCUR BECAUSE THIS PROGRAM WILL BE RUNNING
2755\*\* AS A BACKGROUND PROGRAM.
2756\*\*
2757\*\* MDI=\$TUXX,T7A04,02,0000,EQ
2758\*\*
2759\*\* TURESUL BIT(S) 0 - 10 ..... NOT USED
2760\*\* 1 - 2 ..... FALSE STORE PROTECT CHECK
2761\*\* 3 - 4 ..... NOT USED
2762\*\* 5 ..... STORE PROT NOT ON IS ISB
2763\*\* 6 ..... STOR PROT CHECK NOT REPORTED
2764\*\* 7 ..... INVAL STOR CK NOT ON IS ISB
2765\*\* 8 ..... WRONG CONDITION CODE
2766\*\* 9 ..... INVAL STOR ADDR NOT DETECTED
2767\*\* 10 - 11 ..... NOT USED
2768\*\* 12 ..... CYCLE STEAL STATUS ERROR
2769\*\* 13 ..... FILE NOT READY
2770\*\* 14 ..... OIO CC ERROR
2771\*\* 15 ..... WRONG INTERRUPT LEVEL
2772\*\* 16 - 15 ..... CYCLE STEAL STATUS INTR ERROR
2773\*\* 17 ..... CYCLE STEAL STATUS WORD 4
2774\*\* 18 - 19 ..... CYCLE STEAL STATUS WORD 5
2775\*\* 20 - 21 .....
2776\*\* 22 - 23 .....
2777\*\* RETURN CONTROL
2778\*\*
2779\*\* B TURTN\* RETURN TO MDI SUPERVISOR
2780\*\*
2781\*\*\*\*\*
2782 T7A04 MVM R7,TURTN SAVE RETURN ADDRESS
2783 MVM X'7A04',STUID SAVE TU ID FOR DISPLAY
2784 MVA OPTN1,R4 SET UP POINTER ADRS IN R4
2785 BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
2786 DC A(TO1ER) ERROR ADRS FOR INVALID PREP
2787\*\*
2788 MVTI 12,R7 CLEAR 'TU' RESULTS BUFFER
2789 MVTI 0,R3 \*
2790 MVA TURESUL,R2 \*
2791 FPN R3,(R2) \*
2792 ABI -12,R2 AJUST POINTER TO BEG OF RESULTS BUF
2793 MVA IOBLK,R7 RESET DEVICE
2794 SVC RESET \*
2795 \*\*\*\*\*
2796\*\* TEMPORARY DELAY
2797\*\*
2798 \*\*\*\*\*
2799\*\*
003278 4024 FFFF 2800 MVM X'FFFF',R0 DELAY ROUTINE TO GET BY BUSY AFTER
00327C 6003 2801 SVC IDLE5 \* RESET
00327E B8FE 2802 JCT TEMP,R0 \*
003280 6908 2C2A 2803 MVM \$INTL,R1 SAVE CURRENT INTR LEVEL
003284 4020 2C2A FFF1 2804 MVM X'FFFF',SINTL SET UP INTERRUPT LEVEL FOR PREP
00328A 4029 2C2A 0010 2805 ITST1 AWI X'101',SINTL ADV INTR LEVEL, STARTING AT 0
003290 6E03 2F6E 2806 BAL \$CONC,R6 CONNECT DEV CNTL BLOCK AND PREP DEV
003294 33BE 2807 DC A(TO1ER) ERROR - DEV COULDN'T BE CONNECTED
003296 4C64 2808 TBTS (R4,XE) SET EXPECTED ERROR BIT ON
003298 6E03 2E5E 2809 BAL XIOCS,R6 ISSUE CS STATUS OP TO CAUSE INTR
00329C 33BE 2810 DC A(TO1ER) ERROR - NO CS STATUS AVAILBLE
00329E 4C21 2811 TBT (R4,ER) WAS THERE AN INTERRUPT ERR?
0032A0 127B 2812 JON TO1I YES - SET APPROPRIATE BIT SWITCHES
0032A2 802B 2CFC 2BEE 2813 CB ZEREO,\$ISB ISB = ZERO?
0032A8 6801 33BA 2814 BNE TO1B NO - SET ERROR INDICATOR ON
0032AC 802B 19D0 2BEF 2815 CB DEVADD,\$ISB+1 DEVICE ADDRESS RETURNED IN ISB?
0032B2 6801 33BA 2816 BNE TO1B NO - SET ERROR INDICATOR ON
0032B6 402F 2C2A 0021 2817 CONT CWI X'211',SINTL HAS INTR LEVEL COME DOWN TO 2?
0032BC 18E6 2818 JNE ITST1 \* NO, BCH AND CONTINUE TEST
0032BE 6802 336C 2819 B TO1C
0032C0 6808 18C4 2820 MVM TULAST,R0 GET LAST VALID STG ADDRESS
0032C2 7802 0034 2821 DC S2,R0 DEV LAST VALID STG ADDR FOR CS
0032C4 8828 18C2 2C9A 2822 MVM TUBUFF,CSDCB+14 FIRST AVAILBLE STOR LOCATION
0032D0 4C64 2823 T01H TBTS (R4,XE) SET EXPECTED ERROR
0032D2 6E03 2E5E 2824 BAL XIOCS,R6 CYCLE STEAL STATUS
0032D6 33BE 2825 DC A(TO1ER) ERROR
0032D8 4CA1 2826 TBTR (R4,ER) INTERRUPT ERROR?
