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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
                             3       COPY  LOG7A26              ** MAP EC HISTORY **
                             4 ********************************************************************
                             5 *                                                                  *
                             6 *                     ***       PREREQUISITES        ***           *
                             7 *                                                                  *
                             8 *                                NONE                              *
                             9 *                                                                  *
                            10 ********************************************************************
                            11 *                                                                  *
                            12 *                     ***       MODIFICATIONS        ***           *
                            13 *                                                                  *
                            14 *     CHANGES MADE TO COPRECT ERRORS FOUND WHILE IN TEST           *
                            15 *                                                                  *
                            16 ********************************************************************
                            17 *                                                                  *
                            18 *                     ***     PEA'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 02OCT78  DATE 10JAN79  DATE             *
                            33 *       E.C. 755391   E.C. 375102   E.C. 375222   E.C.              *
                            34 *                                                                  *
                            35 ********************************************************************
002500                      37 I7A26     START X'2500'              START ADDRESS OF ALL 'I' TYPE PROG
000100                      38 @QUES     EQU   X'0100'              EQUATED VALUE FOR MDI STATEMENT
000101                      39 @FIXT     EQU   X'0101'              EQUATED VALUE FOR MDI STATEMENT
000102                      40 @STOP     EQU   X'0102'              EQUATED VALUE FOR MDI STATEMENT
000200                      41 @GOTO     EQU   X'0200'              EQUATED VALUE FOR MDI STATEMENT
000201                      42 @CALL     EQU   X'0201'              EQUATED VALUE FOR MDI STATEMENT
000300                      43 @INPT     EQU   X'0300'              EQUATED VALUE FOR MDI STATEMENT
000400                      44 @QUXX     EQU   X'0400'              EQUATED VALUE FOR MDI STATEMENT
000500                      45 @TUXX     EQU   X'0500'              EQUATED VALUE FOR MDI STATEMENT
000600                      46 @NVLD     EQU   X'0600'              EQUATED VALUE FOR MDI STATEMENT
000000                      47 EQ        EQU   X'0000'              EQUATE FOR EQUAL
000004                      48 NE        EQU   X'0004'              EQUATE FOR NOT EQUAL
000008                      49 HI        EQU   X'0008'              EQUATE FOR HIGH
00000C                      50 NH        EQU   X'000C'              EQUATE FOR NOT HIGH
000010                      51 LO        EQU   X'0010'              EQUATE FOR LOW
000014                      52 NL        EQU   X'0014'              EQUATE FOR NOT LOW
000010                      53 LT        EQU   X'0010'              EQUATE FOR LESS THAN
00000C                      54 LE        EQU   X'000C'              EQUATE FOR LESS THAN OR EQUAL TO
000008                      55 GT        EQU   X'0008'              EQUATE FOR GREATER THAN
000014                      56 GE        EQU   X'0014'              EQUATE FOR GREATER THAN OR EQUAL TO
000200                      57 ON        EQU   X'0200'              EQUATE FOR ON
000202                      58 OF        EQU   X'0202'              EQUATE FOR OFF
000204                      59 MX        EQU   X'0204'              EQUATE FOR MIXED
000000                      60 EBC       EQU   X'0000'              EQUATE FOR EBCDIC DATA TRANSFER
000001                      61 HEX       EQU   X'0001'              EQUATE FOR HEX DATA TRANSFER
000001                      62 XTRNL     EQU   X'0001'              EQUATE FOR EXTERNAL REFERENCE
000000                      63 INTRNL    EQU   X'0000'              EQUATE FOR INTERNAL REFERENCE
000000                      64 PARM      EQU   X'0000'              EQUATE INDICATING PARAMETER
000001                      65 DA        EQU   X'0001'              EQUATE FOR DEVICE ADDRESS
000002                      66 UA        EQU   X'0002'              EQUATE FOR UNIT ADDRESS
000000                      67 DUMMY     EQU   X'0000'              DUMMY EQUATE
001800                      69 PID       EQU   *-X'0D00'            ADDRESS OF MDI HEADER
000232                      70 PTYPE     EQU   *-X'22CE'            ADDRESS OF PROCESSOR TYPE FIELD
00180C                      71 STEPNUM   EQU   PID+X'000C'          ADDRESS OF DECIMAL STEP NUMBER
00180E                      72 OPWD1     EQU   PID+X'000E'          ADDRESS OF OPTION WORD ONE
001810                      73 OPWD2     EQU   PID+X'0010'          ADDRESS OF OPTION WORD TWO
001818                      74 TUSTATUS  EQU   PID+X'0018'          ADDRESS OF TU STATUS WORD
00181A                      75 TUWORK    EQU   PID+X'001A'          ADDRESS OF TU WORK AREA
00189A                      76 TUPARM1   EQU   PID+X'009A'          ADDRESS OF PARM 1 POINTER
00189C                      77 TUPARM2   EQU   PID+X'009C'          ADDRESS OF PARM 2 POINTER
00189E                      78 TUPARM3   EQU   PID+X'009E'          ADDRESS OF PARM 3 POINTER
0018A0                      79 TUPARM4   EQU   PID+X'00A0'          ADDRESS OF PARM 4 POINTER
0018A2                      80 TUPARM5   EQU   PID+X'00A2'          ADDRESS OF PARM 5 POINTER
0018A4                      81 TUPARM6   EQU   PID+X'00A4'          ADDRESS OF PARM 6 POINTER
0018A6                      82 TUPARM7   EQU   PID+X'00A6'          ADDRESS OF PARM 7 POINTER
0018A8                      83 TUPARM8   EQU   PID+X'00A8'          ADDRESS OF PARM 8 POINTER
0018AA                      84 TUPARM9   EQU   PID+X'00AA'          ADDRESS OF PARM 9 POINTER
0018AC                      85 TUPARM10  EQU   PID+X'00AC'          ADDRESS OF PARM 10 POINTER
0018AE                      86 TUPARM11  EQU   PID+X'00AE'          ADDRESS OF PARM 11 POINTER
0018B0                      87 TUPARM12  EQU   PID+X'00B0'          ADDRESS OF PARM 12 POINTER
0018B2                      88 TUPARM13  EQU   PID+X'00B2'          ADDRESS OF PARM 13 POINTER
0018B4                      89 TUPARM14  EQU   PID+X'00B4'          ADDRESS OF PARM 14 POINTER
0018B6                      90 TUPARM15  EQU   PID+X'00B6'          ADDRESS OF PARM 15 POINTER
0018B8                      91 TUPARM16  EQU   PID+X'00B8'          ADDRESS OF PARM 16 POINTER
0018BA                      92 TUMSGWTR  EQU   PID+X'00BA'          ADDRESS OF -> TO COMMON MSG WRITER
0018BE                      93 TUUA      EQU   PID+X'00BE'          ADDRESS OF UNIT ADDRESS IN EBC
0018C0                      94 TUDA      EQU   PID+X'00C0'          ADDRESS OF DEVICE ADDRESS IN EBC
0018C2                      95 TUBUFF    EQU   PID+X'00C2'          ADDRESS OF LAST USED WORD IN MAP
0018C4                      96 TULAST    EQU   PID+X'00C4'          ADDRESS OF LAST ADDRESSABLE WORD
0018C6                      97 TURESULN  EQU   PID+X'00C6'          ADDRESS OF LENGTH OF TU RESULTS
0018C8                      98 TURESUL   EQU   PID+X'00C8'          ADDRESS OF TU RESULTS FIELD
0018FC                      99 MAPNAME   EQU   PID+X'00FC'          ADDRESS OF MAP NAME FIELD IN HEX
001948                     100 TUINPT    EQU   PID+X'0148'          ADDRESS OF $INPT DATA
00196E                     101 PARMARA   EQU   PID+X'016E'          ADDRESS OF $INPT INPUT AREA
0019B8                     102 @DCADD1   EQU   PID+X'01B8'          MDI POINTER
0019BA                     103 @DCADD2   EQU   PID+X'01BA'          MDI POINTER
0019C4                     104 SUPSTAT   EQU   PID+X'01C4'          ADDRESS OF MDI STATUS
0019D0                     105 DEVADD    EQU   PID+X'01D0'          ADDRESS OF DEVICE ADDRESS TABLE 0
0019DA                     106 DEVADD1   EQU   PID+X'01DA'          ADDRESS OF DEVICE ADDRESS TABLE 1
0019E4                     107 DEVADD2   EQU   PID+X'01E4'          ADDRESS OF DEVICE ADDRESS TABLE 2
0019EE                     108 DEVADD3   EQU   PID+X'01EE'          ADDRESS OF DEVICE ADDRESS TABLE 3
0019F8                     109 DEVADD4   EQU   PID+X'01F8'          ADDRESS OF DEVICE ADDRESS TABLE 4
001A02                     110 DEVADD5   EQU   PID+X'0202'          ADDRESS OF DEVICE ADDRESS TABLE 5
001A0C                     111 DEVADD6   EQU   PID+X'020C'          ADDRESS IF DEVICE ADDRESS TABLE 6
001A16                     112 DEVADD7   EQU   PID+X'0216'          ADDRESS OF DEVICE ADDRESS TABLE 7
                           113           PRINT OFF
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
002500  2EBC               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 FOLLOWES                                 **
                           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 CONTAINES 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   **
                           241 **                                                                **
                           242 **        $CALL                                                   **
                           243 **              A) RULE EQUATE X'0201'                            **
                           244 **              B) ADDRESS OF MESSAGE                             **
                           245 **              C) NAME OF MAP TO CALL                            **
                           246 **              D) ENTRY POINT WITHIN CALLED MAP TO USE           **
                           247 **              E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE   **
                           248 **                                                                **
                           249 **        $INPT                                                   **
                           250 **              A) RULE EQUATE X'0300'                            **
                           251 **              B) INPUT TYPE (EBCDIC OR HEX)                     **
                           252 **              C) ADDRESS OF YES LEG RULE                        **
                           253 **              D) DESTINATION LOCATION OF INPUT DATA             **
                           254 **              E) LENGTH OF INPUT DATA                           **
                           255 **              F) LOWER LIMIT OF GOOD DATA                       **
                           256 **              G) HIGHER LIMIT OF GOOD DATA                      **
                           257 **                                                                **
                           258 **        $QUXX                                                   **
                           259 **              A) RULE EQUATE X'0400'                            **
                           260 **              B) ADDRESS OF YES LEG RULE                        **
                           261 **              C) TU BRANCH TO ADDRESS (INITIAL)                 **
                           262 **              D) TU BRANCH TO ADDRESS (SECONDARY)               **
                           263 **              E) LENGTH OF PARAMETER IN BYTES                   **
                           264 **              F) PARAMETER TO PASS TO TU                        **
                           265 **              G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER   **
                           266 **                                                                **
                           267 **        $TUXX                                                   **
                           268 **              A) RULE EQUATE X'0500'                            **
                           269 **              B) ADDRESS OF YES LEG RULE                        **
                           270 **              C) TU BRANCH TO ADDRESS                           **
                           271 **              D) TYPE OF COMPARE TO MAKE ON RESULTS             **
                           272 **              E) LENGTH OF COMPARED RESULTS                     **
                           273 **              F) MASK FIELD FOR COMPARE                         **
                           274 **              G) LENGTH OF PARAMETER IN BYTES                   **
                           275 **              H) PARAMETER TO PASS TO THE TU                    **
                           276 **              I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER   **
                           277 **                                                                **
                           278 **        $NVLD                                                   **
                           279 **              A) RULE EQUATE X'0600'                            **
                           281 **                                                                **
                           282 **   ENTRY POINT TABLE                                            **
                           283 **        THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT **
                           284 **        THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE       **
                           285 **        REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWES: **
                           286 **                                                                **
                           287 **            A) NAME OF ENTRY POINT                              **
                           288 **            B) ADDRESS OF ENTRY POINT RULE TABLE                **
                           289 **                                                                **
                           290 **        THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'     **
                           291 **                                                                **
                           292 **   MESSAGE TABLE                                                **
                           293 **        THIS TABLE CONTAINES THE MESSAGE PASSED TO THE OPERATOR  **
                           294 **        VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWES:       **
                           295 **                                                                **
                           296 **            A) EQUATE FOR START OF MESSAGE BLOCK                **
                           297 **            B) NUMBER OF LINES OF MESSAGE                       **
                           298 **            C) LENGTH OF FOLLOWING LINE                         **
                           299 **            D) FIRST LINE OF MESSAGE                            **
                           300 **            E) LENGTH OF FOLLOWING LINE                         **
                           301 **            F) SECOND LINE OF MESSAGE                           **
                           302 **            G) ETC.                                             **
                           303 **                                                                **
                           304 ********************************************************************
                           305 ********************************************************************
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LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT		COPYRIGHT IBM CORP 1976
		308	**********		
		309	**********		
		310	**		**
		311	**	STEP AND RULE ADDRESS TABLE	**
		312	**		**
		313	**********		
		314	**********		
002502	2728	315		DC AL2(N00001)	
002504	0001	316		DC XL2'0001'	
000001		317	EQN00001	EQU 0001	
002506	2740	318		DC AL2(N00002)	
002508	0002	319		DC XL2'0002'	
000002		320	EQN00002	EQU 0002	
00250A	274C	321		DC AL2(N00003)	
00250C	0003	322		DC XL2'0003'	
000003		323	EQN00003	EQU 0003	
00250E	2766	324		DC AL2(N00004)	
002510	0004	325		DC XL2'0004'	
000004		326	EQN00004	EQU 0004	
002512	2780	327		DC AL2(N00005)	
002514	0005	328		DC XL2'0005'	
000005		329	EQN00005	EQU 0005	
002516	2792	330		DC AL2(N00006)	
002518	0006	331		DC XL2'0006'	
000006		332	EQN00006	EQU 0006	
00251A	2796	333		DC AL2(N00007)	
00251C	0007	334		DC XL2'0007'	
000007		335	EQN00007	EQU 0007	
00251E	27AE	336		DC AL2(N00008)	
002520	0008	337		DC XL2'0008'	
000008		338	EQN00008	EQU 0008	
002522	27C0	339		DC AL2(N00009)	
002524	0009	340		DC XL2'0009'	
000009		341	EQN00009	EQU 0009	
002526	27D8	342		DC AL2(N00010)	
002528	0010	343		DC XL2'0010'	
00000A		344	EQN00010	EQU 0010	
00252A	27F0	345		DC AL2(N00011)	
00252C	0011	346		DC XL2'0011'	
00000B		347	EQN00011	EQU 0011	
00252E	280A	348		DC AL2(N00012)	
002530	0012	349		DC XL2'0012'	
00000C		350	EQN00012	EQU 0012	
002532	2822	351		DC AL2(N00013)	
002534	0013	352		DC XL2'0013'	
00000D		353	EQN00013	EQU 0013	
002536	2826	354		DC AL2(N00014)	
002538	0014	355		DC XL2'0014'	
00000E		356	EQN00014	EQU 0014	
00253A	282A	357		DC AL2(N00015)	
00253C	0015	358		DC XL2'0015'	
00000F		359	EQN00015	EQU 0015	
00253E	282E	360		DC AL2(N00016)	
002540	0016	361		DC XL2'0016'	
000010		362	EQN00016	EQU 0016	
002542	2832	363		DC AL2(N00017)	
002544	0017	364		DC XL2'0017'	
000011		365	EQN00017	EQU 0017	
002546	284A	366		DC AL2(N00018)	
002548	0018	367		DC XL2'0018'	
000012		368	EQN00018	EQU 0018	
00254A	284E	369		DC AL2(N00019)	
00254C	0019	370		DC XL2'0019'	
000013		371	EQN00019	EQU 0019	
00254E	2852	372		DC AL2(N00020)	
002550	0020	373		DC XL2'0020'	
000014		374	EQN00020	EQU 0020	
002552	286A	375		DC AL2(N00021)	
002554	0021	376		DC XL2'0021'	
000015		377	EQN00021	EQU 0021	
002556	2884	378		DC AL2(N00022)	
002558	0022	379		DC XL2'0022'	
000016		380	EQN00022	EQU 0022	
00255A	289C	381		DC AL2(N00023)	
00255C	0023	382		DC XL2'0023'	
000017		383	EQN00023	EQU 0023	
00255E	28B4	384		DC AL2(N00024)	
002560	0024	385		DC XL2'0024'	
000018		386	EQN00024	EQU 0024	
002562	28B8	387		DC AL2(N00025)	
002564	0025	388		DC XL2'0025'	
000019		389	EQN00025	EQU 0025	
002566	28BC	390		DC AL2(N00026)	
002568	0026	391		DC XL2'0026'	
00001A		392	EQN00026	EQU 0026	
00256A	28C0	393		DC AL2(N00027)	
00256C	0027	394		DC XL2'0027'	
00001B		395	EQN00027	EQU 0027	
00256E	28D8	396		DC AL2(N00028)	
002570	0028	397		DC XL2'0028'	
00001C		398	EQN00028	EQU 0028	
002572	28DC	399		DC AL2(N00029)	
002574	0029	400		DC XL2'0029'	
00001D		401	EQN00029	EQU 0029	
002576	28E0	402		DC AL2(N00030)	
002578	0030	403		DC XL2'0030'	
00001E		404	EQN00030	EQU 0030	
00257A	28F8	405		DC AL2(N00031)	
00257C	0031	406		DC XL2'0031'	
00001F		407	EQN00031	EQU 0031	
00257E	28FC	408		DC AL2(N00032)	
002580	0032	409		DC XL2'0032'	
000020		410	EQN00032	EQU 0032	
002582	2900	411		DC AL2(N00033)	
002584	0033	412		DC XL2'0033'	
000021		413	EQN00033	EQU 0033	
002586	2918	414		DC AL2(N00034)	
002588	0034	415		DC XL2'0034'	
000022		416	EQN00034	EQU 0034	
00258A	2930	417		DC AL2(N00035)	
00258C	0035	418		DC XL2'0035'	
000023		419	EQN00035	EQU 0035	
00258E	2948	420		DC AL2(N00036)	
002590	0036	421		DC XL2'0036'	

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT		COPYRIGHT IBM CORP 1976
000024		422	EQN00036	EQU 0036	
002592	294C	423		DC AL2(N00037)	
002594	0037	424		DC XL2'0037'	
000025		425	EQN00037	EQU 0037	
002596	2950	426		DC AL2(N00038)	
002598	0038	427		DC XL2'0038'	
000026		428	EQN00038	EQU 0038	
00259A	2968	429		DC AL2(N00039)	
00259C	0039	430		DC XL2'0039'	
000027		431	EQN00039	EQU 0039	
00259E	296C	432		DC AL2(N00040)	
0025A0	0040	433		DC XL2'0040'	
000028		434	EQN00040	EQU 0040	
0025A2	2970	435		DC AL2(N00041)	
0025A4	0041	436		DC XL2'0041'	
000029		437	EQN00041	EQU 0041	
0025A6	298A	438		DC AL2(N00042)	
0025A8	0042	439		DC XL2'0042'	
00002A		440	EQN00042	EQU 0042	
0025AA	29A4	441		DC AL2(N00043)	
0025AC	0043	442		DC XL2'0043'	
00002B		443	EQN00043	EQU 0043	
0025AE	29BC	444		DC AL2(N00044)	
0025B0	0044	445		DC XL2'0044'	
00002C		446	EQN00044	EQU 0044	
0025B2	29C0	447		DC AL2(N00045)	
0025B4	0045	448		DC XL2'0045'	
00002D		449	EQN00045	EQU 0045	
0025B6	29C4	450		DC AL2(N00046)	
0025B8	0046	451		DC XL2'0046'	
00002E		452	EQN00046	EQU 0046	
0025BA	29DE	453		DC AL2(N00047)	
0025BC	0047	454		DC XL2'0047'	
00002F		455	EQN00047	EQU 0047	
0025BE	29E2	456		DC AL2(N00048)	
0025C0	0048	457		DC XL2'0048'	
000030		458	EQN00048	EQU 0048	
0025C2	29FA	459		DC AL2(N00049)	
0025C4	0049	460		DC XL2'0049'	
000031		461	EQN00049	EQU 0049	
0025C6	2A12	462		DC AL2(N00050)	
0025C8	0050	463		DC XL2'0050'	
000032		464	EQN00050	EQU 0050	
0025CA	2A16	465		DC AL2(N00051)	
0025CC	0051	466		DC XL2'0051'	
000033		467	EQN00051	EQU 0051	
0025CE	2A2E	468		DC AL2(N00052)	
0025D0	0052	469		DC XL2'0052'	
000034		470	EQN00052	EQU 0052	
0025D2	2A32	471		DC AL2(N00053)	
0025D4	0053	472		DC XL2'0053'	
000035		473	EQN00053	EQU 0053	
0025D6	2A36	474		DC AL2(N00054)	
0025D8	0054	475		DC XL2'0054'	
000036		476	EQN00054	EQU 0054	
0025DA	2A3A	477		DC AL2(N00055)	
0025DC	0055	478		DC XL2'0055'	
000037		479	EQN00055	EQU 0055	
0025DE	2A52	480		DC AL2(N00056)	
0025E0	0056	481		DC XL2'0056'	
000038		482	EQN00056	EQU 0056	
0025E2	2A6A	483		DC AL2(N00057)	
0025E4	0057	484		DC XL2'0057'	
000039		485	EQN00057	EQU 0057	
0025E6	2A82	486		DC AL2(N00058)	
0025E8	0058	487		DC XL2'0058'	
00003A		488	EQN00058	EQU 0058	
0025EA	2A9A	489		DC AL2(N00059)	
0025EC	0059	490		DC XL2'0059'	
00003B		491	EQN00059	EQU 0059	
0025EE	2A9E	492		DC AL2(N00060)	
0025F0	0060	493		DC XL2'0060'	
00003C		494	EQN00060	EQU 0060	
0025F2	2AB8	495		DC AL2(N00061)	
0025F4	0061	496		DC XL2'0061'	
00003D		497	EQN00061	EQU 0061	
0025F6	2AD0	498		DC AL2(N00062)	
0025F8	0062	499		DC XL2'0062'	
00003E		500	EQN00062	EQU 0062	
0025FA	2AD4	501		DC AL2(N00063)	
0025FC	0063	502		DC XL2'0063'	
00003F		503	EQN00063	EQU 0063	
0025FE	2AEA	504		DC AL2(N00064)	
002600	0064	505		DC XL2'0064'	
000040		506	EQN00064	EQU 0064	
002602	2AEE	507		DC AL2(N00065)	
002604	0065	508		DC XL2'0065'	
000041		509	EQN00065	EQU 0065	
002606	2B06	510		DC AL2(N00066)	
002608	0066	511		DC XL2'0066'	
000042		512	EQN00066	EQU 0066	
00260A	2B0A	513		DC AL2(N00067)	
00260C	0067	514		DC XL2'0067'	
000043		515	EQN00067	EQU 0067	
00260E	2B28	516		DC AL2(N00068)	
002610	0068	517		DC XL2'0068'	
000044		518	EQN00068	EQU 0068	
002612	2B2C	519		DC AL2(N00069)	
002614	0069	520		DC XL2'0069'	
000045		521	EQN00069	EQU 0069	
002616	2B30	522		DC AL2(N00070)	
002618	0070	523		DC XL2'0070'	
000046		524	EQN00070	EQU 0070	
00261A	2B34	525		DC AL2(N00071)	
00261C	0071	526		DC XL2'0071'	
000047		527	EQN00071	EQU 0071	
00261E	2B38	528		DC AL2(N00072)	
002620	0072	529		DC XL2'0072'	
000048		530	EQN00072	EQU 0072	
002622	2B3C	531		DC AL2(N00073)	
002624	0073	532		DC XL2'0073'	
000049		533	EQN00073	EQU 0073	
002626	2B40	534		DC AL2(N00074)	
002628	0074	535		DC XL2'0074'	

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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT
00004A                      536 EQN00074 EQU       0074
002629  2B5A                537          DC      AL2(N00075)
00262C  0075                538          DC      XL2'0075'
00004B                      539 EQN00075 EQU       0075
00262E  2B72                540          DC      AL2(N00076)
002630  0076                541          DC      XL2'0076'
00004C                      542 EQN00076 EQU       0076
002632  2B90                543          DC      AL2(N00077)
002634  0077                544          DC      XL2'0077'
00004D                      545 EQN00077 EQU       0077
002636  2B94                546          DC      AL2(N00078)
002638  0078                547          DC      XL2'0078'
00004E                      548 EQN00078 EQU       0078
00263A  2B98                549          DC      AL2(N00079)
00263C  0079                550          DC      XL2'0079'
00004F                      551 EQN00079 EQU       0079
00263E  2B9C                552          DC      AL2(N00080)
002640  0080                553          DC      XL2'0080'
000050                      554 EQN00080 EQU       0080
002642  2BB6                555          DC      AL2(N00081)
002644  0081                556          DC      XL2'0081'
000051                      557 EQN00081 EQU       0081
002646  2BCE                558          DC      AL2(N00082)
002648  0082                559          DC      XL2'0082'
000052                      560 EQN00082 EQU       0082
00264A  2BE6                561          DC      AL2(N00083)
00264C  0083                562          DC      XL2'0083'
000053                      563 EQN00083 EQU       0083
00264E  2BFE                564          DC      AL2(N00084)
002650  0084                565          DC      XL2'0084'
000054                      566 EQN00084 EQU       0084
002652  2C02                567          DC      AL2(N00085)
002654  0085                568          DC      XL2'0085'
000055                      569 EQN00085 EQU       0085
002656  2C06                570          DC      AL2(N00086)
002658  0086                571          DC      XL2'0086'
000056                      572 EQN00086 EQU       0086
00265A  2C0A                573          DC      AL2(N00087)
00265C  0087                574          DC      XL2'0087'
000057                      575 EQN00087 EQU       0087
00265E  2C22                576          DC      AL2(N00088)
002660  0088                577          DC      XL2'0088'
000058                      578 EQN00088 EQU       0088
002662  2C26                579          DC      AL2(N00089)
002664  0089                580          DC      XL2'0089'
000059                      581 EQN00089 EQU       0089
002666  2C2A                582          DC      AL2(N00090)
002668  0090                583          DC      XL2'0090'
00005A                      584 EQN00090 EQU       0090
00266A  2C2E                585          DC      AL2(N00091)
00266C  0091                586          DC      XL2'0091'
00005B                      587 EQN00091 EQU       0091
00266E  2C46                588          DC      AL2(N00092)
002670  0092                589          DC      XL2'0092'
00005C                      590 EQN00092 EQU       0092
002672  2C60                591          DC      AL2(N00093)
002674  0093                592          DC      XL2'0093'
00005D                      593 EQN00093 EQU       0093
002676  2C72                594          DC      AL2(N00094)
002678  0094                595          DC      XL2'0094'
00005E                      596 EQN00094 EQU       0094
00267A  2C76                597          DC      AL2(N00095)
00267C  0095                598          DC      XL2'0095'
00005F                      599 EQN00095 EQU       0095
00267E  2C8E                600          DC      AL2(N00096)
002680  0096                601          DC      XL2'0096'
000060                      602 EQN00096 EQU       0096
002682  2CA6                603          DC      AL2(N00097)
002684  0097                604          DC      XL2'0097'
000061                      605 EQN00097 EQU       0097
002686  2CAA                606          DC      AL2(N00098)
002688  0098                607          DC      XL2'0098'
000062                      608 EQN00098 EQU       0098
00268A  2CAE                609          DC      AL2(N00099)
00268C  0099                610          DC      XL2'0099'
000063                      611 EQN00099 EQU       0099
00268E  2CC6                612          DC      AL2(N00100)
002690  0100                613          DC      XL2'0100'
000064                      614 EQN00100 EQU       0100
002692  2CCA                615          DC      AL2(N00101)
002694  0101                616          DC      XL2'0101'
000065                      617 EQN00101 EQU       0101
002696  2CE8                618          DC      AL2(N00102)
002698  0102                619          DC      XL2'0102'
000066                      620 EQN00102 EQU       0102
00269A  2D00                621          DC      AL2(N00103)
00269C  0103                622          DC      XL2'0103'
000067                      623 EQN00103 EQU       0103
00269E  2D04                624          DC      AL2(N00104)
0026A0  0104                625          DC      XL2'0104'
000068                      626 EQN00104 EQU       0104
0026A2  2D08                627          DC      AL2(N00105)
0026A4  0105                628          DC      XL2'0105'
000069                      629 EQN00105 EQU       0105
0026A6  2D0C                630          DC      AL2(N00106)
0026A8  0106                631          DC      XL2'0106'
00006A                      632 EQN00106 EQU       0106
0026AA  2D24                633          DC      AL2(N00107)
0026AC  0107                634          DC      XL2'0107'
00006B                      635 EQN00107 EQU       0107
0026AE  2D3E                636          DC      AL2(N00108)
0026B0  0108                637          DC      XL2'0108'
00006C                      638 EQN00108 EQU       0108
0026B2  2D42                639          DC      AL2(N00109)
0026B4  0109                640          DC      XL2'0109'
00006D                      641 EQN00109 EQU       0109
0026B6  2D46                642          DC      AL2(N00110)
0026B8  0110                643          DC      XL2'0110'
00006E                      644 EQN00110 EQU       0110
0026BA  2D4A                645          DC      AL2(N00111)
0026BC  0111                646          DC      XL2'0111'
00006F                      647 EQN00111 EQU       0111
0026BE  2D64                648          DC      AL2(N00112)
0026C0  0112                649          DC      XL2'0112'
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT
000070                      650 EQN00112 EQU       0112
0026C2  2D7C                651          DC      AL2(N00113)
0026C4  0113                652          DC      XL2'0113'
000071                      653 EQN00113 EQU       0113
0026C6  2D96                654          DC      AL2(N00114)
0026C8  0114                655          DC      XL2'0114'
000072                      656 EQN00114 EQU       0114
0026CA  2DA8                657          DC      AL2(N00115)
0026CC  0115                658          DC      XL2'0115'
000073                      659 EQN00115 EQU       0115
0026CE  2DAC                660          DC      AL2(N00116)
0026D0  0116                661          DC      XL2'0116'
000074                      662 EQN00116 EQU       0116
0026D2  2DC4                663          DC      AL2(N00117)
0026D4  0117                664          DC      XL2'0117'
000075                      665 EQN00117 EQU       0117
0026D6  2DC8                666          DC      AL2(N00118)
0026D8  0118                667          DC      XL2'0118'
000076                      668 EQN00118 EQU       0118
0026DA  2DCC                669          DC      AL2(N00119)
0026DC  0119                670          DC      XL2'0119'
000077                      671 EQN00119 EQU       0119
0026DE  2DE4                672          DC      AL2(N00120)
0026E0  0120                673          DC      XL2'0120'
000078                      674 EQN00120 EQU       0120
0026E2  2DFE                675          DC      AL2(N00121)
0026E4  0121                676          DC      XL2'0121'
000079                      677 EQN00121 EQU       0121
0026E6  2E16                678          DC      AL2(N00122)
0026E8  0122                679          DC      XL2'0122'
00007A                      680 EQN00122 EQU       0122
0026EA  2E1A                681          DC      AL2(N00123)
0026EC  0123                682          DC      XL2'0123'
00007B                      683 EQN00123 EQU       0123
0026EE  2E30                684          DC      AL2(N00124)
0026F0  0124                685          DC      XL2'0124'
00007C                      686 EQN00124 EQU       0124
0026F2  2E34                687          DC      AL2(N00125)
0026F4  0125                688          DC      XL2'0125'
00007D                      689 EQN00125 EQU       0125
0026F6  2E38                690          DC      AL2(N00126)
0026F8  0126                691          DC      XL2'0126'
00007E                      692 EQN00126 EQU       0126
0026FA  2E50                693          DC      AL2(N00127)
0026FC  0127                694          DC      XL2'0127'
00007F                      695 EQN00127 EQU       0127
0026FE  2E54                696          DC      AL2(N00128)
002700  0128                697          DC      XL2'0128'
000080                      698 EQN00128 EQU       0128
002702  2E58                699          DC      AL2(N00129)
002704  0129                700          DC      XL2'0129'
000081                      701 EQN00129 EQU       0129
002706  2E5C                702          DC      AL2(N00130)
002708  0130                703          DC      XL2'0130'
000082                      704 EQN00130 EQU       0130
00270A  2E74                705          DC      AL2(N00131)
00270C  0131                706          DC      XL2'0131'
000083                      707 EQN00131 EQU       0131
00270E  2E78                708          DC      AL2(N00132)
002710  0132                709          DC      XL2'0132'
000084                      710 EQN00132 EQU       0132
002712  2E7C                711          DC      AL2(N00133)
002714  0133                712          DC      XL2'0133'
000085                      713 EQN00133 EQU       0133
002716  2E94                714          DC      AL2(N00134)
002718  0134                715          DC      XL2'0134'
000086                      716 EQN00134 EQU       0134
00271A  2E98                717          DC      AL2(N00135)
00271C  0135                718          DC      XL2'0135'
000087                      719 EQN00135 EQU       0135
00271E  2EB2                720          DC      AL2(N00136)
002720  0136                721          DC      XL2'0136'
000088                      722 EQN00136 EQU       0136
002722  2EB6                723          DC      AL2(N00137)
002724  0137                724          DC      XL2'0137'
000089                      725 EQN00137 EQU       0137
002726  0000                726          DC      AL2(DUMMY)
                            727 ************************************************************************
                            728 ************************************************************************
                            729 **                                                                    **
                            730 **                        RULE INFORMATION TABLE                      **
                            731 **                                                                    **
                            732 ************************************************************************
                            733 ************************************************************************
                            734 N00001  $TUXX T7A10,8,0000000000000040,ON,QT=(Q00007),YES=N00003,     X
                            735+N00001  DC    A(@TUXX)
002728  0500                736+        DC    AL2(N00003)
00272A  274C                737+        DC    A(T7A10)
00272C  3514                738+        DC    AL2(ON)
00272E  0200                739+        DC    AL2(8)
002730  0008                740+        DC    X'0000000000000040'
002732  0000000000000040    741+        ALIGN WORD
                            742+        DC    AL2(0)
00273A  0000                743+        DC    C'AA'
00273C  C1C1                744+        ALIGN WORD
                            745+        DC     AL2(PARMARA)
00273E  196E                746 N00002  $GOTO TYPE=XTRNL,EP=G,MAP=7A24,FT=(F00076),GTO=((7A24,G))
                            747+N00002  DC    A(@GOTO)
002740  0200                748+        DC    A(F00076)
002742  2EC2                749+        DC    CL4'7A24'
002744  F7C1F2F4            750+        DC    CL2'G'
002748  C740                751+        DC    AL2(XTRNL)
00274A  0001                752 N00003  $TUXX T7A02,9,0000000010000000010,OF,QT=(Q00006),YES=N00091,    X
                            753+N00003  DC    A(@TUXX)
00274C  0500                754+        DC    AL2(N00091)
00274E  2C2E                755+        DC    A(T7A02)
002750  2FD0                756+        DC    AL2(OF)
002752  0202                757+        DC    AL2(9)
002754  0009                758+        DC    X'0000000010000000010'
002756  0000000010000001    759+        ALIGN WORD
00275F  00                  760+        DC    AL2(0)
002760  0000                761+        DC    C'AA'
002762  C1C1                762+        ALIGN WORD
                            763+        DC     AL2(PARMARA)
002764  196E
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

                            764 N00004   $TUXX T7A02,9,0000000000800000008,OF,QT=(Q00006),YES=N00074,    X
002766  0500                765+N00004   DC    A(@TUXX)
002768  2B40                766+         DC    AL2(N00074)
00276A  2FD0                767+         DC    A(T7A02)
00276C  0202                768+         DC    AL2(OF)
00276E  0009                769+         DC    AL2(9)
002770  0000000000800000000 770+         DC    X'0000000000800000008'
002779  00                  771+         ALIGN WORD
00277A  0000                772+         DC    AL2(0)
00277C  C1C1                773+         DC    C'AA'
                            774+         ALIGN WORD
00277E  196E                775+         DC     AL2(PARMARA)
                            776 N00005   $TUXX T7A02,2,0008,OF,QT=(Q00006),YES=N00007,CT=(C00027)
002780  0500                777+N00005   DC    A(@TUXX)
002782  2796                778+         DC    AL2(N00007)
002784  2FD0                779+         DC    A(T7A02)
002786  0202                780+         DC    AL2(OF)
002788  0002                781+         DC    AL2(2)
00278A  0008                782+         DC    X'0008'
                            783+         ALIGN WORD
00278C  0000                784+         DC    AL2(0)
00278E  C1C1                785+         DC    C'AA'
                            786+         ALIGN WORD
002790  196E                787+         DC     AL2(PARMARA)
                            788 N00006   $FIXT FT=(F00045),GTO=((7A70,A))
002792  0101                789+N00006   DC    A(@FIXT)
002794  2ECE                790+         DC    A(F00045)
                            791 N00007   $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00033,    X
002796  0500                792+N00007   DC    A(@TUXX)
002798  2900                793+         DC    AL2(N00033)
00279A  2FD0                794+         DC    A(T7A02)
00279C  0202                795+         DC    AL2(OF)
00279E  0008                796+         DC    AL2(8)
0027A0  0000000800000008    797+         DC    X'0000000800000008'
                            798+         ALIGN WORD
0027A8  0000                799+         DC    AL2(0)
0027AA  C1C1                800+         DC    C'AA'
                            801+         ALIGN WORD
0027AC  196E                802+         DC     AL2(PARMARA)
                            803 N00008   $TUXX T7A02,2,0004,OF,QT=(Q00006),YES=N00020,CT=(C00063)
0027AE  0500                804+N00008   DC    A(@TUXX)
0027B0  2852                805+         DC    AL2(N00020)
0027B2  2FD0                806+         DC    A(T7A02)
0027B4  0202                807+         DC    AL2(OF)
0027B6  0002                808+         DC    AL2(2)
0027B8  0004                809+         DC    X'0004'
                            810+         ALIGN WORD
0027BA  0000                811+         DC    AL2(0)
0027BC  C1C1                812+         DC    C'AA'
                            813+         ALIGN WORD
0027BE  196E                814+         DC     AL2(PARMARA)
                            815 N00009   $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00017,    X
0027C0  0500                816+N00009   DC    A(@TUXX)
0027C2  2832                817+         DC    AL2(N00017)
0027C4  2FD0                818+         DC    A(T7A02)
0027C6  0202                819+         DC    AL2(OF)
0027C8  0008                820+         DC    AL2(8)
0027CA  0000000200000002    821+         DC    X'0000000200000002'
                            822+         ALIGN WORD
0027D2  0000                823+         DC    AL2(0)
0027D4  C1C1                824+         DC    C'AA'
                            825+         ALIGN WORD
0027D6  196E                826+         DC     AL2(PARMARA)
                            827 N00010   $TUXX T7A02,7,00002000000002,OF,QT=(Q00006),YES=N00016,      X
0027D8  0500                828+N00010   DC    A(@TUXX)
0027DA  282E                829+         DC    AL2(N00016)
0027DC  2FD0                830+         DC    A(T7A02)
0027DE  0202                831+         DC    AL2(OF)
0027E0  0007                832+         DC    AL2(7)
0027E2  00002000000002      833+         DC    X'00002000000002'
0027E9  00                  834+         ALIGN WORD
0027EA  0000                835+         DC    AL2(0)
0027EC  C1C1                836+         DC    C'AA'
                            837+         ALIGN WORD
0027EE  196E                838+         DC     AL2(PARMARA)
                            839 N00011   $TUXX T7A02,9,0000000020000000020,OF,QT=(Q00006),YES=N00015,   X
0027F0  0500                840+N00011   DC    A(@TUXX)
0027F2  282A                841+         DC    AL2(N00015)
0027F4  2FD0                842+         DC    A(T7A02)
0027F6  0202                843+         DC    AL2(OF)
0027F8  0009                844+         DC    AL2(9)
0027FA  00000000200000002   845+         DC    X'000000002000000020'
002803  00                  846+         ALIGN WORD
002804  0000                847+         DC    AL2(0)
002806  C1C1                848+         DC    C'AA'
                            849+         ALIGN WORD
002808  196E                850+         DC     AL2(PARMARA)
                            851 N00012   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00014,      X
00280A  0500                852+N00012   DC    A(@TUXX)
00280C  2826                853+         DC    AL2(N00014)
00280E  2FD0                854+         DC    A(T7A02)
002810  0202                855+         DC    AL2(OF)
002812  0007                856+         DC    AL2(7)
002814  00004000000040      857+         DC    X'00004000000040'
00281B  00                  858+         ALIGN WORD
00281C  0000                859+         DC    AL2(0)
00281E  C1C1                860+         DC    C'AA'
                            861+         ALIGN WORD
002820  196E                862+         DC     AL2(PARMARA)
                            863 N00013   $FIXT FT=(F00018),GTO=((7A79,A))
002822  0101                864+N00013   DC    A(@FIXT)
002824  2EDC                865+         DC    A(F00018)
                            866 N00014   $FIXT FT=(F00085),GTO=((7A76,A))
002826  0101                867+N00014   DC    A(@FIXT)
002828  2F00                868+         DC    A(F00085)
                            869 N00015   $FIXT FT=(F00085),GTO=((7A76,A))
00282A  0101                870+N00015   DC    A(@FIXT)
00282C  2F00                871+         DC    A(F00085)
                            872 N00016   $FIXT FT=(F00084),GTO=((7A73,A))
00282E  0101                873+N00016   DC    A(@FIXT)
002830  2F0C                874+         DC    A(F00084)
                            875 N00017   $TUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00019,      X
002832  0500                876+N00017   DC    A(@TUXX)
002834  284E                877+         DC    AL2(N00019)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

002836  2FD0                878+         DC    A(T7A02)
002838  0202                879+         DC    AL2(OF)
00283A  0007                880+         DC    AL2(7)
00283C  00008000000080      881+         DC    X'00008000000080'
002843  00                  882+         ALIGN WORD
002844  0000                883+         DC    AL2(0)
002846  C1C1                884+         DC    C'AA'
                            885+         ALIGN WORD
002848  196E                886+         DC     AL2(PARMARA)
                            887 N00018   $FIXT FT=(F00086),GTO=((7A76,B))
00284A  0101                888+N00018   DC    A(@FIXT)
00284C  2F18                889+         DC    A(F00086)
                            890 N00019   $FIXT FT=(F00046),GTO=((7A70,D))
00284E  0101                891+N00019   DC    A(@FIXT)
002850  2F24                892+         DC    A(F00046)
                            893 N00020   $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00030,     X
002852  0500                894+N00020   DC    A(@TUXX)
002854  28E0                895+         DC    AL2(N00030)
002856  2FD0                896+         DC    A(T7A02)
002858  0202                897+         DC    AL2(OF)
00285A  0008                898+         DC    AL2(8)
00285C  0000002000000020    899+         DC    X'0000002000000020'
                            900+         ALIGN WORD
002864  0000                901+         DC    AL2(0)
002866  C1C1                902+         DC    C'AA'
                            903+         ALIGN WORD
002868  196E                904+         DC     AL2(PARMARA)
                            905 N00021   $TUXX T7A02,9,0000000020000000020,OF,QT=(Q00006),YES=N00027,   X
00286A  0500                906+N00021   DC    A(@TUXX)
00286C  28C0                907+         DC    AL2(N00027)
00286E  2FD0                908+         DC    A(T7A02)
002870  0202                909+         DC    AL2(OF)
002872  0009                910+         DC    AL2(9)
002874  0000000020000000002 911+         DC    X'0000000020000000020'
00287D  00                  912+         ALIGN WORD
00287E  0000                913+         DC    AL2(0)
002880  C1C1                914+         DC    C'AA'
                            915+         ALIGN WORD
002882  196E                916+         DC     AL2(PARMARA)
                            917 N00022   $TUXX T7A02,7,00000000000040,ON,QT=(Q00007),YES=N00026,      X
002884  0500                918+N00022   DC    A(@TUXX)
002886  28BC                919+         DC    AL2(N00026)
002888  2FD0                920+         DC    A(T7A02)
00288A  0200                921+         DC    AL2(ON)
00288C  0007                922+         DC    AL2(7)
00288E  00000000000040      923+         DC    X'00000000000040'
002895  00                  924+         ALIGN WORD
002896  0000                925+         DC    AL2(0)
002898  C1C1                926+         DC    C'AA'
                            927+         ALIGN WORD