0032DA 126F 2827 JON TO1B YES
0032DC C824 2C9A 2828 CW CSDCB+14,R0 END OF PHYSICAL STORAGE?

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
0032E0 1704 2829 JLLT T01G YES
0032E2 4029 2C9A 001A 2830 AWI 26,CSDCB+14 INCREMENT CSS DATA BUFFER ADDR
0032E4 50F3 2831 J TO1H
0032E8 7806 FFF0 2832 T01G CWI X'FFF0',R0 MAX STORAGE?
0032EE 1011 2833 JE TO1J YES
0032F0 4029 2C9A 001C 2834 AWI 28,CSDCB+14 FORCE INVALID STG ADDRESS
0032F6 4C64 2835 TBTS (R4,XE) SET EXPECTED ERROR
0032F8 6E03 2E5E 2836 BAL XIOCS,R6 CYCLE STEAL STATUS
0032FC 33BE 2837 DC A(TO1ER) ERROR
0032FE 4CA1 2838 TBTR (R4,ER) INTERRUPT ERROR?
003300 1049 2839 JOFF TO1N NO - INV STG ADDR NO REPORTED
003302 402F 2BEC 0702 2840 CWI X'0702',SIOIN ARE COND CODES 7 AND 2?
003308 1843 2841 JNE TO1P NO-ERROR
00330A 402B 2BEE 0400 2842 TWI X'0400',SISB INVALID STORAGE BIT ON IN ISB?
003310 103D 2843 JOFF TO1O NO-ERROR
003312 4020 2C9A 2C0A 2844 T01J MVA CSBUF,CSDCB+14 CS ADDRESS
003318 C020 0232 2845 MVB CPUID,R0 DETERMINE TYPE OF PROCESSOR
00331C F025 2846 CBI 37,R0 \*
00331E 1826 2847 JNE TO1C JUMP IF NOT 4955
003320 4020 2C8C 2000 2848 MVM X'2000',CSDCB CS CONTROL WORD
003326 6208 2849 EN X'08' ENABLE STORE PROTECT KEY
003328 4C64 2850 TBTS (R4,XE) SET EXPECTED ERROR
00332A 6E03 2E5E 2851 BAL XIOCS,R6 CYCLE STEAL STATUS TO CAUSE INTER
00332E 33BE 2852 DC A(TO1ER) ERROR
003330 4CA1 2853 TBTR (R4,ER) INTERRUPT ERROR?
003332 1226 2854 JN TO1J YES-FLASE STORE PROTECT KEY
003334 4029 2C8C 0100 2855 T01K AWI X'0100',CSDCB SET OR INCREMENT KEYS
00333A 4C64 2856 TBTS (R4,XE) SET EXPECTED ERROR
00333C 6E03 2E5E 2857 BAL XIOCS,R6 CYCLE STEAL STATUS
003340 33BE 2858 DC A(TO1ER) ERROR
003342 4CA1 2859 TBTR (R4,ER) INTERRUPT ERROR?
003344 1021 2860 JOFF TO1X NO,STOR PROTECT NOT REPORTED
003346 402F 2BEC 0702 2861 CWI X'0702',SIOIN ARE COND CODES 7 AND 2?
00334C 1821 2862 JNE TO1P NO-ERROR
00334E 402B 2BEE 0200 2863 TWI X'0200',SISB STOR PROT BIT NOT ON IN ISB?
003354 1017 2864 JOFF TO1U NO-ERROR
003356 402F 2C8C 2700 2865 CWI X'2700',CSDCB ALL KEYS CHECKED?