00289A  196E                928+         DC     AL2(PARMARA)
                            929 N00023   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00025,      X
00289C  0500                930+N00023   DC    A(@TUXX)
00289E  28B8                931+         DC    AL2(N00025)
0028A0  2FD0                932+         DC    A(T7A02)
0028A2  0202                933+         DC    AL2(OF)
0028A4  0007                934+         DC    AL2(7)
0028A6  00004000000040      935+         DC    X'00004000000040'
0028AD  00                  936+         ALIGN WORD
0028AE  0000                937+         DC    AL2(0)
0028B0  C1C1                938+         DC    C'AA'
                            939+         ALIGN WORD
0028B2  196E                940+         DC     AL2(PARMARA)
                            941 N00024   $FIXT FT=(F00018),GTO=((7A79,A))
0028B4  0101                942+N00024   DC    A(@FIXT)
0028B6  2EDC                943+         DC    A(F00018)
                            944 N00025   $FIXT FT=(F00046),GTO=((7A70,D))
0028B8  0101                945+N00025   DC    A(@FIXT)
0028BA  2F24                946+         DC    A(F00046)
                            947 N00026   $FIXT FT=(F00086),GTO=((7A76,B))
0028BC  0101                948+N00026   DC    A(@FIXT)
0028BE  2F18                949+         DC    A(F00086)
                            950 N00027   $TUXX T7A02,8,0000000000000002,ON,QT=(Q00007),YES=N00029,     X
0028C0  0500                951+N00027   DC    A(@TUXX)
0028C2  28DC                952+         DC    AL2(N00029)
0028C4  2FD0                953+         DC    A(T7A02)
0028C6  0200                954+         DC    AL2(ON)
0028C8  0008                955+         DC    AL2(8)
0028CA  0000000000000002    956+         DC    X'0000000000000002'
                            957+         ALIGN WORD
0028D2  0000                958+         DC    AL2(0)
0028D4  C1C1                959+         DC    C'AA'
                            960+         ALIGN WORD
0028D6  196E                961+         DC     AL2(PARMARA)
                            962 N00028   $FIXT FT=(F00084),GTO=((7A73,A))
0028D8  0101                963+N00028   DC    A(@FIXT)
0028DA  2F0C                964+         DC    A(F00084)
                            965 N00029   $FIXT FT=(F00086),GTO=((7A76,B))
0028DC  0101                966+N00029   DC    A(@FIXT)
0028DE  2F18                967+         DC    A(F00086)
                            968 N00030   $TUXX T7A02,7,00000800000008,OF,QT=(Q00006),YES=N00032,      X
0028E0  0500                969+N00030   DC    A(@TUXX)
0028E2  28FC                970+         DC    AL2(N00032)
0028E4  2FD0                971+         DC    A(T7A02)
0028E6  0202                972+         DC    AL2(OF)
0028E8  0007                973+         DC    AL2(7)
0028EA  00000800000008      974+         DC    X'00000800000008'
0028F1  00                  975+         ALIGN WORD
0028F2  0000                976+         DC    AL2(0)
0028F4  C1C1                977+         DC    C'AA'
                            978+         ALIGN WORD
0028F6  196E                979+         DC     AL2(PARMARA)
                            980 N00031   $FIXT FT=(F00018),GTO=((7A79,A))
0028F8  0101                981+N00031   DC    A(@FIXT)
0028FA  2EDC                982+         DC    A(F00018)
                            983 N00032   $FIXT FT=(F00085),GTO=((7A76,A))
0028FC  0101                984+N00032   DC    A(@FIXT)
0028FE  2F00                985+         DC    A(F00085)
                            986 N00033   $TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00041,      X
002900  0500                987+N00033   DC    A(@TUXX)
002902  2970                988+         DC    AL2(N00041)
002904  2FD0                989+         DC    A(T7A02)
002906  0202                990+         DC    AL2(OF)
002908  0007                991+         DC    AL2(7)
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002908A  00000100000001        992+          DC    X'000001000000001'
002911   00                    993+          ALIGN WORD
002912   0000                  994+          DC    AL2(0)
002914   C1C1                  995+          DC    C'AA'
                               996+          ALIGN WORD
002916   196E                  997+          DC     AL2(PARMARA)
                               998 N00034    $TUXX T7A02,7,00000000000040,ON,QT=(Q00007),YES=N00038,       X
002918   0500                  999+N00034    DC    A(@TUXX)
00291A   2950                 1000+          DC    AL2(N00038)
00291C   2FD0                 1001+          DC    A(T7A02)
00291E   0200                 1002+          DC    AL2(ON)
002920   0007                 1003+          DC    AL2(7)
002922   00000000000040       1004+          DC    X'000000000000040'
002929   00                   1005+          ALIGN WORD
00292A   0000                 1006+          DC    AL2(0)
00292C   C1C1                 1007+          DC    C'AA'
                              1008+          ALIGN WORD
00292E   196E                 1009+          DC     AL2(PARMARA)
                              1010 N00035    $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00037,     X
002930   0500                 1011+N00035    DC    A(@TUXX)
002932   294C                 1012+          DC    AL2(N00037)
002934   2FD0                 1013+          DC    A(T7A02)
002936   0202                 1014+          DC    AL2(OF)
002938   0008                 1015+          DC    AL2(8)
00293A   0000002000000020     1016+          DC    X'0000002000000020'
                              1017+          ALIGN WORD
002942   0000                 1018+          DC    AL2(0)
002944   C1C1                 1019+          DC    C'AA'
                              1020+          ALIGN WORD
002946   196E                 1021+          DC     AL2(PARMARA)
                              1022 N00036    $FIXT FT=(F00084),GTO=((7A73,A))
002948   0101                 1023+N00036    DC    A(@FIXT)
00294A   2F0C                 1024+          DC    A(F00084)
                              1025 N00037    $FIXT FT=(F00018),GTO=((7A79,A))
00294C   0101                 1026+N00037    DC    A(@FIXT)
00294E   2EDC                 1027+          DC    A(F00018)
                              1028 N00038    $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00040,     X
002950   0500                 1029+N00038    DC    A(@TUXX)
002952   296C                 1030+          DC    AL2(N00040)
002954   2FD0                 1031+          DC    A(T7A02)
002956   0202                 1032+          DC    AL2(OF)
002958   0008                 1033+          DC    AL2(8)
00295A   0000000200000002     1034+          DC    X'0000000200000002'
                              1035+          ALIGN WORD
002962   0000                 1036+          DC    AL2(0)
002964   C1C1                 1037+          DC    C'AA'
                              1038+          ALIGN WORD
002966   196E                 1039+          DC     AL2(PARMARA)
                              1040 N00039    $FIXT FT=(F00085),GTO=((7A76,A))
002968   0101                 1041+N00039    DC    A(@FIXT)
00296A   2F00                 1042+          DC    A(F00085)
                              1043 N00040    $FIXT FT=(F00053),GTO=((7A70,E))
00296C   0101                 1044+N00040    DC    A(@FIXT)
00296E   2F32                 1045+          DC    A(F00053)
                              1046 N00041    $TUXX T7A02,9,0000000001000000001,OF,QT=(Q00006),YES=N00055,   X
002970   0500                 1047+N00041    DC    A(@TUXX)
002972   2A3A                 1048+          DC    AL2(N00055)
002974   2FD0                 1049+          DC    A(T7A02)
002976   0202                 1050+          DC    AL2(OF)
002978   0009                 1051+          DC    AL2(9)
00297A   0000000001000000     1052+          DC    X'0000000001000000'
002983   00                   1053+          ALIGN WORD
002984   0000                 1054+          DC    AL2(0)
002986   C1C1                 1055+          DC    C'AA'
                              1056+          ALIGN WORD
002988   196E                 1057+          DC     AL2(PARMARA)
                              1058 N00042    $TUXX T7A02,9,0000000000000000010,ON,QT=(Q00007),YES=N00046,   X
00298A   0500                 1059+N00042    DC    A(@TUXX)
00298C   29C4                 1060+          DC    AL2(N00046)
00298E   2FD0                 1061+          DC    A(T7A02)
002990   0200                 1062+          DC    AL2(ON)
002992   0009                 1063+          DC    AL2(9)
002994   0000000000000001     1064+          DC    X'0000000000000010'
00299D   00                   1065+          ALIGN WORD
00299E   0000                 1066+          DC    AL2(0)
0029A0   C1C1                 1067+          DC    C'AA'
                              1068+          ALIGN WORD
0029A2   196E                 1069+          DC     AL2(PARMARA)
                              1070 N00043    $TUXX T7A02,8,0000000000000002,ON,QT=(Q00007),YES=N00045,     X
0029A4   0500                 1071+N00043    DC    A(@TUXX)
0029A6   29C0                 1072+          DC    AL2(N00045)
0029A8   2FD0                 1073+          DC    A(T7A02)
0029AA   0200                 1074+          DC    AL2(ON)
0029AC   0008                 1075+          DC    AL2(8)
0029AE   0000000000000002     1076+          DC    X'0000000000000002'
                              1077+          ALIGN WORD
0029B6   0000                 1078+          DC    AL2(0)
0029B8   C1C1                 1079+          DC    C'AA'
                              1080+          ALIGN WORD
0029BA   196E                 1081+          DC     AL2(PARMARA)
                              1082 N00044    $FIXT FT=(F00084),GTO=((7A73,A))
0029BC   0101                 1083+N00044    DC    A(@FIXT)
0029BE   2F0C                 1084+          DC    A(F00084)
                              1085 N00045    $FIXT FT=(F00053),GTO=((7A70,E))
0029C0   0101                 1086+N00045    DC    A(@FIXT)
0029C2   2F32                 1087+          DC    A(F00053)
                              1088 N00046    $TUXX T7A02,9,0000000008000000080,OF,QT=(Q00006),YES=N00048,   X
0029C4   0500                 1089+N00046    DC    A(@TUXX)
0029C6   29E2                 1090+          DC    AL2(N00048)
0029C8   2FD0                 1091+          DC    A(T7A02)
0029CA   0202                 1092+          DC    AL2(OF)
0029CC   0009                 1093+          DC    AL2(9)
0029CE   0000000800000008     1094+          DC    X'0000000008000000080'
0029D7   00                   1095+          ALIGN WORD
0029D8   0000                 1096+          DC    AL2(0)
0029DA   C1C1                 1097+          DC    C'AA'
                              1098+          ALIGN WORD
0029DC   196E                 1099+          DC     AL2(PARMARA)
                              1100 N00047    $FIXT FT=(F00078),GTO=((7A72,F))
0029DE   0101                 1101+N00047    DC    A(@FIXT)
0029E0   2F40                 1102+          DC    A(F00078)
                              1103 N00048    $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00054,     X
0029E2   0500                 1104+N00048    DC    A(@TUXX)
0029E4   2A36                 1105+          DC    AL2(N00054)
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0029E6   2FD0                 1106+          DC    A(T7A02)
0029E8   0202                 1107+          DC    AL2(OF)
0029EA   0008                 1108+          DC    AL2(8)
0029EC   0000000200000002     1109+          DC    X'0000000200000002'
                              1110+          ALIGN WORD
0029F4   0000                 1111+          DC    AL2(0)
0029F6   C1C1                 1112+          DC    C'AA'
                              1113+          ALIGN WORD
0029F8   196E                 1114+          DC     AL2(PARMARA)
                              1115 N00049    $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00051,       X
0029FA   0500                 1116+N00049    DC    A(@TUXX)
0029FC   2A16                 1117+          DC    AL2(N00051)
0029FE   2FD0                 1118+          DC    A(T7A02)
002A00   0202                 1119+          DC    AL2(OF)
002A02   0007                 1120+          DC    AL2(7)
002A04   00004000000040       1121+          DC    X'00004000000040'
002A0B   00                   1122+          ALIGN WORD
002A0C   0000                 1123+          DC    AL2(0)
002A0E   C1C1                 1124+          DC    C'AA'
                              1125+          ALIGN WORD
002A10   196E                 1126+          DC     AL2(PARMARA)
                              1127 N00050    $FIXT FT=(F00085),GTO=((7A76,A))
002A12   0101                 1128+N00050    DC    A(@FIXT)
002A14   2F00                 1129+          DC    A(F00085)
                              1130 N00051    $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00053,     X
002A16   0500                 1131+N00051    DC    A(@TUXX)
002A18   2A32                 1132+          DC    AL2(N00053)
002A1A   2FD0                 1133+          DC    A(T7A02)
002A1C   0202                 1134+          DC    AL2(OF)
002A1E   0008                 1135+          DC    AL2(8)
002A20   0000002000000020     1136+          DC    X'0000002000000020'
                              1137+          ALIGN WORD
002A28   0000                 1138+          DC    AL2(0)
002A2A   C1C1                 1139+          DC    C'AA'
                              1140+          ALIGN WORD
002A2C   196E                 1141+          DC     AL2(PARMARA)
                              1142 N00052    $FIXT FT=(F00053),GTO=((7A70,E))
002A2E   0101                 1143+N00052    DC    A(@FIXT)
002A30   2F32                 1144+          DC    A(F00053)
                              1145 N00053    $FIXT FT=(F00085),GTO=((7A76,A))
002A32   0101                 1146+N00053    DC    A(@FIXT)
002A34   2F00                 1147+          DC    A(F00085)
                              1148 N00054    $FIXT FT=(F00053),GTO=((7A70,E))
002A36   0101                 1149+N00054    DC    A(@FIXT)
002A38   2F32                 1150+          DC    A(F00053)
                              1151 N00055    $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00073,     X
002A3A   0500                 1152+N00055    DC    A(@TUXX)
002A3C   2B3C                 1153+          DC    AL2(N00073)
002A3E   2FD0                 1154+          DC    A(T7A02)
002A40   0202                 1155+          DC    AL2(OF)
002A42   0008                 1156+          DC    AL2(8)
002A44   0000000200000002     1157+          DC    X'0000000200000002'
                              1158+          ALIGN WORD
002A4C   0000                 1159+          DC    AL2(0)
002A4E   C1C1                 1160+          DC    C'AA'
                              1161+          ALIGN WORD
002A50   196E                 1162+          DC     AL2(PARMARA)
                              1163 N00056    $TUXX T7A02,8,0000000000000002,ON,QT=(Q00007),YES=N00072,     X
002A52   0500                 1164+N00056    DC    A(@TUXX)
002A54   2B38                 1165+          DC    AL2(N00072)
002A56   2FD0                 1166+          DC    A(T7A02)
002A58   0200                 1167+          DC    AL2(ON)
002A5A   0008                 1168+          DC    AL2(8)
002A5C   0000000000000002     1169+          DC    X'0000000000000002'
                              1170+          ALIGN WORD
002A64   0000                 1171+          DC    AL2(0)
002A66   C1C1                 1172+          DC    C'AA'
                              1173+          ALIGN WORD
002A68   196E                 1174+          DC     AL2(PARMARA)
                              1175 N00057    $TUXX T7A02,7,00002000000020,OF,QT=(Q00006),YES=N00071,       X
002A6A   0500                 1176+N00057    DC    A(@TUXX)
002A6C   2B34                 1177+          DC    AL2(N00071)
002A6E   2FD0                 1178+          DC    A(T7A02)
002A70   0202                 1179+          DC    AL2(OF)
002A72   0007                 1180+          DC    AL2(7)
002A74   00002000000020       1181+          DC    X'00002000000020'
002A7B   00                   1182+          ALIGN WORD
002A7C   0000                 1183+          DC    AL2(0)
002A7E   C1C1                 1184+          DC    C'AA'
                              1185+          ALIGN WORD
002A80   196E                 1186+          DC     AL2(PARMARA)
                              1187 N00058    $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00060,     X
002A82   0500                 1188+N00058    DC    A(@TUXX)
002A84   2A9E                 1189+          DC    AL2(N00060)
002A86   2FD0                 1190+          DC    A(T7A02)
002A88   0202                 1191+          DC    AL2(OF)
002A8A   0008                 1192+          DC    AL2(8)
002A8C   0000002000000020     1193+          DC    X'0000002000000020'
                              1194+          ALIGN WORD
002A94   0000                 1195+          DC    AL2(0)
002A96   C1C1                 1196+          DC    C'AA'
                              1197+          ALIGN WORD
002A98   196E                 1198+          DC     AL2(PARMARA)
                              1199 N00059    $FIXT FT=(F00034),GTO=((7A70,C))
002A9A   0101                 1200+N00059    DC    A(@FIXT)
002A9C   2F4C                 1201+          DC    A(F00034)
                              1202 N00060    $TUXX T7A02,9,0000000000000000010,ON,QT=(Q00007),YES=N00070,   X
002A9E   0500                 1203+N00060    DC    A(@TUXX)
002AA0   2B30                 1204+          DC    AL2(N00070)
002AA2   2FD0                 1205+          DC    A(T7A02)
002AA4   0200                 1206+          DC    AL2(ON)
002AA6   0009                 1207+          DC    AL2(9)
002AA8   0000000000000001     1208+          DC    X'0000000000000010'
002AB1   00                   1209+          ALIGN WORD
002AB2   0000                 1210+          DC    AL2(0)
002AB4   C1C1                 1211+          DC    C'AA'
                              1212+          ALIGN WORD
002AB6   196E                 1213+          DC     AL2(PARMARA)
                              1214 N00061    $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00063,       X
002AB8   0500                 1215+N00061    DC    A(@TUXX)
002ABA   2AD4                 1216+          DC    AL2(N00063)
002ABC   2FD0                 1217+          DC    A(T7A02)
002ABE   0202                 1218+          DC    AL2(OF)
002AC0   0007                 1219+          DC    AL2(7)
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002AC2  000040000000040   1220+          DC    X'000040000000040'
002AC9  00                1221+          ALIGN WORD
002ACA  0000              1222+          DC    AL2(0)
002ACC  C1C1              1223+          DC    C'AA'
                          1224+          ALIGN WORD
002ACE  196E              1225+          DC     AL2(PARMARA)
                          1226 N00062    $FIXT FT=(F00085),GTO=((7A76,A))
002AD0  0101              1227+N00062    DC    A(@FIXT)
002AD2  2F00              1228+          DC    A(F00085)
                          1229 N00063    $TUXX T7A02,06,000000000080,OF,QT=(Q00035),YES=N00065
002AD4  0500              1230+N00063    DC    A(@TUXX)
002AD6  2AEE              1231+          DC    AL2(N00065)
002AD8  2FD0              1232+          DC    A(T7A02)
002ADA  0202              1233+          DC    AL2(OF)
002ADC  0006              1234+          DC    AL2(06)
002ADE  000000000080      1235+          DC    X'000000000080'
                          1236+          ALIGN WORD
002AE4  0000              1237+          DC    AL2(0)
002AE6  C1C1              1238+          DC    C'AA'
                          1239+          ALIGN WORD
002AE8  196E              1240+          DC     AL2(PARMARA)
                          1241 N00064    $FIXT FT=(F00085),GTO=((7A76,A))
002AEA  0101              1242+N00064    DC    A(@FIXT)
002AEC  2F00              1243+          DC    A(F00085)
                          1244 N00065    $TUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00067,       X
002AEE  0500              1245+N00065    DC    A(@TUXX)
002AF0  2B0A              1246+          DC    AL2(N00067)
002AF2  2FD0              1247+          DC    A(T7A02)
002AF4  0202              1248+          DC    AL2(OF)
002AF6  0007              1249+          DC    AL2(7)
002AF8  000008000000080   1250+          DC    X'000008000000080'
002AFF  00                1251+          ALIGN WORD
002B00  0000              1252+          DC    AL2(0)
002B02  C1C1              1253+          DC    C'AA'
                          1254+          ALIGN WORD
002B04  196E              1255+          DC     AL2(PARMARA)
                          1256 N00066    $FIXT FT=(F00085),GTO=((7A76,A))
002B06  0101              1257+N00066    DC    A(@FIXT)
002B08  2F00              1258+          DC    A(F00085)
                          1259 N00067    $TUXX T7A02,14,00000000000000000000000000100,OF,QT=(Q00043),  X
002B0A  0500              1260+N00067    DC    A(@TUXX)
002B0C  2B2C              1261+          DC    AL2(N00069)
002B0E  2FD0              1262+          DC    A(T7A02)
002B10  0202              1263+          DC    AL2(OF)
002B12  000E              1264+          DC    AL2(14)
002B14  00000000000000000 1265+          DC    X'00000000000000000000000000100'
                          1266+          ALIGN WORD
002B22  0000              1267+          DC    AL2(0)
002B24  C1C1              1268+          DC    C'AA'
                          1269+          ALIGN WORD
002B26  196E              1270+          DC     AL2(PARMARA)
                          1271 N00068    $FIXT FT=(F00034),GTO=((7A70,C))
002B28  0101              1272+N00068    DC    A(@FIXT)
002B2A  2F4C              1273+          DC    A(F00034)
                          1274 N00069    $FIXT FT=(F00085),GTO=((7A76,A))
002B2C  0101              1275+N00069    DC    A(@FIXT)
002B2E  2F00              1276+          DC    A(F00085)
                          1277 N00070    $FIXT FT=(F00034),GTO=((7A70,C))
002B30  0101              1278+N00070    DC    A(@FIXT)
002B32  2F4C              1279+          DC    A(F00034)
                          1280 N00071    $FIXT FT=(F00085),GTO=((7A76,A))
002B34  0101              1281+N00071    DC    A(@FIXT)
002B36  2F00              1282+          DC    A(F00085)
                          1283 N00072    $FIXT FT=(F00053),GTO=((7A70,E))
002B38  0101              1284+N00072    DC    A(@FIXT)
002B3A  2F32              1285+          DC    A(F00053)
                          1286 N00073    $FIXT FT=(F00086),GTO=((7A76,B))
002B3C  0101              1287+N00073    DC    A(@FIXT)
002B3E  2F18              1288+          DC    A(F00086)
                          1289 N00074    $TUXX T7A02,9,0000000000100000001,OF,QT=(Q00006),YES=N00080,  X
002B40  0500              1290+N00074    DC    A(@TUXX)
002B42  2B9C              1291+          DC    AL2(N00080)
002B44  2FD0              1292+          DC    A(T7A02)
002B46  0202              1293+          DC    AL2(OF)
002B48  0009              1294+          DC    AL2(9)
002B4A  00000000010000000 1295+          DC    X'0000000000100000001'
002B53  00                1296+          ALIGN WORD
002B54  0000              1297+          DC    AL2(0)
002B56  C1C1              1298+          DC    C'AA'
                          1299+          ALIGN WORD
002B58  196E              1300+          DC     AL2(PARMARA)
                          1301 N00075    $TUXX T7A02,7,000000000000040,ON,QT=(Q00007),YES=N00079,       X
002B5A  0500              1302+N00075    DC    A(@TUXX)
002B5C  2B98              1303+          DC    AL2(N00079)
002B5E  2FD0              1304+          DC    A(T7A02)
002B60  0200              1305+          DC    AL2(ON)
002B62  0007              1306+          DC    AL2(7)
002B64  00000000000040    1307+          DC    X'000000000000040'
002B6B  00                1308+          ALIGN WORD
002B6C  0000              1309+          DC    AL2(0)
002B6E  C1C1              1310+          DC    C'AA'
                          1311+          ALIGN WORD
002B70  196E              1312+          DC     AL2(PARMARA)
                          1313 N00076    $TUXX T7A02,14,00000000000000000000000000100,OF,QT=(Q00043),  X
002B72  0500              1314+N00076    DC    A(@TUXX)
002B74  2B94              1315+          DC    AL2(N00078)
002B76  2FD0              1316+          DC    A(T7A02)
002B78  0202              1317+          DC    AL2(OF)
002B7A  000E              1318+          DC    AL2(14)
002B7C  00000000000000000 1319+          DC    X'00000000000000000000000000100'
                          1320+          ALIGN WORD
002B8A  0000              1321+          DC    AL2(0)
002B8C  C1C1              1322+          DC    C'AA'
                          1323+          ALIGN WORD
002B8E  196E              1324+          DC     AL2(PARMARA)
                          1325 N00077    $FIXT FT=(F00084),GTO=((7A73,A))
002B90  0101              1326+N00077    DC    A(@FIXT)
002B92  2F0C              1327+          DC    A(F00084)
                          1328 N00078    $FIXT FT=(F00078),GTO=((7A72,F))
002B94  0101              1329+N00078    DC    A(@FIXT)
002B96  2F40              1330+          DC    A(F00078)
                          1331 N00079    $FIXT FT=(F00084),GTO=((7A73,A))
002B98  0101              1332+N00079    DC    A(@FIXT)
002B9A  2F0C              1333+          DC    A(F00084)
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                          1334 N00080    $TUXX T7A02,9,0000000080000000080,OF,QT=(Q00006),YES=N00090,   X
002B9C  0500              1335+N00080    DC    A(@TUXX)
002B9E  2C2A              1336+          DC    AL2(N00090)
002BA0  2FD0              1337+          DC    A(T7A02)
002BA2  0202              1338+          DC    AL2(OF)
002BA4  0009              1339+          DC    AL2(9)
002BA6  00000000800000008 1340+          DC    X'0000000080000000080'
002BAF  00                1341+          ALIGN WORD
002BB0  0000              1342+          DC    AL2(0)
002BB2  C1C1              1343+          DC    C'AA'
                          1344+          ALIGN WORD
002BB4  196E              1345+          DC     AL2(PARMARA)
                          1346 N00081    $TUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00087,       X
002BB6  0500              1347+N00081    DC    A(@TUXX)
002BB8  2C0A              1348+          DC    AL2(N00087)
002BBA  2FD0              1349+          DC    A(T7A02)
002BBC  0202              1350+          DC    AL2(OF)
002BBE  0007              1351+          DC    AL2(7)
002BC0  00008000000080    1352+          DC    X'00008000000080'
002BC7  00                1353+          ALIGN WORD
002BC8  0000              1354+          DC    AL2(0)
002BCA  C1C1              1355+          DC    C'AA'
                          1356+          ALIGN WORD
002BCC  196E              1357+          DC     AL2(PARMARA)
                          1358 N00082    $TUXX T7A02,8,0000008000000080,OF,QT=(Q00006),YES=N00086,      X
002BCE  0500              1359+N00082    DC    A(@TUXX)
002BD0  2C06              1360+          DC    AL2(N00086)
002BD2  2FD0              1361+          DC    A(T7A02)
002BD4  0202              1362+          DC    AL2(OF)
002BD6  0008              1363+          DC    AL2(8)
002BD8  0000008000000080  1364+          DC    X'0000008000000080'
                          1365+          ALIGN WORD
002BE0  0000              1366+          DC    AL2(0)
002BE2  C1C1              1367+          DC    C'AA'
                          1368+          ALIGN WORD
002BE4  196E              1369+          DC     AL2(PARMARA)
                          1370 N00083    $TUXX T7A02,8,0000001000000010,OF,QT=(Q00006),YES=N00085,      X
002BE6  0500              1371+N00083    DC    A(@TUXX)
002BE8  2C02              1372+          DC    AL2(N00085)
002BEA  2FD0              1373+          DC    A(T7A02)
002BEC  0202              1374+          DC    AL2(OF)
002BEE  0008              1375+          DC    AL2(8)
002BF0  0000001000000010  1376+          DC    X'0000001000000010'
                          1377+          ALIGN WORD
002BF8  0000              1378+          DC    AL2(0)
002BFA  C1C1              1379+          DC    C'AA'
                          1380+          ALIGN WORD
002BFC  196E              1381+          DC     AL2(PARMARA)
                          1382 N00084    $FIXT FT=(F00085),GTO=((7A76,A))
002BFE  0101              1383+N00084    DC    A(@FIXT)
002C00  2F00              1384+          DC    A(F00085)
                          1385 N00085    $FIXT FT=(F00078),GTO=((7A72,F))
002C02  0101              1386+N00085    DC    A(@FIXT)
002C04  2F40              1387+          DC    A(F00078)
                          1388 N00086    $FIXT FT=(F00078),GTO=((7A72,F))
002C06  0101              1389+N00086    DC    A(@FIXT)
002C08  2F40              1390+          DC    A(F00078)
                          1391 N00087    $TUXX T7A02,7,000040000000040,OF,QT=(Q00006),YES=N00089,       X
002C0A  0500              1392+N00087    DC    A(@TUXX)
002C0C  2C26              1393+          DC    AL2(N00089)
002C0E  2FD0              1394+          DC    A(T7A02)
002C10  0202              1395+          DC    AL2(OF)
002C12  0007              1396+          DC    AL2(7)
002C14  000040000000040   1397+          DC    X'000040000000040'
002C1B  00                1398+          ALIGN WORD
002C1C  0000              1399+          DC    AL2(0)
002C1E  C1C1              1400+          DC    C'AA'
                          1401+          ALIGN WORD
002C20  196E              1402+          DC     AL2(PARMARA)
                          1403 N00088    $FIXT FT=(F00078),GTO=((7A72,F))
002C22  0101              1404+N00088    DC    A(@FIXT)
002C24  2F40              1405+          DC    A(F00078)
                          1406 N00089    $FIXT FT=(F00090),GTO=((7A76,O))
002C26  0101              1407+N00089    DC    A(@FIXT)
002C28  2F5A              1408+          DC    A(F00090)
                          1409 N00090    $FIXT FT=(F00090),GTO=((7A76,O))
002C2A  0101              1410+N00090    DC    A(@FIXT)
002C2C  2F5A              1411+          DC    A(F00090)
                          1412 N00091    $TUXX T7A02,6,0000002000000020,OF,QT=(Q00006),YES=N00111,      X
002C2E  0500              1413+N00091    DC    A(@TUXX)
002C30  2D4A              1414+          DC    AL2(N00111)
002C32  2FD0              1415+          DC    A(T7A02)
002C34  0202              1416+          DC    AL2(OF)
002C36  0008              1417+          DC    AL2(8)
002C38  0000002000000020  1418+          DC    X'0000002000000020'
                          1419+          ALIGN WORD
002C40  0000              1420+          DC    AL2(0)
002C42  C1C1              1421+          DC    C'AA'
                          1422+          ALIGN WORD
002C44  196E              1423+          DC     AL2(PARMARA)
                          1424 N00092    $TUXX T7A02,9,0000000100000001,OF,QT=(Q00006),YES=N00106,   X
002C46  0500              1425+N00092    DC    A(@TUXX)
002C48  2D0C              1426+          DC    AL2(N00106)
002C4A  2FD0              1427+          DC    A(T7A02)
002C4C  0202              1428+          DC    AL2(OF)
002C4E  0009              1429+          DC    AL2(9)
002C50  00000000010000000 1430+          DC    X'0000000001000000001'
002C59  00                1431+          ALIGN WORD
002C5A  0000              1432+          DC    AL2(0)
002C5C  C1C1              1433+          DC    C'AA'
                          1434+          ALIGN WORD
002C5E  196E              1435+          DC     AL2(PARMARA)
                          1436 N00093    $TUXX T7A02,2,0004,OF,QT=(Q00006),YES=N00095,CT=(C00063)
002C60  0500              1437+N00093    DC    A(@TUXX)
002C62  2C76              1438+          DC    AL2(N00095)
002C64  2FD0              1439+          DC    A(T7A02)
002C66  0202              1440+          DC    AL2(OF)
002C68  0002              1441+          DC    AL2(2)
002C6A  0004              1442+          DC    X'0004'
                          1443+          ALIGN WORD
002C6C  0000              1444+          DC    AL2(0)
002C6E  C1C1              1445+          DC    C'AA'
                          1446+          ALIGN WORD
002C70  196E              1447+          DC     AL2(PARMARA)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

                           1448 N00094   $FIXT FT=(F00079),GTO=((7A72,N))
002C72  0101               1449+N00094   DC    A(@FIXT)
002C74  2F66               1450+         DC    A(F00079)
                           1451 N00095   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00099,       X
002C76  0500               1452+N00095   DC    A(@TUXX)
002C78  2CAE               1453+         DC    AL2(N00099)
002C7A  2FD0               1454+         DC    A(T7A02)
002C7C  0202               1455+         DC    AL2(OF)
002C7E  0007               1456+         DC    AL2(7)
002C80  00004000000040     1457+         DC    X'00004000000040'
002C87  00                 1458+         ALIGN WORD
002C88  0000               1459+         DC    AL2(0)
002C8A  C1C1               1460+         DC    C'AA'
                           1461+         ALIGN WORD
002C8C  196E               1462+         DC    AL2(PARMARA)
                           1463 N00096   $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00098,     X
002C8E  0500               1464+N00096   DC    A(@TUXX)
002C90  2CAA               1465+         DC    AL2(N00098)
002C92  2FD0               1466+         DC    A(T7A02)
002C94  0202               1467+         DC    AL2(OF)
002C96  0008               1468+         DC    AL2(8)
002C98  0000000800000008   1469+         DC    X'0000000800000008'
                           1470+         ALIGN WORD
002CA0  0000               1471+         DC    AL2(0)
002CA2  C1C1               1472+         DC    C'AA'
                           1473+         ALIGN WORD
002CA4  196E               1474+         DC    AL2(PARMARA)
                           1475 N00097   $FIXT FT=(F00084),GTO=((7A73,A))
002CA6  0101               1476+N00097   DC    A(@FIXT)
002CA8  2F0C               1477+         DC    A(F00084)
                           1478 N00098   $FIXT FT=(F00079),GTO=((7A72,N))
002CAA  0101               1479+N00098   DC    A(@FIXT)
002CAC  2F66               1480+         DC    A(F00079)
                           1481 N00099   $TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00101,       X
002CAE  0500               1482+N00099   DC    A(@TUXX)
002CB0  2CCA               1483+         DC    AL2(N00101)
002CB2  2FD0               1484+         DC    A(T7A02)
002CB4  0202               1485+         DC    AL2(OF)
002CB6  0007               1486+         DC    AL2(7)
002CB8  00000100000001     1487+         DC    X'00000100000001'
002CBF  00                 1488+         ALIGN WORD
002CC0  0000               1489+         DC    AL2(0)
002CC2  C1C1               1490+         DC    C'AA'
                           1491+         ALIGN WORD
002CC4  196E               1492+         DC    AL2(PARMARA)
                           1493 N00100   $FIXT FT=(F00084),GTO=((7A73,A))
002CC6  0101               1494+N00100   DC    A(@FIXT)
002CC8  2F0C               1495+         DC    A(F00084)
                           1496 N00101   $TUXX T7A02,14,00000000000000000000000000100,OF,QT=(Q00043),  X
002CCA  0500               1497+N00101   DC    A(@TUXX)
002CCC  2D08               1498+         DC    AL2(N00105)
002CCE  2FD0               1499+         DC    A(T7A02)
002CD0  0202               1500+         DC    AL2(OF)
002CD2  000E               1501+         DC    AL2(14)
002CD4  00000000000000000  1502+         DC    X'00000000000000000000000000100'
                           1503+         ALIGN WORD
002CE2  0000               1504+         DC    AL2(0)
002CE4  C1C1               1505+         DC    C'AA'
                           1506+         ALIGN WORD
002CE6  196E               1507+         DC    AL2(PARMARA)
                           1508 N00102   $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00104,       X
002CE8  0500               1509+N00102   DC    A(@TUXX)
002CEA  2D04               1510+         DC    AL2(N00104)
002CEC  2FD0               1511+         DC    A(T7A02)
002CEE  0202               1512+         DC    AL2(OF)
002CF0  0008               1513+         DC    AL2(8)
002CF2  0000000800000008   1514+         DC    X'0000000800000008'
                           1515+         ALIGN WORD
002CFA  0000               1516+         DC    AL2(0)
002CFC  C1C1               1517+         DC    C'AA'
                           1518+         ALIGN WORD
002CFE  196E               1519+         DC    AL2(PARMARA)
                           1520 N00103   $FIXT FT=(F00034),GTO=((7A70,C))
002D00  0101               1521+N00103   DC    A(@FIXT)
002D02  2F4C               1522+         DC    A(F00034)
                           1523 N00104   $FIXT FT=(F00084),GTO=((7A73,A))
002D04  0101               1524+N00104   DC    A(@FIXT)
002D06  2F0C               1525+         DC    A(F00084)
                           1526 N00105   $FIXT FT=(F00084),GTO=((7A73,A))
002D08  0101               1527+N00105   DC    A(@FIXT)
002D0A  2F0C               1528+         DC    A(F00084)
                           1529 N00106   $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00110,       X
002D0C  0500               1530+N00106   DC    A(@TUXX)
002D0E  2D46               1531+         DC    AL2(N00110)
002D10  2FD0               1532+         DC    A(T7A02)
002D12  0202               1533+         DC    AL2(OF)
002D14  0008               1534+         DC    AL2(8)
002D16  0000000200000002   1535+         DC    X'0000000200000002'
                           1536+         ALIGN WORD
002D1E  0000               1537+         DC    AL2(0)
002D20  C1C1               1538+         DC    C'AA'
                           1539+         ALIGN WORD
002D22  196E               1540+         DC    AL2(PARMARA)
                           1541 N00107   $TUXX T7A02,4,0000000080000000080,OF,QT=(Q00006),YES=N00109,   X
002D24  0500               1542+N00107   DC    A(@TUXX)
002D26  2D42               1543+         DC    AL2(N00109)
002D28  2FD0               1544+         DC    A(T7A02)
002D2A  0202               1545+         DC    AL2(OF)
002D2C  0004               1546+         DC    AL2(4)
002D2E  0000000080000008   1547+         DC    X'0000000080000008'
002D37  00                 1548+         ALIGN WORD
002D38  0000               1549+         DC    AL2(0)
002D3A  C1C1               1550+         DC    C'AA'
                           1551+         ALIGN WORD
002D3C  196E               1552+         DC    AL2(PARMARA)
                           1553 N00108   $FIXT FT=(F00034),GTO=((7A70,C))
002D3E  0101               1554+N00108   DC    A(@FIXT)
002D40  2F4C               1555+         DC    A(F00034)
                           1556 N00109   $FIXT FT=(F00084),GTO=((7A73,A))
002D42  0101               1557+N00109   DC    A(@FIXT)
002D44  2F0C               1558+         DC    A(F00084)
                           1559 N00110   $FIXT FT=(F00086),GTO=((7A76,B))
002D46  0101               1560+N00110   DC    A(@FIXT)
002D48  2F18               1561+         DC    A(F00086)
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                           1562 N00111   $TUXX T7A02,9,0000000000800000008,OF,QT=(Q00006),YES=N00133,   X
002D4A  0500               1563+N00111   DC    A(@TUXX)
002D4C  2E7C               1564+         DC    AL2(N00133)
002D4E  2FD0               1565+         DC    A(T7A02)
002D50  0202               1566+         DC    AL2(OF)
002D52  0009               1567+         DC    AL2(9)
002D54  0000000000800000008 1568+        DC    X'0000000000800000008'
002D5D  00                 1569+         ALIGN WORD
002D5E  0000               1570+         DC    AL2(0)
002D60  C1C1               1571+         DC    C'AA'
                           1572+         ALIGN WORD
002D62  196E               1573+         DC    AL2(PARMARA)
                           1574 N00112   $TUXX T7A02,8,0000000000000002,ON,QT=(Q00007),YES=N00130,     X
002D64  0500               1575+N00112   DC    A(@TUXX)
002D66  2E5C               1576+         DC    AL2(N00130)
002D68  2FD0               1577+         DC    A(T7A02)
002D6A  0200               1578+         DC    AL2(ON)
002D6C  0008               1579+         DC    AL2(8)
002D6E  0000000000000002   1580+         DC    X'0000000000000002'
                           1581+         ALIGN WORD
002D76  0000               1582+         DC    AL2(0)
002D78  C1C1               1583+         DC    C'AA'
                           1584+         ALIGN WORD
002D7A  196E               1585+         DC    AL2(PARMARA)
                           1586 N00113   $TUXX T7A02,9,0000000010000001,OF,QT=(Q00006),YES=N00119,   X
002D7C  0500               1587+N00113   DC    A(@TUXX)
002D7E  2DCC               1588+         DC    AL2(N00119)
002D80  2FD0               1589+         DC    A(T7A02)
002D82  0202               1590+         DC    AL2(OF)
002D84  0009               1591+         DC    AL2(9)
002D86  0000000010000000   1592+         DC    X'0000000010000001'
002D8F  00                 1593+         ALIGN WORD
002D90  0000               1594+         DC    AL2(0)
002D92  C1C1               1595+         DC    C'AA'
                           1596+         ALIGN WORD
002D94  196E               1597+         DC    AL2(PARMARA)
                           1598 N00114   $TUXX T7A02,2,0004,OF,QT=(Q00006),YES=N00116,CT=(C00063)
002D96  0500               1599+N00114   DC    A(@TUXX)
002D98  2DAC               1600+         DC    AL2(N00116)
002D9A  2FD0               1601+         DC    A(T7A02)
002D9C  0202               1602+         DC    AL2(OF)
002D9E  0002               1603+         DC    AL2(2)
002DA0  0004               1604+         DC    X'0004'
                           1605+         ALIGN WORD
002DA2  0000               1606+         DC    AL2(0)
002DA4  C1C1               1607+         DC    C'AA'
                           1608+         ALIGN WORD
002DA6  196E               1609+         DC    AL2(PARMARA)
                           1610 N00115   $FIXT FT=(F00085),GTO=((7A76,A))
002DA8  0101               1611+N00115   DC    A(@FIXT)
002DAA  2F00               1612+         DC    A(F00085)
                           1613 N00116   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00118,       X
002DAC  0500               1614+N00116   DC    A(@TUXX)
002DAE  2DC8               1615+         DC    AL2(N00118)
002DB0  2FD0               1616+         DC    A(T7A02)
002DB2  0202               1617+         DC    AL2(OF)
002DB4  0007               1618+         DC    AL2(7)
002DB6  00004000000040     1619+         DC    X'00004000000040'
002DBD  00                 1620+         ALIGN WORD
002DBE  0000               1621+         DC    AL2(0)
002DC0  C1C1               1622+         DC    C'AA'
                           1623+         ALIGN WORD
002DC2  196E               1624+         DC    AL2(PARMARA)
                           1625 N00117   $FIXT FT=(F00034),GTO=((7A70,C))
002DC4  0101               1626+N00117   DC    A(@FIXT)
002DC6  2F4C               1627+         DC    A(F00034)
                           1628 N00118   $FIXT FT=(F00084),GTO=((7A73,A))
002DC8  0101               1629+N00118   DC    A(@FIXT)
002DCA  2F0C               1630+         DC    A(F00084)
                           1631 N00119   $TUXX T7A02,7,00002000000020,OF,QT=(Q00006),YES=N00129,       X
002DCC  0500               1632+N00119   DC    A(@TUXX)
002DCE  2E58               1633+         DC    AL2(N00129)
002DD0  2FD0               1634+         DC    A(T7A02)
002DD2  0202               1635+         DC    AL2(OF)
002DD4  0007               1636+         DC    AL2(7)
002DD6  00002000000020     1637+         DC    X'00002000000020'
002DDD  00                 1638+         ALIGN WORD
002DDE  0000               1639+         DC    AL2(0)
002DE0  C1C1               1640+         DC    C'AA'
                           1641+         ALIGN WORD
002DE2  196E               1642+         DC    AL2(PARMARA)
                           1643 N00120   $TUXX T7A02,9,0000000080000000080,OF,QT=(Q00006),YES=N00126,   X
002DE4  0500               1644+N00120   DC    A(@TUXX)
002DE6  2E38               1645+         DC    AL2(N00126)
002DE8  2FD0               1646+         DC    A(T7A02)
002DEA  0202               1647+         DC    AL2(OF)
002DEC  0009               1648+         DC    AL2(9)
002DEE  0000000080000008   1649+         DC    X'0000000080000008'
002DF7  00                 1650+         ALIGN WORD
002DF8  0000               1651+         DC    AL2(0)
002DFA  C1C1               1652+         DC    C'AA'
                           1653+         ALIGN WORD
002DFC  196E               1654+         DC    AL2(PARMARA)
                           1655 N00121   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00123,       X
002DFE  0500               1656+N00121   DC    A(@TUXX)
002E00  2E1A               1657+         DC    AL2(N00123)
002E02  2FD0               1658+         DC    A(T7A02)
002E04  0202               1659+         DC    AL2(OF)
002E06  0007               1660+         DC    AL2(7)
002E08  00004000000040     1661+         DC    X'00004000000040'
002E0F  00                 1662+         ALIGN WORD
002E10  0000               1663+         DC    AL2(0)
002E12  C1C1               1664+         DC    C'AA'
                           1665+         ALIGN WORD
002E14  196E               1666+         DC    AL2(PARMARA)
                           1667 N00122   $FIXT FT=(F00084),GTO=((7A73,A))
002E16  0101               1668+N00122   DC    A(@FIXT)
002E18  2F0C               1669+         DC    A(F00084)
                           1670 N00123   $TUXX T7A02,06,000000000080,OF,QT=(Q00035),YES=N00125
002E1A  0500               1671+N00123   DC    A(@TUXX)
002E1C  2E34               1672+         DC    AL2(N00125)
002E1E  2FD0               1673+         DC    A(T7A02)
002E20  0202               1674+         DC    AL2(OF)
002E22  0006               1675+         DC    AL2(06)
```

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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                         2137 * 1   BAL   $RKEW,R6               READ SECTOR ID SKEWED
                         2138 *
                         2139 * 2   BAL   $WKEW,R6               WRITE SECTOR ID SKEWED
                         2140 *
                         2141 * 3   BAL   $WSEC,R6               WRITE SECTOR ID
                         2142 *
                         2143 * 4   BAL   $DIAG,R6               DIAGNOSTIC
                         2144 *