00335C 18E8 2866 JNE TO1K NO
00335E 6308 2867 DSSP DIS X'08' DISABLE STORAGE PROTECT
003360 4020 2C8C 2000 2868 MVM X'2000',CSDCB RESTORE CS STATUS DCB
003366 4020 2C9A 2C0A 2869 MVA CSBUF,CSDCB+14 \*
00336C 690D 2C2A 2870 T01C MVM R1,SINTL RESTORE ORIGINAL INTR LEVEL
003370 9028 2C12 18CA 2871 MVD CSTL5,TURESUL+2 SAVE CSS ERROR STATUS WORDS
003376 9028 2C20 18CE 2872 MVD CST12,TURESUL+6 SAVE DIAG. SENSE BYTES
2873 TXIT RETURN TO MDI CONTROLLER
00337C 6802 3004 2874 B \$CONX \*\*\*\*\*
2875 \*\*\*\*\*
2876\*\*
2877 T01Y TBTS (R2,2) FALSE STORE PROTECT CHECK
2878 J DSSP EXIT
2879 T01U TBTS (R2,5) STOR PROT NOT ON IN ISB
2880 J DSSP EXIT
2881 T01X TBTS (R2,6) STOR PROTECT NOT DETECTED
2882 J DSSP EXIT
2883 T01Q TBTS (R2,7) INV STOR BIT NOT ON IN ISB
2884 J TO1C EXIT
2885 T01P TBTS (R2,8) WRONG CONDITION CODE
2886 J DSSP EXIT
2887 T01N TBTS (R2,9) INVALID STOR ADDR NOT DETECTED
2888 J TO1C EXIT
2889 T01L TBT (R4,\$LE) INTERRUPT ON WRONG LEVEL?
2890 JOFF TO1Z NO - SET CSS INTR ERROR BIT ON
2891 TBTS (R2,14) YES - SET WRONG INTR LVL BIT ON
2892 J TO1C RETURN TO MDI
2893 T01Z TWI X'0001',CSTL5 CYCLE STEAL STATUS ERROR?
2894 JON T01A YES - SET CS STATUS ERROR BIT ON
2895 TWI X'0001',CSTL6 FILE NOT READY?
2896 JOFF TO1B NO - SET CS STATUS INTR ERR BIT ON
2897 TBTS (R2,12) SET FILE NOT READY BIT ON
2898 J TO1C RETURN TO MDI
2899 T01A TBTS (R2,11) CYCLE STEAL STATUS ERROR
2900 B CONT CONTINUE WITH TEST
2901 T01B TBTS (R2,15) CYCLE STEAL STATUS INTR ERROR
2902 J TO1C RETURN TO MDI
2903 T01ER TBTS (R2,13) OIO CC ERROR
2904 J DSSP RETURN TO MDI
2905 \*
2906 CPUID EQU X'232'
2907 COPY T7A05 26OCT77
2908 T7A05 TUIT \*\*\*\*\*
2909 \*\*\*\*\*06FEB76\*\*
2910\*\*
2911\*\* TEST UNIT
2912\*\*
2913\*\* ATTACHMENT DIAGNOSTIC CHECKOUT
2914\*\*
2915\*\* PURPOSE
2916\*\* TO CHECKOUT THE 4963 ATTACHMENT CARD DIAGNOSTICALLY.
2917\*\*
2918\*\* CALLING SEQUENCE
2919\*\*
2920\*\* TURESUL BIT(S) 0.....TEST FAILED TO EXECUTE
2921\*\* 1.....FAULTY ROS DETECTED
2922\*\* 2.....DIAG READ DETECTED FAULT
2923\*\* 3.....DIAG WRITE DETECTED FAULT
2924\*\* 4.....READ ACCESS MEMORY FAULT
2925\*\* 5.....GEN DIAG DETECTED FAULT
2926\*\* 6.....OIO ERROR
2927\*\* 7 - 15 ..... NOT USED
2928\*\* 16 - 31 ..... CYCLE STEAL STATUS WD 5
2929\*\* 32 - 47 ..... CYCLE STEAL STATUS WD 6
2930\*\* 47 - 63 ..... I/O AND INTR CONDITION CODES
2931\*\*
2932\*\* MDI=\$TUXX,T7A05,01,00,EQ
2933\*\*
2934\*\* RETURN CONTROL
2935\*\*
2936\*\* B TURTN\* RETURN TO MDI SUPERVISOR
2937\*\*
2938\*\*
2939\*\*
2940\*\*\*\*\*
2941 T7A05 MVM R7,TURTN SAVE RETURN ADDRESS
2942 MVM X'7A05',STUID SAVE TU ID FOR DISPLAY
2943 MVA OPTN1,R4 SET UP POINTER ADRS IN R4

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, and COPYRIGT IBM CORP 1976. Contains assembly code and comments for I7A01.

Table with columns: DECLARED, NAME, ATTRIBUTES AND REFERENCES, and COPYRIGT IBM CORP 1976. Contains cross-reference listing for I7A01.

CROSS-REFERENCE LISTING

COPYRIGHT IBM CORP 1976

DECLARED	NAME	ATTRIBUTES AND REFERENCES
1220	EXIT	ABSOLUTE. HEX VALUE (00000006)
2586	FAKETU	ADDRESS. HEX LOCATION (00003170) IN CSECT (I7A01 ) LENGTH (2)
1068	F00008	ADDRESS. HEX LOCATION (00002A58) IN CSECT (I7A01 ) LENGTH (1)