                         2145 * 5   BAL   XIOCS,R6               CYCLE STEAL STATUS
                         2146 *
                         2147 * 6   BAL   $SEEK,R6               SEEK
                         2148 *
                         2149 * 7   BAL   $RECL,R6               RECALIBRATE
                         2150 *
                         2151 * 8   BAL   $RDID,R6               READ SECTOR ID
                         2152 *
                         2153 * 9   BAL   $RD,R6                 READ
                         2154 *
                         2155 * 10  BAL   $RDVY,R6               READ VERIFY
                         2156 *
                         2157 * 11  BAL   $WRT,R6                WRITE
                         2158 *
                         2159 * 12  BAL   $RDIM,R6               READ MULTI SECTOR IDS
                         2160 *
                         2161 ************************************************************************
                         2162 *
0030E2  4020 32FA 3018   2163 $SEEK  MVA   SKDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
0030E8  507F             2164         J     XIO
                         2165 *
0030EA  4020 32FA 2FE8   2166 $RECL  MVA   CLDCB,IODCB           SET UP BLOCK FOR SVC CALL
0030F0  507B             2167         J     XIO
                         2168 *
0030F2  4020 32FA 3008   2169 $RDID  MVA   RSDCB,IODCB           SET UP BLOCK FOR SVC CALL
0030F8  0BBB             2170         MVBI  X'BB',R3             SET BUFFER TO B'S
0030FA  4524 2F8E        2171         MVA   SCTID,R5             SETUP READ SECTOR ID BUFFER ADRS
0030FE  4724 0004        2172         MVWI  4,R7                 SETUP BUFFER LENGTH
003102  2BAC             2173         FFN   R3,(R5)              INIT READ SECTOR ID BUFFER
003104  4020 3016 2F8E   2174         MVA   SCTID,RSDCB+14       DATA ADDR
00310A  506E             2175         J     XIO
                         2176 *
00310C  4020 32FA 3088   2177 $RDIM  MVA   RMDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003112  4724 0084        2178         MVWI  132,R7               SET BUFFER LENGTH
003116  4524 30C2        2179         MVA   IO00,R5              SET BUFFER ADDRESS
00311A  0BBB             2180         MVBI  X'BB',R3             SET CLEAR CHARACTERS
00311C  2BAC             2181         FFN   R3,(R5)              CLEAR THE BUFFER
00311E  5064             2182         J     XIO
                         2183 *
003120  0BFF             2184 $RD     MVBI  X'FF',R3             SETRD BUFFER TO ALL F'S
003122  6D08 3066        2185         MVW   RDDCB+14,R5          SET UP READ BUFFER ADRS
003126  6F08 3064        2186         MVW   RDDCB+12,R7          SET UP BUFFER LENGTH
00312A  2BAC             2187         FFN   R3,(R5)              CLEAR READ BUFFER
00312C  4020 32FA 3058   2188 $RD$   MVA   RDDCB,IODCB           SET UP BLOCK FOR SVC CALL
003132  505A             2189         J     XIO
                         2190 *
003134  4020 32FA 3048   2191 $RDVY  MVA   VRDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
00313A  5056             2192         J     XIO
                         2193 *
00313C  4020 32FA 3038   2194 $WRT   MVA   WRDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003142  5052             2195         J     XIO
                         2196 *
003144  4020 32FA 3078   2197 $RKEW  MVA   RKDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
00314A  0BBB             2198         MVBI  X'BB',R3             SET BUFFER TO B'S
00314C  4524 2F8E        2199         MVA   SCTID,R5             SETUP READ SECTOR ID BUFFER ADRS
003150  4724 0004        2200         MVWI  4,R7                 SETUP BUFFER LENGTH
003154  2BAC             2201         FFN   R3,(R5)              INIT READ SECTOR ID BUFFER
003156  4020 3086 2F8E   2202         MVA   SCTID,RKDCB+14        DATA ADDR
00315C  5045             2203         J     XIO
                         2204 *
00315E  4020 32FA 3068   2205 $WKEW  MVA   WKDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
003164  4020 3076 30A6   2206         MVA   WRSID,WKDCB+14       DATA ADDR
00316A  503E             2207         J     XIO
                         2208 *
00316C  4020 32FA 2FF8   2209 $WSEC  MVA   WSDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
003172  4020 3006 30A6   2210         MVA   WRSID,WSDCB+14       DATA ADDR
003178  5037             2211         J     XIO
                         2212 *
00317A  4020 32FA 2FD8   2213 $DIAG  MVA   DGDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003180  5033             2214         J     XIO
                         2215 *
003182  6E0D 2F8C        2216 $WRT0  MVW   R6,LSTIO               SAVE IAR FOR RETRY IF REQUESTED
003186  0BFF             2217         MVBI  255,R3               CLEAR CYCLE STATUS BUFFER
003188  4524 2FA6        2218         MVA   CSBUF,R5             *  TO ALL ONES  *
00318C  0F16             2219         MVBI  22,R7                *
00318E  2BAC             2220         FFN   R3,(R5)              *
003190  4524 2F96        2221         MVA   DCBUF,R5             CLEAR DCB BUFFER TO ALL ONES
003194  0F10             2222         MVBI  16,R7                *
003196  2BAC             2223         FFN   R3,(R5)              *
003198  4020 2F88 0708   2224         MVWI  X'0708',$IOIN        OVERLAY OLD CONDITION CODES
00319E  CB25 2F8A        2225         MVWZ  $ISB,R3              ZERO OUT OLD ISB VALUE
0031A2  4CA3             2226         TBTR  (R4,IN)              CLEAR INTERRUPT RECEIVED CNTL BIT
0031A4  4CA1             2227         TBTR  (R4,ER)              RESET ANY ERROR BEFORE I/O COMMAND
0031A6  4C62             2228         TBTS  (R4,XI)              SET EXPECTED INTR CONTROL BIT
0031A8  4724 32F6        2229         MVA   IOBLK,R7             SET UP CONTROL BLK FOR SUPR
0031AC  C020 32FD        2230         MVB   IOMOD+1,R0           GET IDCB FUNC/MODIFIER
0031B0  402D 32FC 00F0   2231         RBTWI X'00F0',IOMOD        REMOVE FUNCTION FROM 'IOMOD'
0031B4  3022             2232         SRL   4,R0                 RIGHT JUSTIFY FUNCTION BITS IN R0
0031B6  F005             2233         CBI   5,R0                 IDCB FUNCTION = 5?
0031B8  1003             2234         JE    $WRT1                YES - ISSUE 'SVC  'WRIT1'
0031BA  6010             2235         SVC   WRIT0                ISSUE WRITE DPC '4X' OP
0031BC  6802 3242        2236         B     XIO8-4               GO WAIT FOR THE INTERRUPT
0031BE  6011             2237 $WRT1  SVC   WRIT1                ISSUE WRITE DPC '5X' OP
0031C2  6802 3242        2238         B     XIO8-4               GO WAIT FOR THE INTERRUPT
0031C4                   2239 *
0031C8  4020 32FA 3038   2240 $DGWR  MVA   WRDCB,IODCB           SET UP CONTROL BLK FOR SVC CALL
0031CE  6802 31EE        2241         B     XIODG                ISSUE START CS DIAG CMD
                         2242 *
0031D2  4020 32FA 3058   2243 $DGRD  MVA   RDDCB,IODCB           SET UP CONTROL BLK FOR SVC CALL
0031D8  6F08 3064        2244         MVW   RDDCB+12,R7          GET NO. OF BYTES TO CLEAR
0031DC  6D08 3066        2245         MVW   RDDCB+14,R5          ADDR OF READ BUFFER
0031E0  0BFF             2246         MVBI  X'FF',R3             CLEAR TO F'S
0031E2  2BAC             2247         FFN   R3,(R5)              *
0031E4  6802 31EE        2248         B     XIODG                ISSUE START CS DIAG CMD
                         2250         COPY  COMECU
                         2251 ************************************************************************
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                         2252 *                                                              *
                         2253 *              EQUATED NAMES FOR SUPPORTED SVC'S              *
                         2254 *                                                              *
                         2255 ************************************************************************
000000                   2256 OUT    EQU   0                    OUT SVC
000001                   2257 OUTIN  EQU   1                    OUTIN SVC
000002                   2258 IDLE   EQU   2                    IDLE SVC
000003                   2259 IDLE5  EQU   3                    IDLE SVC - INDEPENDENT OF CPU TYPE
000004                   2260 CHNGE  EQU   4                    CHANGE LEVEL SVC
000005                   2261 PGMCK  EQU   5                    ALLOW RETURN ON PROGRAM CHECK SVC
000006                   2262 EXIT   EQU   6                    EXIT SVC
000007                   2263 TERM   EQU   7                    TERMINATE SVC
000008                   2264 RESET  EQU   8                    RESET DEVICE SVC
000009                   2265 RID    EQU   9                    READ ID SVC
00000A                   2266 START  EQU   10                   START CYCLE STEAL SVC
00000B                   2267 STCSS  EQU   11                   START CYCLE STEAL STATUS SVC
00000C                   2268 PREP   EQU   12                   PREPARE DEVICE SVC
00000D                   2269 READ0  EQU   13                   READ WITH FUNCTION BIT 3 OFF SVC
00000E                   2270 READ1  EQU   14                   READ WITH FUNCTION BIT 3 ON SVC
00000F                   2271 RSTAT  EQU   15                   READ STATUS SVC
000010                   2272 WRIT0  EQU   16                   WRITE WITH FUNCTION BIT 3 OFF SVC
000011                   2273 WRIT1  EQU   17                   WRITE WITH FUNCTION BIT 3 ON SVC
000012                   2274 CTRL   EQU   18                   CONTROL SVC
000013                   2275 RICB   EQU   19                   RELEASE INTERUPT CONTROL BLOCK SVC
000014                   2276 CICB   EQU   20                   CONNECT INTERUPT CONTROL BLOCK SVC
000015                   2277 HIO    EQU   21                   HALT ALL I/O
000016                   2278 REQSD  EQU   22                   REQUEST USE OF DCP DISK SVC
000017                   2279 RELSD  EQU   23                   RELEASE USE OF DCP DISK SVC
000018                   2280 HALT   EQU   24                   HALT SVC
000019                   2281 ETOH   EQU   25                   EBCDIC TO HEX SVC (STRING)
00001A                   2282 HTOE   EQU   26                   HEX TO EBCDIC SVC (STRING)
00001B                   2283 ATOH   EQU   27                   ASCII TO HEX SVC (STRING)
00001C                   2284 HTOA   EQU   28                   HEX TO ASCII SVC (STRING)
00001D                   2285 ETOA   EQU   29                   EBCDIC TO ASCII SVC (STRING)
00001E                   2286 ATOE   EQU   30                   ASCII TO EBCDIC SVC (STRING)
00001F                   2287 READI  EQU   31                   READ DATA SETS FOR MDI/UTIL
000020                   2288 WRITI  EQU   32                   WRITE DATA SETS FOR UTIL
                         2290 ************************************************************************
                         2291 *                                                              *
                         2292 *                EQUATES USED BY TU'S AS CONSTANTS             *
                         2293 *                                                              *
                         2294 ************************************************************************
00004E                   2295 PLUS   EQU   C'+'                 PLUS CHAR
000060                   2296 MINUS  EQU   C'-'                 MINUS CHAR
000000                   2298 ZERO   EQU   0
000001                   2299 ONE    EQU   1
000002                   2300 TWO    EQU   2
000003                   2301 THREE  EQU   3
000004                   2302 FOUR   EQU   4
000005                   2303 FIVE   EQU   5
000006                   2304 SIX    EQU   6
000007                   2305 SEVEN  EQU   7
000008                   2306 EIGHT  EQU   8
000009                   2307 NINE   EQU   9
00000A                   2308 TEN    EQU   10
00000B                   2309 ELEVN  EQU   11                                  11
00000C                   2310 TWELV  EQU   12                                  12
00000D                   2311 THRTN  EQU   13                                  13
00000F                   2312 FIVTN  EQU   15                                  15
000010                   2313 SIXTN  EQU   16                                  16
000020                   2314 THRY2  EQU   32                                  32
000040                   2315 SIXT4  EQU   64                                  64
000080                   2316 ONE28  EQU   128                                 128
000100                   2317 TWO56  EQU   256                                 256
000400                   2318 ONEK   EQU   1024                                1024
000800                   2319 TWOK   EQU   2048                                2048
000C00                   2320 THREK  EQU   3072                                3072
001000                   2321 FOURK  EQU   4096                                4096
FFFFFF                   2323 M1     EQU   -1                                  -1
FFFFFE                   2324 M2     EQU   -2                                  -2
FFFFFD                   2325 M3     EQU   -3                                  -3
FFFFFC                   2326 M4     EQU   -4                                  -4
                         2328 ************************************************************************
                         2329 *                                                              *
                         2330 *     THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE *
                         2331 *     BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES. *
                         2332 *                                                              *
                         2333 ************************************************************************
000000                   2334 BS0    EQU   0
000001                   2335 BS1    EQU   1
000002                   2336 BS2    EQU   2
000003                   2337 BS3    EQU   3
000004                   2338 BS4    EQU   4
000005                   2339 BS5    EQU   5
000006                   2340 BS6    EQU   6
000007                   2341 BS7    EQU   7
000008                   2342 BS8    EQU   8
000009                   2343 BS9    EQU   9
00000A                   2344 BS10   EQU   10
00000B                   2345 BS11   EQU   11
00000C                   2346 BS12   EQU   12
00000D                   2347 BS13   EQU   13
00000E                   2348 BS14   EQU   14
00000F                   2349 BS15   EQU   15
                         2351         COPY  T7AXEQ               16MAR78
                         2352         PRINT OFF
                         2916         T7AXEQ
                         2917************************************************************29JUL76**
                         2918+*
                         2919+* SUB-ROUTINE
                         2920+*
                         2921+*     EXECUTE INPUT AND OUTPUT COMMANDS
                         2922+*
                         2923+* PURPOSE
                         2924+*
                         2925+*     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                         2926+*     THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
                         2927+*
                         2928+*       1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
                         2929+*          THE I/O COMMAND.
                         2930+*       2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
                         2931+*          ISSUED BY THIS SUBROUTINE.
                         2932+*       3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
                         2933+*          START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
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 LOCTR  OBJECT TEXT       STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
                          2934+*      4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
                          2935+*         SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
                          2936+*         MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
                          2937+*      5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
                          2938+*         EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC  START'.
                          2939+*      6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
                          2940+*         STARTS TO DETERMINE A LOST INTERRUPT.
                          2941+*      7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
                          2942+*         WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
                          2943+*      8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
                          2944+*      9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
                          2945+*     10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
                          2946+*     11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
                          2947+*     12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
                          2948+*         ISSUED BY THIS SUBROUTINE.
                          2949+*     13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
                          2950+*         CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
                          2951+*         COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
                          2952+*
                          2953+* CALLING SEQUENCE
                          2954+*
                          2955+*      THIS ROUTINE HAS THE FOLLOWING ENTRIES:
                          2956+*
                          2957+* --> BAL   XIO         OR          XEQ ANY CYCLE STEAL COMMAND, MOD=0
                          2958+* --> BAL   XIO1                   MOD PARM PRELOADED IN 'IOMOD'
                          2959+* --> BAL   XIOCS,R6    OR          XEQ START CYCLE STEAL STATUS, MOD=F
                          2960+* --> BAL   XIOCS-4,R6             AUTO CS STATUS (FOLLOWING OTHER XIO
                          2961+*      .                           AND DOES NOT POST INTERRUPT STATUS)
                          2962+*
                          2963+* RETURN CONTROL
                          2964+*
                          2965+*      BXS   (R6,2)                RETURN TO USER NO ERROR
                          2966+* OR   B     (R6)*                 RETURN AND RETRY ON ERROR
                          2967+*************************************************************************
 0031E8  CB25 32FC        2969+XIO    MVWZ  IOMOD,R3              SET MOF OF 0 FOR CYCLE STEAL OP
 0031EC  500E             2970+       J     XIO1                  CS I/O'S ARE NOT RETRIED
                          2971+*
 0031EE  4020 32FC 000D   2972+XIODG  MVWI  X'000D',IOMOD         SET MODIFIER FOR DIAGNOSTIC OPS
 0031F4  500A             2973+       J     XIO1                  GO TO CS OPS
                          2974+*
 0031F6  4CAA             2975+       TBTR  (R4,CE)               RESET CS STATUS INTER ERROR INDICAT.
 0031F8  4C68             2976+       TBTS  (R4,CS)               SET 'CYCLE STEAL STATUS' IN PROGRESS
 0031FA  4020 32FA 3028   2977+XIOCS  MVA   CSDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
 003200  4020 32FC 000F   2978+       MVWI  X'000F',IOMOD         SET CYCLE STEAL MODIFIER
 003206  4C28             2979+       TBT   (R4,CS)               IS CS IN PROGRESS, ERROR CONDITION
 003208  1213             2980+       JON   XIO2                  * YES, BYPASS SAVING I/O ADRS
 00320A  6E0D 2F8C        2981+XIO1   MVW   R6,LSTIO              SAVE IAR FOR RETRY IF REQUESTED
 00320E  4324 2F96        2982+       MVA   DCBUF,R3              SET UP TO ADRS TO MOVE DCB TABLE
 003212  6D08 32FA        2983+       MVW   IODCB,R5              * AND THE FROM ADRS, ALONG WITH
 003216  0F1A             2984+       MVBI  26,R7                 * THE NUMBER OF MOVES
 003218  2D64             2985+       MVFN  (R5),(R3)             MOVE 1 STATUS WORD AND ADJUST
 00321A  0BFF             2986+       MVBI  255,R3                CLEAR CYCLE STATUS BUFFER
 00321C  4524 2FA6        2987+       MVA   CSBUF,R5              *   TO ALL ONES  *
 003220  0F1A             2988+       MVBI  26,R7                 *
 003222  2BAC             2989+       FFN   R3,(R5)               *
 003224  4020 2F88 0708   2990+       MVWI  X'0708',$IOIN         OVERLAY OLD CONDITION CODES
 00322A  CB25 2F8A        2991+       MVWZ  $ISB,R3               ZERO OUT OLD ISB VALUE
                          2992+*
 00322E  4CA1             2993+       TBTR  (R4,ER)               RESET ANY ERROR BEFORE I/O COMMAND
 003230  4CA3             2994+XIO2   TBTR  (R4,IN)               CLEAR INTERRUPT RECEIVED CNTL BIT
 003232  4724 32F6        2995+       MVA   IOBLK,R7              SET UP CONTROL BLOCK FOR SUPVR
 003236  4CA6             2996+       TBTR  (R4,$LE)              RESET LEVEL ERROR INDICATOR
 003238  4C62             2997+       TBTS  (R4,XI)               SET EXPECTED INTR CONTROL BIT
 00323A  600A             2998+       SVC   START                 CALL SUPVR FOR I/O COMMAND
                          2999+*
 00323C  4CA7             3000+       TBTR  (R4,NI)               IS AN INTR EXPECTED
 00323E  6AC0 0002        3001+       BN    (R6,2)                * NO, RETURN TO USER
                          3002+*
                          3003+*           THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
                          3004+*
 003242  4524 0000        3005+       MVWI  0,R5                  SET UP WORK REG FOR 'LOST INTR'
 003246  4CA3             3006+XIO8   TBTR  (R4,IN)               HAS INTERRUPT BEEN RECEIVED
 003248  1239             3007+       JON   XIOCK                 * YES, CHECK IF ALL WAS SATISFACTORY
 00324A  6002             3008+       SVC   IDLE                  ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                          3009+*                                   SUPVR WILL RETURN HERE
 00324C  6002             3010+       SVC   IDLE                  ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                          3011+*                                   SUPVR WILL RETURN HERE
 00324E  7DA1 0001        3012+       AWI   1,R5                  ADVANCE TIME OUT COUNT
 003252  18F9             3013+       JNZ   XIO8                  BCH IF TIME OUT NOT REACHED
 003254  4C61             3014+       TBTS  (R4,ER)               SET ON ERROR CONTROL BIT
 003256  6802 0000        3015+       B     (R6)*                 ERR 'NO INTERRUPT'
                          3017+*************************************************************03FEB76**
                          3018+*
                          3019+* SUBROUTINE
                          3020+*
                          3021+*      I/O EXECUTE ERROR HANDLING ROUTINE
                          3022+*
                          3023+* PURPOSE
                          3024+*
                          3025+*      THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
                          3026+*      PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
                          3027+*      SUPERVISOR AND IT WAS NOT ACCEPTED.
                          3028+*
                          3029+* CALLING SEQUENCE
                          3030+*
                          3031+*      SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
                          3032+*
                          3033+* RETURN CONTROL
                          3034+*
                          3035+*      B     (R6)*                 RETURN TO USERS ERROR HANDLER
                          3036+*
                          3037+*************************************************************************
                          3038+*
                          3039+* CC         0= DEVICE NOT ATTACHED
                          3040+* FOR        1= DEVICE BUSY
                          3041+* I/O        2= DEVICE BUSY AFTER RESET
                          3042+*            3= COMMAND REJECT
                          3043+*            4= INTERVENTION REQUIRED
                          3044+*            5= INTERFACE DATA CHECK
                          3045+*            6= CONTROLLER BUSY
                          3046+*            7= I/O COMMAND EXCEPTED
                          3047+*
 00325A  706E             3048+XIOER  CPLSR R3                    COPY STATUS ANY LEVEL INTO R3
 00325C  336A             3049+       SRL   13,R3                 POSITION CC CODE TO BITS 13-15
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 LOCTR  OBJECT TEXT       STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
 00325E  C328 2F88        3050+       MVB   R3,$IOIN              * PUT IN LOG OUT AREA
 003262  68D2 0000        3051+       B     (R6)*                 PETURN TO USER ERROR HANDLER
                          3053+*************************************************************14APR76**
                          3054+*                                                                       IL
                          3055+* SUB-ROUTINE                                                          IL
                          3056+*                                                                       IL
                          3057+*      ERROR INTERRUPT             RUNS ON INTERRUPT LEVEL '$INTL'      IL
                          3058+*                                                                       IL
                          3059+* PURPOSE                                                             IL
                          3060+*                                                                       IL
                          3061+*      THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR     IL
                          3062+*      OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE       IL
                          3063+*      EXPECTED CODE.                                                   IL
                          3064+*                                                                       IL
                          3065+* CALLING SEQUENCE                                                    IL
                          3066+*                                                                       IL
                          3067+*      SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT        IL
                          3068+*                                                                       IL
                          3069+* RETURN CONTROL                                                      IL
                          3070+*                                                                       IL
                          3071+*      SVC   EXIT                  RETURN TO USER VIA SUPVR             IL
                          3072+*                                                                       IL
                          3073+*************************************************************************IL
                          3074+*                                                                       IL
                          3075+* CC         0= CONTROLLER END                ISB   0= ADD STATUS      IL
                          3076+* FOR        1= PROGRAM CONTROL INTERRUPT     BITS  1= COMD REJECT     IL
                          3077+* INTR       2= EXCEPTION INTERRUPT           FOR   2= INCOR LENGTH    IL
                          3078+*            3= DEVICE END INTERRUPT          INTR  3= DCB SPEC CK     IL
                          3079+*            4= ATTENTION INTERRUPT                 4= STG DATA CK     IL
                          3080+*            5= ATTENTION / PROGRAM CNTL INTR       5= INV STG ADRS    IL
                          3081+*            6= ATTENTION / EXCEPTION INTR          6= PROTECT CK      IL
                          3082+*            7= ATTENTION / DEVICE END INTR         7= I-FACE DATA     IL
                          3083+*                                                                       IL
 003266  706E             3084+INTER  CPLSR R3                    COPY STATUS ANY LEVEL INTO R3        IL
 003268  336A             3085+       SRL   13,R3                 POSITION INDICATORS IN R3            IL
 00326A  4424 2F80        3086+       MVA   OPTN1,R4              SET UP BASE ADRS                     IL
 00326E  4C28             3087+       TBT   (R4,CS)               IS CS IN PROGRESS                    IL
 003270  1006             3088+       JOFF  INTES                 * NO                                 IL
 003272  4C6A             3089+       TBTS  (R4,CE)               TURN ON CYCLE STEAL INTER ERROR      IL
 003274  6F0D 2F94        3090+       MVW   R7,DEV4               SAVE CS ERR ISB VALUE, BITS 0-7      IL
 003278  C328 2F95        3091+       MVB   R3,DEV4+1             * AND THE COND CODE                  IL
 00327C  500A             3092+       J     INTR1                                                      IL
 00327E  4C24             3093+INTES  TBT   (R4,XE)               TEST  EXPECTED ATTEN / ERROR IND     IL
 003280  1002             3094+       JOFF  INTET                 BCH IF NOT EXPECTED                  IL
 003282  F304             3095+       CBI   4,R3                  IS THIS AN 'ATTENTION' INTR           IL
 003284  1006             3096+       JE    INTR1                 * YES, BCH TO END INTR SEQUENCE      IL
 003286  4C61             3097+INTET  TBTS  (R4,ER)               SET ERROR ON I/O COMMAND CNTL BIT    IL
 003288  5004             3098+       J     INTR1                                                      IL
                          3099+*                                  THE ERROR INTERRUPT USES THE SAME    IL
                          3100+*                                  ENDING SEQUENCE AS THE NORMAL INTR   IL
                          3102+*************************************************************14APR76IL
                          3103+*                                                                       IL
                          3104+* SOUBROUTINE                                                          IL
                          3105+*                                                                       IL
                          3106+*      OKAY  INTERRUPT             RUNS ON INTERRUPT LEVEL '$INTL'      IL
                          3107+*                                                                       IL
                          3108+* PURPOSE                                                             IL
                          3109+*                                                                       IL
                          3110+*      TO CHECK THE INTERRUPT AND CONTINUE THE TEST                     IL
                          3111+*                                                                       IL
                          3112+* CALLING SEQUENCE                                                    IL
                          3113+*                                                                       IL
                          3114+*      SUPERVISOR WILL ENTER HERE  IF INTR CC IS AS REQUESTED           IL
                          3115+*      THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE          IL
                          3116+*      AFTER THE SPECIAL PART HAS BEEN COMPLETED  AND THE               IL
                          3117+*      COMMON SECTION IS HANDLED HERE.                                  IL
                          3118+*                                                                       IL
                          3119+* RETURN CONTROL                                                      IL
                          3120+*                                                                       IL
                          3121+*      SVC   EXIT                  RETURN TO USER VIA SUPVR             IL
                          3122+*                                                                       IL
                          3123+*************************************************************************IL
 003292  4C63             3124+INTOK  CPLSR R3                    COPY STATUS ANY LEVEL INTO R3        IL
 003294  4C28             3125+       SRL   13,R3                 POSITION INDICATORS IN R3            IL
 003296  1204             3126+       MVA   OPTN1,R4              SET UP BASE ADRS                     IL
 003298  C328 2F89        3127+INTR1  TBTS  (R4,IN)               SET   INTERRUPT RECEIVED             IL
 00329C  6F0D 2F8A        3128+       TBT   (R4,CS)               IS 'CS IN PROGRESS' ON               IL
 0032A0                   3129+       JON   INTR2                 * YES, BCH AROUND UPDATE             IL
                          3130+       MVB   R3,$IOIN+1            SAVE INTERRUPTING CC CODE            IL
                          3131+       MVW   R7,$ISB               SAVE INTR STATUS AND DEV ADRS        IL
                          3132+INTR2  EQU   *                                                          IL
 0032A0  3521             3133+*      CPCL  R5                    CURRENT LEVEL COPIED BY DCP          IL
 0032A2  0501             3134+       SLL   4,R5                  POSITION INTR LEVEL AND PUT          IL
 0032A4  CD24 2FC6        3135+       ABI   1,R5                  * IN 'I' BIT                         IL
 0032A8  1002             3136+       CW    $INTL,R5              IS THIS THE CORRECT INTR LEVEL       IL
 0032AA  4C66             3137+       JE    INTR3                 * YES, GO EXIT THIS LEVEL            IL
 0032AC  4C61             3138+       TBTS  (R4,$LE)              SET INTR LEVEL ERROR CONTROL BIT     IL
 0032AE  4CA2             3139+       TBTS  (R4,ER)               SET ERROR ON I/O COMMAND CNTL BIT    IL
 0032B0  1204             3140+INTR3  TBTR  (R4,XI)               WAS INTERRUPT EXPECTED               IL
 0032B2  4C60             3141+       JON   INTRX                 * YES, EXIT OFF THIS INTR LEVEL      IL
 0032B4  F304             3142+       TBTS  (R4,MI)               * NO, SET MYSTERY INTR CONTROL BIT   IL
 0032B6  1001             3143+       CBI   4,R3                  ATTENTION INTERRUPT?                 IL
 0032B8  4C6C             3144+       JE    INTRX                 YES                                  IL
 0032BA  6006             3145+       TBTS  (R4,NG)               ERROR,UNEXPECTED INTERRUPT           IL
                          3146+INTRX  SVC   EXIT                  EXIT THIS LEVEL VIA SUPVR TO PGM     IL
                          3148+*************************************************************03FEB76**
                          3149+*
                          3150+*      THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
                          3151+*      HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
                          3152+*      RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
                          3153+*
                          3154+*
 0032BC  4CA4             3155+XIOCK  TBTR  (R4,XE)               WAS AN ERROR EXPECTED
 0032BE  6AC0 0002        3156+       BN    (R6,2)                * YES, EXIT THIS ROUTINE
 0032C2  4CA8             3157+       TBTR  (R4,CS)               WAS AUTO CS IN PROGRESS
 0032C4  1006             3158+       JOFF  XIOCV                 * NO, CONTINUE CHECKING
 0032C6  4C2A             3159+       TBT   (R4,CE)               IS CS IN AN ERR CONDITION
 0032C8  1002             3160+       JOFF  XIOCO                 * NO, BCH
 0032CA  68D2 0000        3161+       B     (R6)*                 CS ERROR
 0032CE  4C69             3162+XIOCO  TBTS  (R4,CSA)              TURN ON CS STATS AVAIL FLAG
 0032D0  5601             3163+       BXS   (R6,2)                GO TO USER
 0032D2  4C21             3164+XIOCV  TBT   (R4,ER)               WAS ERROR INTR CONTROL BIT ON
 0032D4  100D             3165+       JOFF  XIOCX                 * NO, EXIT THIS ROUTINE
                          3166+*
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

0032D6  C520 2F89       3167+        MVB   $IOIN+1,R5          GET LAST INTR CC CODE
0032DA  F502            3168+        CBI   2,R5                IS THIS CC=2
0032DC  1003            3169+        JE    XIOCQ               YES
0032DE  F506            3170+        CBI   6,R5                IS THIS CC=6
0032E0  68D1 0000       3171+        BNE   (R6)*               * NO, BCH TO ERROR HANDLER
0032E4  C520 2F8A       3172+XIOCQ   MVB   $ISB,R5             GET LAST ISB DATA BYTE AND IF CS
0032E8  6A00 31F6       3173+        BN    XIOCS-4             * AVAILABLE, GO AND GET IT
0032EC  68D2 0000       3174+        B     (R6)*               ERROR
0032F0  CB25 2F84       3175+XIOCX   MVWZ  OPTN3,R3            CLEAR OUT OPTION 3 CNTL BITS
0032F4  5601            3176+        BXS   (R6,2)              RETURN TO USER VIA REG 6
                        3177+**
                        3178+**            I/O   PARAMETER LIST
                        3179+**
0032F6  19D0            3180+IOBLK   DC    A(DEVADD)           ADRS OF DEVICE ADRS
0032F8  325A            3181+        DC    A(XIOER)            ERROR ROUTINE ADRS
0032FA  0000            3182+IODCB   DC    A(*-*)              DCB ADRS OR LEVEL & INTR
0032FC  0000            3183+IOMOD   DC    A(*-*)              MODIFIER
0032FE  0000            3184+        DC    A(*-*)              ADRS OF LAST SVC CALL
003300  0000            3185+IORSP   DC    A(*-*)              SECOND WORD OF LAST IDCB
                        3186+**
                        3187+**            INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
                        3188+**
003302  19D0            3189+INTBL   DC    A(DEVADD)           ADRS OF DEVICE ADRS
003304  328A            3190+        DC    A(INTOK)            INTERRUPT OK RETURN ADRS
003306  3266            3191+        DC    A(INTER)            INTERRUPT ERROR ADRS
003308  0003            3192+INTCC   DC    X'0003'             INTERRUPT CODE EXPECTED
                        3194+*****************************************************************11MAY76**
                        3195+**
                        3196+** SUBROUTINE
                        3197+**
                        3198+**      CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
                        3199+**
                        3200+** PURPOSE
                        3201+**
                        3202+**      TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                        3203+**      PREPARE ON THE DESIFED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
                        3204+**      TO INTERRUPT.
                        3205+**
                        3206+** CALLING SEQUENCE
                        3207+**
                        3208+**      THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                        3209+**
                        3210+** --> BAL   $CONC,R6             CLEAR DEV DEP STG AND CONNECT I/O BLK
                        3211+** --> BAL   $CONP,R6             PREPARE DEVICE ONLY, ALREADY CONNECT
                        3212+**
                        3213+** RETURN CONTROL
                        3214+**
                        3215+**      BXS   (R6,2)              RETURN TO USER VIA REG 6 IF OKAY
                        3216+** OR  B     (R6)*               IF THE DEVICE COULD NOT BE CONNECTED
                        3217+**
                        3218+*****************************************************************
00330A  0F06            3219+$CONC   MVBI  6,R7                NUMBER OF BYTE TO CLEAR
00330C  0B00            3220+        MVBI  0,R3                * AND THE DATA TO USE
00330E  4524 2F8E       3221+        MVA   DEV1,R5             * ALONG WITH THE ADRS TO USE
003312  2BAC            3222+        FFN   R3,(R5)             *
003314  CB25 2F84       3223+        MVWZ  OPTN3,R3            CLEAR OLD CONTROLS FOR NEW ROUTINE
003318  4724 3302       3224+        MVA   INTBL,R7            SET R7 TO CONTROL BLOCK AND
00331C  6014            3225+        SVC   CICB                * CONNECT IT TO THIS DEVICE
00331E  6AD0 0000       3226+        BN    (R6)*               ERROR RETURN TO USER
                        3227+**
003322  8828 2FC6 32FA  3228+$CONP   MVW   $INTL,IODCB          PUT IN LEVEL & INTR PARAMETER
003328  4724 32F6       3229+        MVA   IOBLK,R7            SET R7 TO CONTROL BLOCK TO PREPARE
00332C  4020 2F88 0708  3230+        MVWI  X'0708',$IOIN       INITIALIZE CONDITION CODE STORAGE
003332  CB25 2F8A       3231+        MVWZ  $ISB,R3             * AND CLEAR OLD ISB VALUE
003336  6E0D 2F8C       3232+        MVW   R6,LSTIO            SET UP ADDRESS THAT STARTED LAST I/O
00333A  600C            3233+        SVC   PREP                * AND CALL ON SUPVR
00333C  5601            3234+        BXS   (R6,2)              RETURN TO USER
                        3236+*****************************************************************06APR76**
                        3237+**
                        3238+** SUBROUTINE
                        3239+**
                        3240+**      DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
                        3241+**
                        3242+** PURPOSE
                        3243+**
                        3244+**      DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                        3245+**      SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
                        3246+**      BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
                        3247+**
                        3248+** CALLING SEQUENCE
                        3249+**
                        3250+**      THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                        3251+**
                        3252+** --> B     $ERR$               SET 'NG' BIT AND CONVERT DATA TO LOG
                        3253+** --> B     $CONX               RETURN TO MDI SUPERVISOR TO TEST STS
                        3254+**
                        3255+** RETURN CONTROL
                        3256+**
                        3257+**      B     TURTN*              RETURN TO MDI
                        3258+** OR  B     (R6)*               IF THE DEVICE COULD NOT BE CONNECTED
                        3259+**
                        3260+*****************************************************************
003324  4020 1818 8000  3261+$ERR$   MVWI   X'8000',TUSTATUS    SET ON 'NO GOOD' STATUS BIT
003344  4724 350E       3262+        MVA    HEBLK,R7           GET ADRS OF CONTROL BLOCK
003348  601A            3263+        SVC    HTOE               CONVERT HEX TO EBC VIS DCP
00334A  4020 188E 4040  3264+        MVWI  X'4040',TUWORK+116
003350  4020 1890 4040  3265+        MVWI  X'4040',TUWORK+118
003356  4020 1892 4040  3266+        MVWI  X'4040',TUWORK+120
00335C  0D04            3267+$PRNT   MVBI  4,R5
00335E  4324 181A       3268+        MVA   TUWORK,R3            SET UP BUFFER STORAGE
003362  6B0D 3506       3269+        MVW   R3,BUFPT
003366  4124 33E2       3270+        MVA   LINE1,R1
00336A  0F04            3271+        MVBI  4,R7
00336C  0E08            3272+        MVBI  8,R6
00336E  2B24            3273+MVBUF   MVFN  (R3),(R1)
003370  0F04            3274+        MVBI  4,R7
003372  0A40            3275+        MVBI  X'40',R2
003374  C258            3276+        MVB   R2,(R1)+
003376  BEFB            3277+        JCT   MVBUF,R6
003378  0E08            3278+        MVBI  8,R6
00337A  7921 002C       3279+        AWI   44,R1
00337E  BDF7            3280+        JCT   MVBUF,R5
003380  4020 1802 F1F0  3281+        MVWI  PIDMSG10,PID+2
003386  4020 19B8 350C  3282+        MVA   FAKETU,@DCADD1
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

003386  4020 19B8 350C  3283+        MVA   DC2PT,@DCADD2
003392  402C 19C4 0080  3284+        OWI   BIT0080,SUPSTAT
003398  4324 2F86       3285+        MVA   $TUID,R3            SET UP BUFFER STORAGE
00339C  6F13 18BA       3286+        BAL   TUMSGWTR*,R7        GO TO MESSAGE WRITER
                        3287+**
0033A0                  3288+$CONX   EQU   *
0033A0  C720 19D0       3289+        MVB   DEVADD,R7           GET DEVICE ADDRESS FROM MDI
0033A4  6013            3290+        SVC   RICB                RELEASE INTERRUPT CONTROL BLOCK
0033A6  6812 2FC8       3291+        B     TURTN*              RETURN TO MDI SUPERVISOR
                        3292+*
0033AA  0009            3293+BEGIN   DC    A(0009)             NUMBER OF LINES TO PRINT
0033AC  0008            3294+        DC    A(0008)             LINE LENGTH = 8 CHAR
0033AE  5C5C40C1C2D6D9E3 3295+       DC    C'** ABORT'
0033B6  0028            3296+        DC    A(0040)             LINE LENGTH = 40 CHAR
0033B8  E3E4C9C440C9D6C9D 3297+      DC    C'TUID IOIN ISB  INST SECT  ID  DATA CSCC '
0033E0  0028            3298+        DC    A(0040)             LINE LENGTH = 40 CHAR
0033E2  4040404040404040 3299+LINE1  DC    C'                  '
00340A  0028            3300+        DC    A(0040)             LINE LENGTH = 40 CHAR
00340C  C3D5E3D340C4C3C2F 3301+      DC    C'CNTL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS '
003434  0028            3302+        DC    A(0040)             LINE LENGTH = 40 CHAR
003436  4040404040404040 3303+LINE2  DC    C'                  '
00345E  0028            3304+        DC    A(0040)             LINE LENGTH = 40 CHAR
003460  C3E260F040C3E260F 3305+      DC    C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 '
003488  0028            3306+        DC    A(0040)             LINE LENGTH = 40 CHAR
00348A  4040404040404040 3307+LINE3  DC    C'                  '
0034B2  0028            3308+        DC    A(0040)             LINE LENGTH = 40 CHAR
0034B4  C3E260F840C3E260F 3309+      DC    C'CS-8 CS-9 CS-A CS-B CS-C '
0034DC  0028            3310+        DC    A(0040)             LINE LENGTH = 40 CHAR
0034DE  4040404040404040 3311+LINE4  DC    C'                  '
                        3312+*
003506  0000            3313+BUFPT   DC    A(*-*)
003508  33AA            3314+DC2PT   DC    A(BEGIN)
00350A  0101            3315+FIXTU   DC    X'0101'
00350C  0101            3316+FAKETU  DC    X'0101'
00F1F0                  3317+PIDMSG10 EQU  X'F1F0'
000080                  3318+BIT0080  EQU   X'0080'
                        3319+*
                        3320+*       DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
                        3321+*
00350E  003A            3322+HEBLK   DC    A(58)               NUMBER OF BYTES TO CONVERT
003510  2F86            3323+        DC    A($TUID)            FROM ADRS
003512  181A            3324+        DC    A(TUWORK)           AND THE TO ADRS
                        3325         COPY  T7A10               23JAN78
                        3326 T7A10 TUIT
                        3327+*****************************************************************06FEB76**
                        3328+*
                        3329+* TEST UNIT
                        3330+*
                        3331+*      ERROR HALT CODE/DIAG SENSE BYTE CHECK
                        3332+*
                        3333+* PURPOSE
                        3334+*
                        3335+*      TO MOVE THE ERROR HALT CODE, STATUS BYTE, AND DIAG BYTES 1,2 3
                        3336+*      TO THE TU RESULTS BUFFER (TURESUL).
                        3337+*      .
                        3338+*      MDI=$TUXX,T7A10,01,0708,EQ
                        3339+*      .