1072	F00010	ADDRESS. HEX LOCATION (00002A8A) IN CSECT (I7A01 ) LENGTH (1)
1048	F00017	ADDRESS. HEX LOCATION (00002970) IN CSECT (I7A01 ) LENGTH (1)
1052	F00058	ADDRESS. HEX LOCATION (00002996) IN CSECT (I7A01 ) LENGTH (1)
1064	F00085	ADDRESS. HEX LOCATION (00002A38) IN CSECT (I7A01 ) LENGTH (1)
1078	F00097	ADDRESS. HEX LOCATION (00002AC4) IN CSECT (I7A01 ) LENGTH (1)
1090	F00257	ADDRESS. HEX LOCATION (00002B66) IN CSECT (I7A01 ) LENGTH (1)
1094	F00266	ADDRESS. HEX LOCATION (00002B7E) IN CSECT (I7A01 ) LENGTH (1)
3015	GENER	ADDRESS. HEX LOCATION (000034AA) IN CSECT (I7A01 ) LENGTH (2)
2592	HEBLK	ADDRESS. HEX LOCATION (00003172) IN CSECT (I7A01 ) LENGTH (2)
1240	HTOE	ABSOLUTE. HEX VALUE (0000001A)
1216	IDLE	ABSOLUTE. HEX VALUE (00000002)
1217	IDLE5	ABSOLUTE. HEX VALUE (00000003)
1461	ID00	ADDRESS. HEX LOCATION (00002D26) IN CSECT (I7A01 ) LENGTH (2)
1142	IN	ABSOLUTE. HEX VALUE (00000023)
2459	INTBL	ADDRESS. HEX LOCATION (00002F66) IN CSECT (I7A01 ) LENGTH (2)
2354	INTER	ADDRESS. HEX LOCATION (00002ECA) IN CSECT (I7A01 ) LENGTH (2)
2363	INTES	ADDRESS. HEX LOCATION (00002EE2) IN CSECT (I7A01 ) LENGTH (2)
2367	INTET	ADDRESS. HEX LOCATION (00002EEA) IN CSECT (I7A01 ) LENGTH (2)
2394	INTOK	ADDRESS. HEX LOCATION (00002EEE) IN CSECT (I7A01 ) LENGTH (2)
63	INTRNL	ABSOLUTE. HEX VALUE (00000000)
2416	INTRX	ADDRESS. HEX LOCATION (00002F1E) IN CSECT (I7A01 ) LENGTH (2)
2397	INTR1	ADDRESS. HEX LOCATION (00002EF6) IN CSECT (I7A01 ) LENGTH (2)
2402	INTR2	ADDRESS. HEX LOCATION (00002F04) IN CSECT (I7A01 ) LENGTH (1)
2410	INTR3	ADDRESS. HEX LOCATION (00002F12) IN CSECT (I7A01 ) LENGTH (2)
2450	IOBLK	ADDRESS. HEX LOCATION (00002F5A) IN CSECT (I7A01 ) LENGTH (2)
2452	IODCB	ADDRESS. HEX LOCATION (00002F5E) IN CSECT (I7A01 ) LENGTH (2)
3005	IOER1	ADDRESS. HEX LOCATION (00003496) IN CSECT (I7A01 ) LENGTH (2)
2453	IOMOD	ADDRESS. HEX LOCATION (00002F60) IN CSECT (I7A01 ) LENGTH (2)
2730	IO3ER	ADDRESS. HEX LOCATION (0000324A) IN CSECT (I7A01 ) LENGTH (2)
2805	ITST1	ADDRESS. HEX LOCATION (0000328A) IN CSECT (I7A01 ) LENGTH (6)
37	I7A01	CSECT. START (00002500) LENGTH (4526) ESDID (1)
2569	LINE1	ADDRESS. HEX LOCATION (00003046) IN CSECT (I7A01 ) LENGTH (40)
1162	LSTIO	ADDRESS. HEX LOCATION (00002BF0) IN CSECT (I7A01 ) LENGTH (2)
1139	MI	ABSOLUTE. HEX VALUE (00000020)
2543	MVBUF	ADDRESS. HEX LOCATION (00002FD2) IN CSECT (I7A01 ) LENGTH (2)
1151	NG	ABSOLUTE. HEX VALUE (0000002C)
1146	NI	ABSOLUTE. HEX VALUE (00000027)
525	N00001	ADDRESS. HEX LOCATION (00002610) IN CSECT (I7A01 ) LENGTH (2)
528	N00002	ADDRESS. HEX LOCATION (00002614) IN CSECT (I7A01 ) LENGTH (2)
530	N00003	ADDRESS. HEX LOCATION (00002616) IN CSECT (I7A01 ) LENGTH (2)
542	N00004	ADDRESS. HEX LOCATION (0000262C) IN CSECT (I7A01 ) LENGTH (2)
554	N00005	ADDRESS. HEX LOCATION (0000263E) IN CSECT (I7A01 ) LENGTH (2)
557	N00006	ADDRESS. HEX LOCATION (00002642) IN CSECT (I7A01 ) LENGTH (2)
569	N00007	ADDRESS. HEX LOCATION (00002658) IN CSECT (I7A01 ) LENGTH (2)
572	N00008	ADDRESS. HEX LOCATION (0000265C) IN CSECT (I7A01 ) LENGTH (2)
575	N00009	ADDRESS. HEX LOCATION (00002660) IN CSECT (I7A01 ) LENGTH (2)
587	N00010	ADDRESS. HEX LOCATION (00002676) IN CSECT (I7A01 ) LENGTH (2)
599	N00011	ADDRESS. HEX LOCATION (00002688) IN CSECT (I7A01 ) LENGTH (2)