                        3340+*      TURESUL BIT(S) 0-7 ........ ERROR HALT CODE
                        3341+*      .              8-15 ........ STATUS (SENSE) BYTE
                        3342+*      .              16-23 ....... SINGLE SHOT BYTE 1 (5-HURSLEY)
                        3343+*      .              24-31 ....... SINGLE SHOT BYTE 2 (6-HURSLEY)
                        3344+*      .              32-39 ....... SINGLE SHOT BYTE 3 (7-HURSLEY)
                        3345+*      .              48-55 ....... NOT USED
                        3346+*      .              56-63 ....... MULTISAMPLE BYTE 1 (5-HURSLEY)
                        3347+*      .              64-71 ....... MULTISAMPLE BYTE 2 (6-HURSLEY)
                        3348+*      .              72-79 ....... MULTISAMPLE BYTE 3 (7-HURSLEY)
                        3349+*      .              80-87 ....... WRAP BYTE
                        3350+*
                        3351+* CALLING SEQUENCE
                        3352+*
                        3353+        MVW   TUWORK,TURESUL      MOVE ERROR HALT CODE & STATUS BYTES
                        3354+        MVD   TUWORK+6,TURESUL+2  SINGLE SHOT BYTES 1, 2, AND 3
                        3355+        MVD   TUWORK+10,TURESUL+6 MULTISAMPLE BYTES 1, 2, AND 3
                        3356+*                                 AND WRAP BYTE
                        3357+* RETURN CONTROL
                        3358+*
                        3359+*       B     TURTN*              RETURN TO MDI SUPERVISOR
                        3360+*
                        3361+*****************************************************************
003514  6F0D 2FC8       3362+T7A10   MVW   R7,TURTN            SAVE RETURN ADDRESS
003518  4020 2F86 7A10  3363+        MVWI  X'7A10',$TUID       SAVE TU ID FOR DISPLAY
00351E  4424 2F80       3364+        MVA   OPTN1,R4            SET UP POINTER ADRS IN R4
003522  6E03 330A       3365+        BAL   $CONC,R6            CLEAR DEV DEP STG AND CONNECT I/O BL
003526  333E            3366+        DC    A($ERR$)            ERROR ADRS FOR INVALID PREP
                        3367+*
003528  9028 181C 18D2  3368+        MVD   TUWORK+2,TURESUL+10 MOVE ERROR WORDS 4,5
00352E  8028 1827 18CD  3369         MVB   TUWORK+13,TURESUL+5 MOVE WRAP CHECK RESULTS
                        3370         TXIT
003534  6802 33A0       3371+        B     $CONX               RETURN TO MDI CONTROLLER
000000                  3372+*****************************************************************
                        3374         END
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

                           1448 N00094   $FIXT FT=(F00079),GTO=((7A72,N))
                           1449+N00094   DC    A(@FIXT)
002C72  0101               1450+         DC    A(F00079)
002C74  2F66               1451 N00095   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00099,       X
                           1452+N00095   DC    A(@TUXX)
002C76  0500               1453+         DC    AL2(N00099)
002C78  2CAE               1454+         DC    A(T7A02)
002C7A  2FD0               1455+         DC    AL2(OF)
002C7C  0202               1456+         DC    AL2(7)
002C7E  0007               1457+         DC    X'00004000000040'
002C80  00004000000040     1458+         ALIGN WORD
002C87  00                 1459+         DC    AL2(0)
002C88  0000               1460+         DC    C'AA'
002C8A  C1C1               1461+         ALIGN WORD
                           1462+         DC     AL2(PARMARA)
002C8C  196E               1463 N00096   $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00098,     X
                           1464+N00096   DC    A(@TUXX)
002C8E  0500               1465+         DC    AL2(N00098)
002C90  2CAA               1466+         DC    A(T7A02)
002C92  2FD0               1467+         DC    AL2(OF)
002C94  0202               1468+         DC    AL2(8)
002C96  0008               1469+         DC    X'0000000800000008'
002C98  0000000800000008   1470+         ALIGN WORD
                           1471+         DC    AL2(0)
002CA0  0000               1472+         DC    C'AA'
002CA2  C1C1               1473+         ALIGN WORD
                           1474+         DC     AL2(PARMARA)
002CA4  196E               1475 N00097   $FIXT FT=(F00084),GTO=((7A73,A))
                           1476+N00097   DC    A(@FIXT)
002CA6  0101               1477+         DC    A(F00084)
002CA8  2F0C               1478 N00098   $FIXT FT=(F00079),GTO=((7A72,N))
                           1479+N00098   DC    A(@FIXT)
002CAA  0101               1480+         DC    A(F00079)
002CAC  2F66               1481 N00099   $TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00101,       X
                           1482+N00099   DC    A(@TUXX)
002CAE  0500               1483+         DC    AL2(N00101)
002CB0  2CCA               1484+         DC    A(T7A02)
002CB2  2FD0               1485+         DC    AL2(OF)
002CB4  0202               1486+         DC    AL2(7)
002CB6  0007               1487+         DC    X'00000100000001'
002CB8  00000100000001     1488+         ALIGN WORD
002CBF  00                 1489+         DC    AL2(0)
002CC0  0000               1490+         DC    C'AA'
002CC2  C1C1               1491+         ALIGN WORD
                           1492+         DC     AL2(PARMARA)
002CC4  196E               1493 N00100   $FIXT FT=(F00084),GTO=((7A73,A))
                           1494+N00100   DC    A(@FIXT)
002CC6  0101               1495+         DC    A(F00084)
002CC8  2F0C               1496 N00101   $TUXX T7A02,14,00000000000000000000000000100,OF,QT=(Q00043),  X
                           1497+N00101   DC    A(@TUXX)
002CCA  0500               1498+         DC    AL2(N00105)
002CCC  2D08               1499+         DC    A(T7A02)
002CCE  2FD0               1500+         DC    AL2(OF)
002CD0  0202               1501+         DC    AL2(14)
002CD2  000E               1502+         DC    X'00000000000000000000000000100'
002CD4  00000000000000000  1503+         ALIGN WORD
                           1504+         DC    AL2(0)
002CE2  0000               1505+         DC    C'AA'
002CE4  C1C1               1506+         ALIGN WORD
                           1507+         DC     AL2(PARMARA)
002CE6  196E               1508 N00102   $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00104,     X
                           1509+N00102   DC    A(@TUXX)
002CE8  0500               1510+         DC    AL2(N00104)
002CEA  2D04               1511+         DC    A(T7A02)
002CEC  2FD0               1512+         DC    AL2(OF)
002CEE  0202               1513+         DC    AL2(8)
002CF0  0008               1514+         DC    X'0000000800000008'
002CF2  0000000800000008   1515+         ALIGN WORD
                           1516+         DC    AL2(0)
002CFA  0000               1517+         DC    C'AA'
002CFC  C1C1               1518+         ALIGN WORD
                           1519+         DC     AL2(PARMARA)
002CFE  196E               1520 N00103   $FIXT FT=(F00034),GTO=((7A70,C))
                           1521+N00103   DC    A(@FIXT)
002D00  0101               1522+         DC    A(F00034)
002D02  2F4C               1523 N00104   $FIXT FT=(F00084),GTO=((7A73,A))
                           1524+N00104   DC    A(@FIXT)
002D04  0101               1525+         DC    A(F00084)
002D06  2F0C               1526 N00105   $FIXT FT=(F00084),GTO=((7A73,A))
                           1527+N00105   DC    A(@FIXT)
002D08  0101               1528+         DC    A(F00084)
002D0A  2F0C               1529 N00106   $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00110,     X
                           1530+N00106   DC    A(@TUXX)
002D0C  0500               1531+         DC    AL2(N00110)
002D0E  2D46               1532+         DC    A(T7A02)
002D10  2FD0               1533+         DC    AL2(OF)
002D12  0202               1534+         DC    AL2(8)
002D14  0008               1535+         DC    X'0000000200000002'
002D16  0000000200000002   1536+         ALIGN WORD
                           1537+         DC    AL2(0)
002D1E  0000               1538+         DC    C'AA'
002D20  C1C1               1539+         ALIGN WORD
                           1540+         DC     AL2(PARMARA)
002D22  196E               1541 N00107   $TUXX T7A02,4,0000000080000000080,OF,QT=(Q00006),YES=N00109,   X
                           1542+N00107   DC    A(@TUXX)
002D24  0500               1543+         DC    AL2(N00109)
002D26  2D42               1544+         DC    A(T7A02)
002D28  2FD0               1545+         DC    AL2(OF)
002D2A  0202               1546+         DC    AL2(4)
002D2C  0004               1547+         DC    X'0000000080000000080'
002D2E  0000000080000000080 1548+        ALIGN WORD
002D37  00                 1549+         DC    AL2(0)
002D38  0000               1550+         DC    C'AA'
002D3A  C1C1               1551+         ALIGN WORD
                           1552+         DC     AL2(PARMARA)
002D3C  196E               1553 N00108   $FIXT FT=(F00034),GTO=((7A70,C))
                           1554+N00108   DC    A(@FIXT)
002D3E  0101               1555+         DC    A(F00034)
002D40  2F4C               1556 N00109   $FIXT FT=(F00084),GTO=((7A73,A))
                           1557+N00109   DC    A(@FIXT)
002D42  0101               1558+         DC    A(F00084)
002D44  2F0C               1559 N00110   $FIXT FT=(F00086),GTO=((7A76,B))
                           1560+N00110   DC    A(@FIXT)
002D46  0101               1561+         DC    A(F00086)
002D48  2F18
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

                           1562 N00111   $TUXX T7A02,9,0000000000800000008,OF,QT=(Q00006),YES=N00133,   X
002D4A  0500               1563+N00111   DC    A(@TUXX)
002D4C  2E7C               1564+         DC    AL2(N00133)
002D4E  2FD0               1565+         DC    A(T7A02)
002D50  0202               1566+         DC    AL2(OF)
002D52  0009               1567+         DC    AL2(9)
002D54  0000000000800000008 1568+        DC    X'0000000000800000008'
002D5D  00                 1569+         ALIGN WORD
002D5E  0000               1570+         DC    AL2(0)
002D60  C1C1               1571+         DC    C'AA'
                           1572+         ALIGN WORD
002D62  196E               1573+         DC     AL2(PARMARA)
                           1574 N00112   $TUXX T7A02,8,0000000000000002,ON,QT=(Q00007),YES=N00130,     X
002D64  0500               1575+N00112   DC    A(@TUXX)
002D66  2E5C               1576+         DC    AL2(N00130)
002D68  2FD0               1577+         DC    A(T7A02)
002D6A  0200               1578+         DC    AL2(ON)
002D6C  0008               1579+         DC    AL2(8)
002D6E  0000000000000002   1580+         DC    X'0000000000000002'
                           1581+         ALIGN WORD
002D76  0000               1582+         DC    AL2(0)
002D78  C1C1               1583+         DC    C'AA'
                           1584+         ALIGN WORD
002D7A  196E               1585+         DC     AL2(PARMARA)
                           1586 N00113   $TUXX T7A02,9,0000000010000001,OF,QT=(Q00006),YES=N00119,   X
002D7C  0500               1587+N00113   DC    A(@TUXX)
002D7E  2DCC               1588+         DC    AL2(N00119)
002D80  2FD0               1589+         DC    A(T7A02)
002D82  0202               1590+         DC    AL2(OF)
002D84  0009               1591+         DC    AL2(9)
002D86  0000000010000000   1592+         DC    X'0000000010000001'
002D8F  00                 1593+         ALIGN WORD
002D90  0000               1594+         DC    AL2(0)
002D92  C1C1               1595+         DC    C'AA'
                           1596+         ALIGN WORD
002D94  196E               1597+         DC     AL2(PARMARA)
                           1598 N00114   $TUXX T7A02,2,0004,OF,QT=(Q00006),YES=N00116,CT=(C00063)
002D96  0500               1599+N00114   DC    A(@TUXX)
002D98  2DAC               1600+         DC    AL2(N00116)
002D9A  2FD0               1601+         DC    A(T7A02)
002D9C  0202               1602+         DC    AL2(OF)
002D9E  0002               1603+         DC    AL2(2)
002DA0  0004               1604+         DC    X'0004'
                           1605+         ALIGN WORD
002DA2  0000               1606+         DC    AL2(0)
002DA4  C1C1               1607+         DC    C'AA'
                           1608+         ALIGN WORD
002DA6  196E               1609+         DC     AL2(PARMARA)
                           1610 N00115   $FIXT FT=(F00085),GTO=((7A76,A))
002DA8  0101               1611+N00115   DC    A(@FIXT)
002DAA  2F00               1612+         DC    A(F00085)
                           1613 N00116   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00118,       X
002DAC  0500               1614+N00116   DC    A(@TUXX)
002DAE  2DC8               1615+         DC    AL2(N00118)
002DB0  2FD0               1616+         DC    A(T7A02)
002DB2  0202               1617+         DC    AL2(OF)
002DB4  0007               1618+         DC    AL2(7)
002DB6  00004000000040     1619+         DC    X'00004000000040'
002DBD  00                 1620+         ALIGN WORD
002DBE  0000               1621+         DC    AL2(0)
002DC0  C1C1               1622+         DC    C'AA'
                           1623+         ALIGN WORD
002DC2  196E               1624+         DC     AL2(PARMARA)
                           1625 N00117   $FIXT FT=(F00034),GTO=((7A70,C))
002DC4  0101               1626+N00117   DC    A(@FIXT)
002DC6  2F4C               1627+         DC    A(F00034)
                           1628 N00118   $FIXT FT=(F00084),GTO=((7A73,A))
002DC8  0101               1629+N00118   DC    A(@FIXT)
002DCA  2F0C               1630+         DC    A(F00084)
                           1631 N00119   $TUXX T7A02,7,00002000000020,OF,QT=(Q00006),YES=N00129,       X
002DCC  0500               1632+N00119   DC    A(@TUXX)
002DCE  2E58               1633+         DC    AL2(N00129)
002DD0  2FD0               1634+         DC    A(T7A02)
002DD2  0202               1635+         DC    AL2(OF)
002DD4  0007               1636+         DC    AL2(7)
002DD6  00002000000020     1637+         DC    X'00002000000020'
002DDD  00                 1638+         ALIGN WORD
002DDE  0000               1639+         DC    AL2(0)
002DE0  C1C1               1640+         DC    C'AA'
                           1641+         ALIGN WORD
002DE2  196E               1642+         DC     AL2(PARMARA)
                           1643 N00120   $TUXX T7A02,9,0000000080000000080,OF,QT=(Q00006),YES=N00126,   X
002DE4  0500               1644+N00120   DC    A(@TUXX)
002DE6  2E38               1645+         DC    AL2(N00126)
002DE8  2FD0               1646+         DC    A(T7A02)
002DEA  0202               1647+         DC    AL2(OF)
002DEC  0009               1648+         DC    AL2(9)
002DEE  0000000080000008   1649+         DC    X'0000000080000000080'
002DF7  00                 1650+         ALIGN WORD
002DF8  0000               1651+         DC    AL2(0)
002DFA  C1C1               1652+         DC    C'AA'
                           1653+         ALIGN WORD
002DFC  196E               1654+         DC     AL2(PARMARA)
                           1655 N00121   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00123,       X
002DFE  0500               1656+N00121   DC    A(@TUXX)
002E00  2E1A               1657+         DC    AL2(N00123)
002E02  2FD0               1658+         DC    A(T7A02)
002E04  0202               1659+         DC    AL2(OF)
002E06  0007               1660+         DC    AL2(7)
002E08  00004000000040     1661+         DC    X'00004000000040'
002E0F  00                 1662+         ALIGN WORD
002E10  0000               1663+         DC    AL2(0)
002E12  C1C1               1664+         DC    C'AA'
                           1665+         ALIGN WORD
002E14  196E               1666+         DC     AL2(PARMARA)
                           1667 N00122   $FIXT FT=(F00084),GTO=((7A73,A))
002E16  0101               1668+N00122   DC    A(@FIXT)
002E18  2F0C               1669+         DC    A(F00084)
                           1670 N00123   $TUXX T7A02,06,000000000080,OF,QT=(Q00035),YES=N00125
002E1A  0500               1671+N00123   DC    A(@TUXX)
002E1C  2E34               1672+         DC    AL2(N00125)
002E1E  2FD0               1673+         DC    A(T7A02)
002E20  0202               1674+         DC    AL2(OF)
002E22  0006               1675+         DC    AL2(06)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

002E24  000000000080      1676+          DC    X'000000000080'
                          1677+          ALIGN WORD
002E2A  0000              1678+          DC    AL2(0)
002E2C  C1C1              1679+          DC    C'AA'
                          1680+          ALIGN WORD
002E2E  196E              1681+          DC     AL2(PARMARA)
                          1682 N00124    $FIXT FT=(P00079),GTO=((7A72,N))
002E30  0101              1683+N00124    DC    A(@FIXT)
002E32  2F66              1684+          DC    A(F00079)
                          1685 N00125    $FIXT FT=(P00034),GTO=((7A70,C))
002E34  0101              1686+N00125    DC    A(@FIXT)
002E36  2F4C              1687+          DC    A(F00034)
                          1688 N00126    $TUXX T7A02,7,D0000100000001,OF,QT=(Q00006),YES=N00128,       X
002E38  0500              1689+N00126    DC    A(@TUXX)
002E3A  2E54              1690+          DC    AL2(N00128)
002E3C  2FD0              1691+          DC    A(T7A02)
002E3E  0202              1692+          DC    AL2(OF)
002E40  0007              1693+          DC    AL2(7)
002E42  00000100000001    1694+          DC    X'000001000000001'
002E49  00                1695+          ALIGN WORD
002E4A  0000              1696+          DC    AL2(0)
002E4C  C1C1              1697+          DC    C'AA'
                          1698+          ALIGN WORD
002E4E  196E              1699+          DC     AL2(PARMARA)
                          1700 N00127    $FIXT FT=(P00034),GTO=((7A70,C))
002E50  0101              1701+N00127    DC    A(@FIXT)
002E52  2F4C              1702+          DC    A(F00034)
                          1703 N00128    $FIXT FT=(F00084),GTO=((7A73,A))
002E54  0101              1704+N00128    DC    A(@FIXT)
002E56  2F0C              1705+          DC    A(F00084)
                          1706 N00129    $FIXT FT=(P00079),GTO=((7A72,N))
002E58  0101              1707+N00129    DC    A(@FIXT)
002E5A  2F66              1708+          DC    A(F00079)
                          1709 N00130    $TUXX T7A02,7,D0004000000040,OF,QT=(Q00006),YES=N00132,       X
002E5C  0500              1710+N00130    DC    A(@TUXX)
002E5E  2E78              1711+          DC    AL2(N00132)
002E60  2FD0              1712+          DC    A(T7A02)
002E62  0202              1713+          DC    AL2(OF)
002E64  0007              1714+          DC    AL2(7)
002E66  00004000000040    1715+          DC    X'000040000000040'
002E6D  00                1716+          ALIGN WORD
002E6E  0000              1717+          DC    AL2(0)
002E70  C1C1              1718+          DC    C'AA'
                          1719+          ALIGN WORD
002E72  196E              1720+          DC     AL2(PARMARA)
                          1721 N00131    $FIXT FT=(P00018),GTO=((7A79,A))
002E74  0101              1722+N00131    DC    A(@FIXT)
002E76  2EDC              1723+          DC    A(F00018)
                          1724 N00132    $FIXT FT=(F00053),GTO=((7A70,E))
002E78  0101              1725+N00132    DC    A(@FIXT)
002E7A  2F32              1726+          DC    A(F00053)
                          1727 N00133    $TUXX T7A02,7,D0004000000040,OF,QT=(Q00006),YES=N00135,       X
002E7C  0500              1728+N00133    DC    A(@TUXX)
002E7E  2E98              1729+          DC    AL2(N00135)
002E80  2FD0              1730+          DC    A(T7A02)
002E82  0202              1731+          DC    AL2(OF)
002E84  0007              1732+          DC    AL2(7)
002E86  00004000000040    1733+          DC    X'000040000000040'
002E8D  00                1734+          ALIGN WORD
002E8E  0000              1735+          DC    AL2(0)
002E90  C1C1              1736+          DC    C'AA'
                          1737+          ALIGN WORD
002E92  196E              1738+          DC     AL2(PARMARA)
                          1739 N00134    $FIXT FT=(P00079),GTO=((7A72,N))
002E94  0101              1740+N00134    DC    A(@FIXT)
002E96  2F66              1741+          DC    A(F00079)
                          1742 N00135    $TUXX T7A02,9,D0000000800000080,OF,QT=(Q00006),YES=N00137,    X
002E98  0500              1743+N00135    DC    A(@TUXX)
002E9A  2EB6              1744+          DC    AL2(N00137)
002E9C  2FD0              1745+          DC    A(T7A02)
002E9E  0202              1746+          DC    AL2(OF)
002EA0  0009              1747+          DC    AL2(9)
002EA2  00000000800000008 1748+          DC    X'000000008000000080'
002EAB  00                1749+          ALIGN WORD
002EAC  0000              1750+          DC    AL2(0)
002EAE  C1C1              1751+          DC    C'AA'
                          1752+          ALIGN WORD
002EB0  196E              1753+          DC     AL2(PARMARA)
                          1754 N00136    $FIXT FT=(P00078),GTO=((7A72,F))
002EB2  0101              1755+N00136    DC    A(@FIXT)
002EB4  2F40              1756+          DC    A(F00078)
                          1757 N00137    $FIXT FT=(F00048),GTO=((7A70,B))
002EB6  0101              1758+N00137    DC    A(@FIXT)
002EB8  2F72              1759+          DC    A(F00048)
002EBA  0000              1760           DC    AL2(DUMMY)
002EBC                    1761 ENTPT     EQU   *
                          1762 ********************************************************************************
                          1763 ********************************************************************************
                          1764 **                                                                            **
                          1765 **                          ENTRY POINT TABLE                                 **
                          1766 **                                                                            **
                          1767 ********************************************************************************
                          1768 ********************************************************************************
                          1769          ENTPT EP=F,STEP=00001
002EBC  C640              1770+          DC    CL2'F'
002EBE  2728              1771+          DC    A(N00001)
002EC0  0000              1772           DC    AL2(DUMMY)
                          1773 ********************************************************************************
                          1774 ********************************************************************************
                          1775 **                                                                            **
                          1776 **                          MESSAGE TABLE                                     **
                          1777 **                                                                            **
                          1778 ********************************************************************************
                          1779 ********************************************************************************
002EC2                    1780 P00076    EQU   *
002EC2  0001              1781           DC    AL2(0001)
002EC4  0008              1782           DC    A(0008)
002EC6  D4C1D7F7C1F2F4C7  1783           DC    CL0008'MAP7A24G'
002ECE                    1784 P00045    EQU   *
002ECE  0001              1785           DC    AL2(0001)
002ED0  000A              1786           DC    A(0010)
002ED2  D4C1D7F7C1F7F060C 1787           DC    CL0010'MAP7A70-A '
002EDC                    1788 P00018    EQU   *
002EDC  0001              1789           DC    AL2(0001)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

002EDE  0020              1790           DC    A(0032)
002EE0  C6F0F840C7D640E3D 1791           DC    CL0032'F08 GO TO POWER FAILURE MAP 7A79'
002F00                    1792 P00085    EQU   *
002F00  0001              1793           DC    AL2(0001)
002F02  0008              1794           DC    A(0008)