611	N00012	ADDRESS. HEX LOCATION (0000269A) IN CSECT (I7A01 ) LENGTH (2)
623	N00013	ADDRESS. HEX LOCATION (000026AC) IN CSECT (I7A01 ) LENGTH (2)
626	N00014	ADDRESS. HEX LOCATION (000026B0) IN CSECT (I7A01 ) LENGTH (2)

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
638	N00015	ADDRESS. HEX LOCATION (000026C6) IN CSECT (I7A01 ) LENGTH (2)
641	N00016	ADDRESS. HEX LOCATION (000026CA) IN CSECT (I7A01 ) LENGTH (2)
647	N00017	ADDRESS. HEX LOCATION (000026D6) IN CSECT (I7A01 ) LENGTH (2)
650	N00018	ADDRESS. HEX LOCATION (000026DA) IN CSECT (I7A01 ) LENGTH (2)
653	N00019	ADDRESS. HEX LOCATION (000026DE) IN CSECT (I7A01 ) LENGTH (2)
665	N00020	ADDRESS. HEX LOCATION (000026F2) IN CSECT (I7A01 ) LENGTH (2)
668	N00021	ADDRESS. HEX LOCATION (000026F6) IN CSECT (I7A01 ) LENGTH (2)
680	N00022	ADDRESS. HEX LOCATION (0000270C) IN CSECT (I7A01 ) LENGTH (2)
683	N00023	ADDRESS. HEX LOCATION (00002710) IN CSECT (I7A01 ) LENGTH (2)
695	N00024	ADDRESS. HEX LOCATION (00002726) IN CSECT (I7A01 ) LENGTH (2)
698	N00025	ADDRESS. HEX LOCATION (0000272A) IN CSECT (I7A01 ) LENGTH (2)
710	N00026	ADDRESS. HEX LOCATION (00002740) IN CSECT (I7A01 ) LENGTH (2)
713	N00027	ADDRESS. HEX LOCATION (00002744) IN CSECT (I7A01 ) LENGTH (2)
725	N00028	ADDRESS. HEX LOCATION (0000275A) IN CSECT (I7A01 ) LENGTH (2)
728	N00029	ADDRESS. HEX LOCATION (0000275E) IN CSECT (I7A01 ) LENGTH (2)
740	N00030	ADDRESS. HEX LOCATION (00002774) IN CSECT (I7A01 ) LENGTH (2)
743	N00031	ADDRESS. HEX LOCATION (00002778) IN CSECT (I7A01 ) LENGTH (2)
755	N00032	ADDRESS. HEX LOCATION (0000278E) IN CSECT (I7A01 ) LENGTH (2)
758	N00033	ADDRESS. HEX LOCATION (00002792) IN CSECT (I7A01 ) LENGTH (2)
770	N00034	ADDRESS. HEX LOCATION (000027A8) IN CSECT (I7A01 ) LENGTH (2)
773	N00035	ADDRESS. HEX LOCATION (000027AC) IN CSECT (I7A01 ) LENGTH (2)
785	N00036	ADDRESS. HEX LOCATION (000027C2) IN CSECT (I7A01 ) LENGTH (2)
788	N00037	ADDRESS. HEX LOCATION (000027C6) IN CSECT (I7A01 ) LENGTH (2)
800	N00038	ADDRESS. HEX LOCATION (000027DC) IN CSECT (I7A01 ) LENGTH (2)
803	N00039	ADDRESS. HEX LOCATION (000027E0) IN CSECT (I7A01 ) LENGTH (2)
815	N00040	ADDRESS. HEX LOCATION (000027F2) IN CSECT (I7A01 ) LENGTH (2)
818	N00041	ADDRESS. HEX LOCATION (000027F6) IN CSECT (I7A01 ) LENGTH (2)
830	N00042	ADDRESS. HEX LOCATION (0000280C) IN CSECT (I7A01 ) LENGTH (2)
833	N00043	ADDRESS. HEX LOCATION (00002810) IN CSECT (I7A01 ) LENGTH (2)
845	N00044	ADDRESS. HEX LOCATION (00002824) IN CSECT (I7A01 ) LENGTH (2)
848	N00045	ADDRESS. HEX LOCATION (00002828) IN CSECT (I7A01 ) LENGTH (2)
860	N00046	ADDRESS. HEX LOCATION (0000283E) IN CSECT (I7A01 ) LENGTH (2)
863	N00047	ADDRESS. HEX LOCATION (00002842) IN CSECT (I7A01 ) LENGTH (2)
875	N00048	ADDRESS. HEX LOCATION (00002854) IN CSECT (I7A01 ) LENGTH (2)
878	N00049	ADDRESS. HEX LOCATION (00002858) IN CSECT (I7A01 ) LENGTH (2)
890	N00050	ADDRESS. HEX LOCATION (0000286E) IN CSECT (I7A01 ) LENGTH (2)
893	N00051	ADDRESS. HEX LOCATION (00002872) IN CSECT (I7A01 ) LENGTH (2)
905	N00052	ADDRESS. HEX LOCATION (00002886) IN CSECT (I7A01 ) LENGTH (2)
908	N00053	ADDRESS. HEX LOCATION (0000288A) IN CSECT (I7A01 ) LENGTH (2)
920	N00054	ADDRESS. HEX LOCATION (000028A0) IN CSECT (I7A01 ) LENGTH (2)
923	N00055	ADDRESS. HEX LOCATION (000028A4) IN CSECT (I7A01 ) LENGTH (2)
935	N00056	ADDRESS. HEX LOCATION (000028B6) IN CSECT (I7A01 ) LENGTH (2)
938	N00057	ADDRESS. HEX LOCATION (000028BA) IN CSECT (I7A01 ) LENGTH (2)
950	N00058	ADDRESS. HEX LOCATION (000028D0) IN CSECT (I7A01 ) LENGTH (2)
953	N00059	ADDRESS. HEX LOCATION (000028D4) IN CSECT (I7A01 ) LENGTH (2)
965	N00060	ADDRESS. HEX LOCATION (000028E8) IN CSECT (I7A01 ) LENGTH (2)
968	N00061	ADDRESS. HEX LOCATION (000028EC) IN CSECT (I7A01 ) LENGTH (2)
980	N00062	ADDRESS. HEX LOCATION (000028FE) IN CSECT (I7A01 ) LENGTH (2)
983	N00063	ADDRESS. HEX LOCATION (00002902) IN CSECT (I7A01 ) LENGTH (2)
995	N00064	ADDRESS. HEX LOCATION (00002914) IN CSECT (I7A01 ) LENGTH (2)
1001	N00065	ADDRESS. HEX LOCATION (00002920) IN CSECT (I7A01 ) LENGTH (2)
1013	N00066	ADDRESS. HEX LOCATION (00002932) IN CSECT (I7A01 ) LENGTH (2)
1016	N00067	ADDRESS. HEX LOCATION (00002936) IN CSECT (I7A01 ) LENGTH (2)
58	OF	ABSOLUTE. HEX VALUE (00000202)
3004	OIOER	ADDRESS. HEX LOCATION (00003494) IN CSECT (I7A01 ) LENGTH (2)
57	ON	ABSOLUTE. HEX VALUE (00000200)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
1104	OPTN1	656 836 896 956 ADDRESS. HEX LOCATION(00002BE4) IN CSECT(I7A01 ) LENGTH(2)
1127	OPTN3	2356 2396 2625 2697 2784 2943 ADDRESS. HEX LOCATION(00002BE8) IN CSECT(I7A01 ) LENGTH(2)
101	PARMARA	2445 2493 ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7A01 ) LENGTH(1)
69	PID	540 552 567 585 597 609 621 636 663 678 693 708 723 738 753 768 783 798 813 828 843 858 873 888 903 918 933 948 963 978 993 1011 ADDRESS. HEX LOCATION(00001800) IN CSECT(I7A01 ) LENGTH(1)
2587	PIDMSG10	71 72 73 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 99 100 101 102 103 104 105 106 107 108 109 110 111 112 2551 ABSOLUTE. HEX VALUE(0000F1F0)
1226	PREP	2551 ABSOLUTE. HEX VALUE(0000000C)
3013	RAMER	2503 ADDRESS. HEX LOCATION(000034A6) IN CSECT(I7A01 ) LENGTH(2)
3019	RDBUF	2991 ADDRESS. HEX LOCATION(000035AE) IN CSECT(I7A01 ) LENGTH(2)
1402	RDDCB	2951 2959 2959 2975 ADDRESS. HEX LOCATION(00002CBC) IN CSECT(I7A01 ) LENGTH(2)
1222	RESET	1556 1557 1559 1614 1615 1616 2951 2953 2954 ABSOLUTE. HEX VALUE(00000008)
2998	RETRN	2794 ADDRESS. HEX LOCATION(00003484) IN CSECT(I7A01 ) LENGTH(6)
1233	RICB	3006 ABSOLUTE. HEX VALUE(00000013)
1424	RKDCB	2560 ADDRESS. HEX LOCATION(00002CDC) IN CSECT(I7A01 ) LENGTH(2)
1435	RMDCB	1568 1573 ADDRESS. HEX LOCATION(00002CEC) IN CSECT(I7A01 ) LENGTH(2)
3007	ROSER	1548 ADDRESS. HEX LOCATION(0000349A) IN CSECT(I7A01 ) LENGTH(2)
1458	RSBA	2958 2960 ADDRESS. HEX LOCATION(00002D16) IN CSECT(I7A01 ) LENGTH(2)
1347	RSDCB	1324 1340 1351 1362 1384 1395 1406 1417 1428 ADDRESS. HEX LOCATION(00002C6C) IN CSECT(I7A01 ) LENGTH(2)
0	R0	1439 REGISTER. HEX VALUE(00000000) 1540 1545 1601 1603 1604 2635 2641 2642 2647 2648 2708 2720 2800 2802 2820 2821 2828 2832 2845 2846 2947 2948 2949
0	R1	REGISTER. HEX VALUE(00000001) 2540 2543 2546 2549 2630 2631 2633 2634 2703
0	R2	REGISTER. HEX VALUE(00000002) 2704 2706 2707 2803 2870
0	R3	REGISTER. HEX VALUE(00000003) 2545 2546 2701 2730 2790 2791 2792 2877 2879 2881 2883 2885 2887 2891 2897 2899 2901 2903 2950 3004 3005 3007 3009 3011 3013 3015
0	R4	REGISTER. HEX VALUE(00000004) 1487 1489 1541 1544 1551 1552 1555 1558 1569 1572 1589 1591 1594 1596 1617 1618 2339 2352 2255 2288 2259 2261 2318 2319 2320 2354 2355 2361 2365 2394 2395 2400 2413 2445 2490 2492 2493 2501 2538 2539 2543 2555 2789 2791 2969 2971 2971 2975 2977
0	R5	REGISTER. HEX VALUE(00000005) 1597 1598 1599 2245 2246 2249 2263 2264 2266 2267 2270 2276 2284 2356 2357 2359 2363 2367 2396 2397 2398 2408 2409 2410 2412 2415 2425 2427 2429 2432 2434 2625 2697 2716 2723 2784 2808 2811 2823 2826 2835 2838 2850 2853 2856 2859 2889 2943 2957 2965 2984 2990 2996
0	R6	REGISTER. HEX VALUE(00000006) 1488 1489 1542 1544 1550 1552 1556 1558 1570 1572 1589 1591 1592 1594 1616 1618 2253 2255 2257 2259 2275 2282 2404 2405 2406 2437 2438 2440 2442 2491 2492 2537 2550 2638 2639 2640 2644 2646 2711 2712 2713 2714 2718 2970 2971 2972 2976 2977
0	R7	REGISTER. HEX VALUE(00000007) 1490 1491 1587 2251 2271 2285 2321 2426 2431 2433 2441 2444 2446 2496 2502 2504 2542 2547 2548 2698 2721 2785 2806 2809 2824 2836 2851 2857 2944 2955 2964 2982 2988 2994
1167	SCSID	1206 1486 1543 1549 1557 1571 1590 1593 1600 1615 2254 2258 2265 2360 2401 2489 2494 2499 2532 2541 2544 2556 2559 2623 2627 2695 2782 2788 2793 2941 2968 2973 2974 ADDRESS. HEX LOCATION(00002BF2) IN CSECT(I7A01 ) LENGTH(2)
1358	SKDCB	1354 1431 1487 1542 1545 1570 1573 ADDRESS. HEX LOCATION(00002C7C) IN CSECT(I7A01 ) LENGTH(2)
1224	START	1534 ABSOLUTE. HEX VALUE(0000000A)
104	SUPSTAT	2268 ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7A01 ) LENGTH(1)
2801	TEMP	2554 ADDRESS. HEX LOCATION(0000327C) IN CSECT(I7A01 ) LENGTH(2)
95	TUBUFF	2802 ADDRESS. HEX LOCATION(000018C2) IN CSECT(I7A01 ) LENGTH(1)
96	TULAST	2822 ADDRESS. HEX LOCATION(000018C4) IN CSECT(I7A01 ) LENGTH(1)
92	TUMSGWTR	2820 ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7A01 ) LENGTH(1)
76	TUPARM1	2556 ADDRESS. HEX LOCATION(0000189A) IN CSECT(I7A01 ) LENGTH(1)
98	TURESUL	2630 2703 ADDRESS. HEX LOCATION(000018C8) IN CSECT(I7A01 ) LENGTH(1)
1196	TURTN	2650 2651 2701 2719 2720 2725 2790 2871 2872 2947 2948 2949 2950 2998 2999 ADDRESS. HEX LOCATION(00002C2C) IN CSECT(I7A01 ) LENGTH(2)
74	TUSTATUS	2561 2623 2695 2782 2941 ADDRESS. HEX LOCATION(00001818) IN CSECT(I7A01 ) LENGTH(1)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
75	TUWORK	ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7A01 ) LENGTH(1)
2899	T01A	2534 2535 2536 2538 2594 ADDRESS. HEX LOCATION(000033B4) IN CSECT(I7A01 ) LENGTH(2)
2901	T01B	2894 ADDRESS. HEX LOCATION(000033BA) IN CSECT(I7A01 ) LENGTH(2)
2870	T01C	2814 2816 2827 2896 ADDRESS. HEX LOCATION(0000336C) IN CSECT(I7A01 ) LENGTH(4)
2903	T01ER	2819 2847 2884 2888 2892 2898 2902 ADDRESS. HEX LOCATION(000033BE) IN CSECT(I7A01 ) LENGTH(2)
2832	T01G	2786 2807 2810 2825 2837 2852 2858 ADDRESS. HEX LOCATION(000032EA) IN CSECT(I7A01 ) LENGTH(4)
2823	T01H	2829 ADDRESS. HEX LOCATION(000032D0) IN CSECT(I7A01 ) LENGTH(2)
2844	T01J	2831 ADDRESS. HEX LOCATION(00003312) IN CSECT(I7A01 ) LENGTH(6)
2855	T01K	2833 ADDRESS. HEX LOCATION(00003334) IN CSECT(I7A01 ) LENGTH(6)
2889	T01L	2866 ADDRESS. HEX LOCATION(00003398) IN CSECT(I7A01 ) LENGTH(2)
2887	T01N	2812 ADDRESS. HEX LOCATION(00003394) IN CSECT(I7A01 ) LENGTH(2)
2885	T01P	2839 ADDRESS. HEX LOCATION(00003390) IN CSECT(I7A01 ) LENGTH(2)
2883	T01Q	2841 2862 ADDRESS. HEX LOCATION(0000338C) IN CSECT(I7A01 ) LENGTH(2)
2879	T01U	2843 ADDRESS. HEX LOCATION(00003384) IN CSECT(I7A01 ) LENGTH(2)
2881	T01X	2864 ADDRESS. HEX LOCATION(00003388) IN CSECT(I7A01 ) LENGTH(2)
2877	T01Y	2860 ADDRESS. HEX LOCATION(00003380) IN CSECT(I7A01 ) LENGTH(2)
2893	T01Z	2854 ADDRESS. HEX LOCATION(000033A0) IN CSECT(I7A01 ) LENGTH(6)
2623	T7A01	2890 ADDRESS. HEX LOCATION(00003178) IN CSECT(I7A01 ) LENGTH(4)
2658	T7A01I	532 559 577 628 670 685 700 715 730 745 760 775 790 850 910 ADDRESS. HEX LOCATION(000031DA) IN CSECT(I7A01 ) LENGTH(2)
2651	T7A01X	2631 2632 2633 2634 2635 2637 2650 ADDRESS. HEX LOCATION(000031D0) IN CSECT(I7A01 ) LENGTH(6)
1205	T7A02	2649 ADDRESS. HEX LOCATION(00002C34) IN CSECT(I7A01 ) LENGTH(6)
2695	T7A03	544 589 601 613 655 805 835 865 895 925 955 985 ADDRESS. HEX LOCATION(000031DE) IN CSECT(I7A01 ) LENGTH(4)
2715	T7A03K	820 880 940 ADDRESS. HEX LOCATION(00003224) IN CSECT(I7A01 ) LENGTH(2)
2735	T7A03L	2718 ADDRESS. HEX LOCATION(0000324E) IN CSECT(I7A01 ) LENGTH(2)
2719	T7A03M	2704 2705 2706 2707 2708 2710 ADDRESS. HEX LOCATION(0000322C) IN CSECT(I7A01 ) LENGTH(6)
2782	T7A04	2717 ADDRESS. HEX LOCATION(00003252) IN CSECT(I7A01 ) LENGTH(4)
2941	T7A05	970 ADDRESS. HEX LOCATION(000033C2) IN CSECT(I7A01 ) LENGTH(4)
1391	VRDCB	1003 ADDRESS. HEX LOCATION(00002CAC) IN CSECT(I7A01 ) LENGTH(2)
1413	WKDCB	1562 ADDRESS. HEX LOCATION(00002CCC) IN CSECT(I7A01 ) LENGTH(2)
3018	WRBUF	1576 1577 ADDRESS. HEX LOCATION(000034AE) IN CSECT(I7A01 ) LENGTH(2)
1380	WRDCB	2952 2969 2976 ADDRESS. HEX LOCATION(00002C9C) IN CSECT(I7A01 ) LENGTH(2)
1230	WRIT0	1565 1611 2952 2980 2981 ABSOLUTE. HEX VALUE(00000010)
1231	WRIT1	1606 ABSOLUTE. HEX VALUE(00000011)
1452	WRSID	1608 ADDRESS. HEX LOCATION(00002D0A) IN CSECT(I7A01 ) LENGTH(2)
1336	WSDCB	1443 1420 1488 1577 1581 ADDRESS. HEX LOCATION(00002C5C) IN CSECT(I7A01 ) LENGTH(2)
1143	XE	ABSOLUTE. HEX VALUE(00000024) 2363 2425 2808 2823 2835 2850 2856
1141	XI	ABSOLUTE. HEX VALUE(00000022) 1599 2267 2410
2239	XIO	ADDRESS. HEX LOCATION(00002E4C) IN CSECT(I7A01 ) LENGTH(4)
2425	XIOCK	1535 1538 1546 1553 1560 1563 1566 1574 1578 1582 1585 ADDRESS. HEX LOCATION(00002F20) IN CSECT(I7A01 ) LENGTH(2)
2432	XIOCO	2277 ADDRESS. HEX LOCATION(00002F32) IN CSECT(I7A01 ) LENGTH(2)
2442	XIOCO	2430 ADDRESS. HEX LOCATION(00002F48) IN CSECT(I7A01 ) LENGTH(4)
2247	XIOCS	2439 ADDRESS. HEX LOCATION(00002E5E) IN CSECT(I7A01 ) LENGTH(6)
2434	XIOCV	2443 2721 2809 2824 2836 2851 2857 ADDRESS. HEX LOCATION(00002F36) IN CSECT(I7A01 ) LENGTH(2)
2445	XIOCX	2428 ADDRESS. HEX LOCATION(00002F54) IN CSECT(I7A01 ) LENGTH(4)
2242	XIODG	2435 ADDRESS. HEX LOCATION(00002E52) IN CSECT(I7A01 ) LENGTH(6)
2318	XIOER	1612 1619 ADDRESS. HEX LOCATION(00002EBE) IN CSECT(I7A01 ) LENGTH(2)
2251	XIOI	2451 ADDRESS. HEX LOCATION(00002E6E) IN CSECT(I7A01 ) LENGTH(4)
2264	XIOI	2240 2243 ADDRESS. HEX LOCATION(00002E94) IN CSECT(I7A01 ) LENGTH(2)
2276	XIOI	2250 ADDRESS. HEX LOCATION(00002EAA) IN CSECT(I7A01 ) LENGTH(2)
62	XTRNL	1607 1609 2283 ABSOLUTE. HEX VALUE(00000001)
2727	X7A03	999 ADDRESS. HEX LOCATION(00003246) IN CSECT(I7A01 ) LENGTH(4)
1445	ZERO0	2731 ADDRESS. HEX LOCATION(00002CFC) IN CSECT(I7A01 ) LENGTH(2)