002F04  D4C1D7F7C1F7F6C1  1795           DC    CL0008'MAP7A76A'
002F0C                    1796 P00084    EQU   *
002F0C  0001              1797           DC    AL2(0001)
002F0E  0008              1798           DC    A(0008)
002F10  D4C1D7F7C1F7F3C1  1799           DC    CL0008'MAP7A73A'
002F18                    1800 P00086    EQU   *
002F18  0001              1801           DC    AL2(0001)
002F1A  0008              1802           DC    A(0008)
002F1C  D4C1D7F7C1F7F6C2  1803           DC    CL0008'MAP7A76B'
002F24                    1804 P00046    EQU   *
002F24  0001              1805           DC    AL2(0001)
002F26  000A              1806           DC    A(0010)
002F28  D4C1D7F7C1F7F060C 1807           DC    CL0010'MAP7A70-D '
002F32                    1808 P00053    EQU   *
002F32  0001              1809           DC    AL2(0001)
002F34  000A              1810           DC    A(0010)
002F36  D4C1D7F7C1F7F060C 1811           DC    CL0010'MAP7A70-E '
002F40                    1812 P00078    EQU   *
002F40  0001              1813           DC    AL2(0001)
002F42  0008              1814           DC    A(0008)
002F44  D4C1D7F7C1F7F2C6  1815           DC    CL0008'MAP7A72F'
002F4C                    1816 P00034    EQU   *
002F4C  0001              1817           DC    AL2(0001)
002F4E  000A              1818           DC    A(0010)
002F50  D4C1D7F7C1F7F060C 1819           DC    CL0010'MAP7A70-C '
002F5A                    1820 P00090    EQU   *
002F5A  0001              1821           DC    AL2(0001)
002F5C  0008              1822           DC    A(0008)
002F5E  D4C1D7F7C1F7F6D6  1823           DC    CL0008'MAP7A76O'
002F66                    1824 P00079    EQU   *
002F66  0001              1825           DC    AL2(0001)
002F68  0008              1826           DC    A(0008)
002F6A  D4C1D7F7C1F7F2D5  1827           DC    CL0008'MAP7A72N'
002F72                    1828 P00048    EQU   *
002F72  0001              1829           DC    AL2(0001)
002F74  000A              1830           DC    A(0010)
002F76  D4C1D7F7C1F7F060C 1831           DC    CL0010'MAP7A70-B '
                          1832           PDIT  00
002F80  0000              1834+OPTN1     DC    X'0000'                  PROGRAM OPTION CONTROL WORD 1
                          1835+*
002F82  0000              1836+OPTN2     DC    X'0000'                  PROGRAM OPTION CONTROL WORD 2
                          1837+**                      BIT     HEX
000010                    1838+B48       EQU   16       0       8       PROBLEM PROGRAM CONTROL BITS
000011                    1839+B49       EQU   17       1       4       *
000012                    1840+B50       EQU   18       2       2       * THESE BITS ARE USED WITH THE
000013                    1841+B51       EQU   19       3       1       * SECOND OPTION WD   AND ARE TO
000014                    1842+B52       EQU   20       4       8       * BE ASSIGNED BY EACH PROGRAMMER
000015                    1843+B53       EQU   21       5       4       *
000016                    1844+B54       EQU   22       6       2       *
000017                    1845+B55       EQU   23       7       1       *
000018                    1846+B56       EQU   24       8       8       *
000019                    1847+B57       EQU   25       9       4       *
00001A                    1848+B58       EQU   26      10       2       *
00001B                    1849+B59       EQU   27      11       1       *
00001C                    1850+B60       EQU   28      12       8       *
00001D                    1851+B61       EQU   29      13       4       *
00001E                    1852+B62       EQU   30      14       2       *
00001F                    1853+B63       EQU   31      15       1       *
00001E                    1854+CH        EQU   30      14       2       CHARACTER SUPPLIED
00001F                    1855+CMP       EQU   31      15       1       COMPARE OPERATION
002F84  0000              1857+OPTN3     DC    X'0000'                  PROGRAM OPTION CONTROL WORD 3
                          1858+*
                          1859+*  0  MYSTERY INTERRUPT     MI        8  CS STATUS IN PROGRESS    CS
                          1860+*  1  ERROR INTERRUPT       ER        9  CS AVAILABLE             CSA
                          1861+*  2  EXPECTED INTERRUPT    XI       10  CS STATUS INTERRUPT ERR  CE
                          1862+*  3  INTERRUPT RECEIVED    IN       11  ISB BITS ON (1-7)        ISBON
                          1863+**
                          1864+*  4  EXPECTED ERR/ATTENT   XE       12  TEST UNIT RESULTS VOID   NG
                          1865+*  5  HARD ERROR FOUND      HE       13  OIO CC ERROR             IOCC
                          1866+*  6  WRONG INTR LEVEL      $LE      14  NO INTERRUPT             NOIN
                          1867+*  7  NO INTR EXPECTED      NI       15  INTERRUPT CC ERROR       INCC
                          1868+**                      BIT     HEX
000020                    1869+MI        EQU   32       0       8       MYSTERY INTERRUPT HAPPENED
000021                    1870+ER        EQU   33       1       4       ERROR RECEIVED ON INTERRUPT
000022                    1871+XI        EQU   34       2       2       EXPECTED INTERRUPT CONTROL BIT
000023                    1872+IN        EQU   35       3       1       INTERRUPT RECEIVED CONTROL BIT
000024                    1873+XE        EQU   36       4       8       EXPECTED ERROR RESPONSE
000025                    1874+HE        EQU   37       5       4       HARD ERROR, 8 RETRIES
000026                    1875+$LE       EQU   38       6       2       INTERRUPT ON WRONG LEVEL ERROR
000027                    1876+NI        EQU   39       7       1       NO INTERRUPT EXPECTED E
000028                    1877+CS        EQU   40       8       8       CYCLE STATUS IN PROGRESS
000029                    1878+CSA       EQU   41       9       4       CYCLE STEAL AVAILABLE
00002A                    1879+CE        EQU   42      10       2       CYCLE STEAL STATUS INERRUPT ERROR
00002B                    1880+ISBON     EQU   43      11       1       ISB BITS ON (1-7)
00002C                    1881+NG        EQU   44      12       8       TEST UNIT RESULTS NO GOOD
00002D                    1882+IOCC      EQU   45      13       4       OIO CC ERROR
00002E                    1883+NOIN      EQU   46      14       2       NO INTERRUPT
00002F                    1884+INCC      EQU   47      15       1       INTERRUPT CC ERROR
                          1885+*
                          1886+*     COMMON BUFFER FOR PRINTING DATA
                          1887+**
002F86  0000              1889+$TUID     DC    A(*-*)                   TEST UNIT IDENTIFICATION
002F88  0000              1890+$IOIN     DC    A(*-*)                   I/O AND INTR CONDITION CODES
002F8A  0000              1891+$ISB      DC    A(*-*)                   R7, INTR STATUS BYTE & DEV ADRS
002F8C  0000              1892+LSTIO     DC    A(*-*)                   ADRS OF LAST I/O + 4 BYTES
002F8E  0000              1893+DEV1      DC    A(*-*)                   DEVICE DEPENDENT DATA
002F90  0000              1894+DEV2      DC    A(*-*)                   *
002F92  0000              1895+DEV3      DC    A(*-*)                   *
002F94  0000              1896+DEV4      DC    A(*-*)                   CS STATUS ERROR ISB & INTR CC
002F8E                    1897+SCTID     EQU   DEV1                     READ ID BUFFER FOR IBIS & TERN
002F96                    1898+DCBUF     EQU   *                        DCB BUFFER FOR LAST DCB USED
002F96  0000              1899+DCB1      DC    A(*-*)                   LAST DCB TABLE, CONTROL WORD
002F98  0000              1900+DCB2      DC    A(*-*)                   LAST DCB TABLE, DEV DEP WORD
002F9A  0000              1901+DCB3      DC    A(*-*)                   LAST DCB TABLE, DEV DEP WORD
002F9C  0000              1902+DCB4      DC    A(*-*)                   LAST DCB TABLE, DEV DEP WORD
002F9E  0000              1903+DCB5      DC    A(*-*)                   LAST DCB TABLE, DEV DEP WORD
002FA0  0000              1904+DCB6      DC    A(*-*)                   LAST DCB TABLE, CHAIN ADRS
002FA2  0000              1905+DCB7      DC    A(*-*)                   LAST DCB TABLE, BYTE COUNT
002FA4  0000              1906+DCB8      DC    A(*-*)                   LAST DCB TABLE, BUFFER ADDRESS
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                           1907+*
                           1908+CSBUF EQU   *                       CYCLE STEAL DATA BUFFER
002FA6                     1909+CSTL1 DC    A(*-*)                  CS STATUS WD 0, RESIDUAL ADDRESS
002FA6  0000               1910+CSTL2 DC    A(*-*)                  CS STATUS WD 1, RESIDUAL COUNT
002FA8  0000               1911+CSTL3 DC    A(*-*)                  CS STATUS WD 2, RETRY CNT WD 1
002FAA  0000               1912+CSTL4 DC    A(*-*)                  CS STATUS WD 3, RETRY CNT WD 2
002FAC  0000               1913+CSTL5 DC    A(*-*)                  CS STATUS WD 4, ERROR STATUS WD 1
002FAE  0000               1914+CSTL6 DC    A(*-*)                  CS STATUS WD 5, ERROR STATUS WD 2
002FB0  0000               1915+CSTL7 DC    A(*-*)                  CS STATUS WD 6, LAST DCB ADDRESS
002FB2  0000               1916+CSTL8 DC    A(*-*)                  CS STATUS WD 7, PREVIOUS HD/CYL
002FB4  0000               1917+CSTL9 DC    A(*-*)                  CS STATUS WD 8, CURRENT HD/CYL
002FB6  0000               1918+CST10 DC    A(*-*)                  CS STATUS WD 9, FLAG/SECTOR
002FB8  0000               1919+CST11 DC    A(*-*)                  CS STATUS WD 10, HEAD/CYLINDER
002FBA  0000               1920+CST12 DC    A(*-*)                  CS STATUS WD 11, DIAG BYTES 1, 2
002FBC  0000               1921+CST13 DC    A(*-*)                  CS STATUS WD 12, AND 3 + WRAP BYTE
002FBE  0000               1922+*
                           1923+$SUBN DC    A(*-*)                  LAST SUBROUTINE ADDRESS USED
002FC0  0000               1924+$DATA DC    2A(*-*)                 OPTIONAL DATA
002FC2  00000000           1925+$INTL DC    X'0021'                 INTERRUPT LEVEL REQUESTED
002FC6  0021               1926+TURTN DC    A(*-*)                  TEST UNIT RETURN ADRS TO MDI
002FC8  0000               1927+$DVID DC    X'00'                   DEVICE ID
002FCA  00                 1928+SVCAL DC    A(DEVADD)               ADRS OF DEVICE ADDRESS
002FCC  19D0               1929+      DC    A(*-*)                  IBIS CYLINDER ADDRESS
002FCE  0000               1930+*
                           1931+*     THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
                           1932+*     FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
                           1933+*     STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
                           1934+*
002FD0  4020 2F86 7A02     1935+T7A02 MVWI  X'7A02',$TUID             SET UP TEST UNIT ID
002FD6  5700               1936+      BXS   (R7)                      RETURN TO MDI SUPVR
                           1938       COPY  T7A00DCB
                           1939 ** (T7A00DCB)
                           1940 *
                           1941 ************************************************4/28/77**********
                           1942 *
                           1943 *     DCB TABLES AND DC'S
                           1944 *
                           1945 ********************************************************************
                           1946 *
                           1947 ***** DIAGNOSTIC DCB   ********
                           1948 *
002FD8  2008               1949 DGDCB DC    X'2008'                 DIAGNOSTIC DCB
002FDA  0000               1950       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
002FDC  0000               1951       DC    A(*-*)                  HEAD / CYLINDER#'S
002FDE  0000               1952       DC    X'0000'                 NOT USED
002FE0  30B2               1953       DC    A(RSBA)                 RSB ADDRESS
002FE2  0000               1954       DC    A(*-*)                  CHAINING ADDRESS
002FE4  0100               1955       DC    X'0100'                 BYTE COUNT
002FE6  0000               1956       DC    A(*-*)                  DATA ADDRESS
                           1957 *
                           1958 ***** RECALIBRATE DCB  ********
                           1959 *
002FE8  0001               1960 CLDCB DC    X'0001'                 RECALIBRATE DCB
002FEA  00000000000000000  1961       DC    7A(*-*)
                           1962 *
                           1963 ***** WRITE SECTOR ID  ********
                           1964 *
002FF8  002D               1965 WSDCB DC    X'002D'                 WRITE SECTOR ID CNTL WORD
002FFA  0000               1966       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
002FFC  0000               1967       DC    A(*-*)                  HEAD / CYLINDER#'S
002FFE  0000               1968       DC    X'0000'                 NOT USED
003000  30B2               1969       DC    A(RSBA)                 RSB ADDRESS
003002  0000               1970       DC    A(*-*)                  CHAIN ADDRESS
003004  0004               1971       DC    X'0004'                 BYTE COUNT
003006  30A6               1972       DC    A(WRSID)                ADDR OF SECTOR ID DATA
                           1973 *
                           1974 ***** READ SECTOR ID DCB  *******
                           1975 *
003008  201C               1976 RSDCB DC    X'201C'                 READ SECTOR ID CNTL WORD
00300A  0000               1977       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
00300C  0000               1978       DC    X'0000'                 HEAD / CYLINDER#'S
00300E  0000               1979       DC    X'0000'                 NOT USED
003010  30B2               1980       DC    A(RSBA)                 RSB ADDRESS
003012  0000               1981       DC    A(*-*)                  CHAIN ADDRESS
003014  0004               1982       DC    X'0004'                 BYTE COUNT FOR READ SECTOR ID
003016  2F8E               1983       DC    A(SCTID)                SECTOR ID DATA ADDRESS
                           1984 *
                           1985 ***** SEEK DCB  ********
                           1986 *
003018  0000               1987 SKDCB DC    X'0000'                 SEEK DCB CONTROL WORD
00301A  0000               1988       DC    X'0000'                 NOT USED
00301C  0000               1989       DC    A(*-*)                  HEAD / CYLINDER#'S
00301E  0000               1990       DC    X'0000'                 NOT USED
003020  30B2               1991       DC    A(RSBA)                 RSB ADDRESS
003022  0000               1992       DC    A(*-*)                  CHAIN ADDRESS
003024  0000               1993       DC    X'0000'                 NOT USED
003026  0000               1994       DC    X'0000'                 NOT USED
                           1995 *
                           1996 ***** CYCLE STEAL STATUS DCB  ********
                           1997 *
003028  2000               1998 CSDCB DC    X'2000'                 CONTROL WORD
00302A  0000               1999       DC    F'0'                    NOT USED
00302C  0000               2000       DC    F'0'                    NOT USED
00302E  0000               2001       DC    F'0'                    NOT USED
003030  0000               2002       DC    F'0'                    NOT USED
003032  0000               2003       DC    F'0'                    NOT USED
003034  001A               2004       DC    X'001A'                 13 WORDS OF STATUS
003036  2FA6               2005       DC    A(CSBUF)                ADDRESS OF CYCLE STEAL STATUS DATA
                           2006 *
                           2007 ***** WRITE DCB  **********
                           2008 *
003038  0028               2009 WRDCB DC    X'0028'                 WRITE DATA DCB CNTL WORD
00303A  0000               2010       DC    A(*-*)                  FLAG / RECORD#
00303C  0000               2011       DC    A(*-*)                  HEAD / CYLIDNER#'S
00303E  0000               2012       DC    A(*-*)                  SCAN / REPEAT COUNT
003040  30B2               2013       DC    A(RSBA)                 RSB ADDRESS
003042  0000               2014       DC    A(*-*)                  CHAIN ADDRESS
003044  0100               2015       DC    X'0100'                 BYTE COUNT
003046  0000               2016       DC    A(*-*)                  WRITE DATA ADDRESS
                           2017 *
                           2018 ***** VERIFY DCB   *******
                           2019 *
003048  0019               2020 VRDCB DC    X'0019'                 CONTROL WORD
00304A  0000               2021       DC    A(*-*)                  FLAG / RECORD#
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
00304C  0000               2022       DC    A(*-*)                  HEAD / CYLINDER#'S
00304E  0000               2023       DC    A(*-*)                  SCAN / REPEAT COUNT
003050  30B2               2024       DC    A(RSBA)                 RSB ADDRESS
003052  0000               2025       DC    A(*-*)                  CHAIN ADDRESS
003054  0000               2026       DC    A(*-*)                  BYTE COUNT
003056  0000               2027       DC    F'0'                    NOT USED
                           2028 *
                           2029 ***** READ DCB   *******
                           2030 *
003058  2018               2031 RDDCB DC    X'2018'                 READ DCB CONTROL WORD
00305A  0000               2032       DC    A(*-*)                  FLAG / RECORD#
00305C  0000               2033       DC    A(*-*)                  HEAD / CYLINDER#'S
00305E  0000               2034       DC    A(*-*)                  SCAN / REPEAT COUNT
003060  30B2               2035       DC    A(RSBA)                 RSB ADDRESS
003062  0000               2036       DC    A(*-*)                  CHAIN ADDRESS
003064  0100               2037       DC    X'0100'                 BYTE COUNT
003066  0000               2038       DC    A(*-*)                  READ DATA ADDRESS
                           2039 *
                           2040 ****  WRITE SECTOR ID SKEWED   ****
                           2041 *
003068  002F               2042 WKDCB DC    X'002F'                 CONTROL WORD
00306A  0000               2043       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
00306C  0000               2044       DC    A(*-*)                  HEAD / CYLINDER#'S
00306E  0000               2045       DC    F'0'                    NOT USED
003070  30B2               2046       DC    A(RSBA)                 RSB ADDRESS
003072  0000               2047       DC    A(*-*)                  CHAIN ADDRESS
003074  0004               2048       DC    X'0004'                 BYTE COUNT
003076  30A6               2049       DC    A(WRSID)                ADDR OF SECTOR ID DATA
                           2050 *
                           2051 ****  READ SECTOR ID SKEWED    ****
                           2052 *
003078  201D               2053 RKDCB DC    X'201D'                 CONTROL WORD
00307A  0000               2054       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
00307C  0000               2055       DC    A(*-*)                  HEAD / CYLINDER#'S
00307E  0000               2056       DC    F'0'                    NOT USED
003080  30B2               2057       DC    A(RSBA)                 RSB ADDRESS
003082  0000               2058       DC    A(*-*)                  CHAIN ADDRESS
003084  0004               2059       DC    X'0004'                 BYTE COUNT
003086  2F8E               2060       DC    A(SCTID)                SECTOR ID DATA ADDRESS
                           2061 *
                           2062 ****  READ MULTIPLE SECTOR IDS     ****
                           2063 *
003088  201C               2064 RMDCB DC    X'201C'                 CONTROL WORD
00308A  0000               2065       DC    A(*-*)                  FLAG / PHYSICAL SECTOR#
00308C  0000               2066       DC    A(*-*)                  HEAD / CYLINDER#'S
00308E  0000               2067       DC    F'0'                    NOT USED
003090  30B2               2068       DC    A(RSBA)                 RSB ADDRESS
003092  0000               2069       DC    A(*-*)                  CHAIN ADDRESS
003094  0084               2070       DC    X'0084'                 BYTE COUNT
003096  30C2               2071       DC    A(ID00)                 DATA AREA ADDRESS
                           2072 *
                           2073 *     CONSTANTS AND DEFINED STORAGE  LOCATIONS
003098  0000               2074 ZERO0 DC    X'0000'                 CONSTANT ZERO
00309A  0001               2075 ONE1  DC    X'0001'                 CONSTANT ONE
00309C  0000               2076 RAY   DC    A(*-*)                  WRITE PARAMETER POINTER
00309E  EB6D               2077 WDATA DC    X'EB6D'                 WRITE DATA
0030A0  6BDB               2078       DC    X'6BDB'                 *
0030A2  0000               2079 LGSEC DC    X'0000'                 LOGICAL SECTOR #
0030A4  0000               2080 PHYSC DC    X'0000'                 CONVERTED PHYSICAL SEC #
0030A6  0000               2081 WRSID DC    X'0000'                 FLAG,SECTOR   (WRT SECTOR ID DATA)
0030A8  0000               2082       DC    X'0000'                 HEAD,CYLINDER
0030AA  FF34               2083 WSIDT DC    X'FF34'                 WRITE SECTOR ID TEST DATA
0030AC  5678               2084       DC    X'5678'                 *
0030AE  0000               2085 SCTST DC    X'0000'                 READ SECTOR ID TEST DATA BUFFER
0030B0  0000               2086       DC    X'0000'                 *
0030B2  00000000000000000  2087 RSBA  DC    6A(*-*)                 RESIDUAL STATUS BLOCK
0030BE  0000               2088 CTR02 DC    X'0000'                 COUNTER
0030C0  0000               2089 CTR03 DC    X'0000'                 COUNTER
0030C2  0000               2090 ID00  DC    X'0000'                 ID ADDRESS TO BE SET BY USER
0030C4  1010               2091 PDATA DC    X'1010'                 WRITE DIAG WORD 1 DATA PATTERNS
0030C6  5555               2092       DC    X'5555'                 *
0030C8  AAAA               2093       DC    X'AAAA'                 *
0030CA  FFFF               2094       DC    X'FFFF'                 *
                           2095 *
                           2096 ****************************4/06/77**********************************
                           2097 *
                           2098 *  SUBROUTINE
                           2099 *
                           2100 *     PURPOSE
                           2101 *
                           2102 *          COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
                           2103 *
                           2104 *     CALLING SEQUENCE
                           2105 *
                           2106 *          BAL  CMPRW,R6          (NORMAL)
                           2107 *
                           2108 *     RETURN
                           2109 *
                           2110 *          BXS (R6,2)     -   NORMAL
                           2111 *
                           2112 *
                           2113 ********************************************************************
                           2114 *
0030CC  4724 0004          2115 CMPRW MVWI  4,R7                    COMPARE BYTE COUNT
0030D0  4324 2F8E          2116       MVA   SCTID,R3                ADDR OF RD SEC ID DATA
0030D4  4524 30A6          2117       MVA   WRSID,R5                ADDR OF WR SEC ID DATA
0030D8  2BA6               2118       CFNEN (R3),(R5)               COMPARE ID DATA
0030DA  68C0 0002          2119       BE    (R6,2)                  BCH IF WRITE ID DATA OK
0030DE  68D2 0000          2120       B     (R6)*                   COMPARE ERROR
                           2122 ************************************************************
                           2123 *
                           2124 *     EXECUTE INPUT & OUTPUT COMMANDS
                           2125 *     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                           2126 *     EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
                           2127 *     LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
                           2128 *     SUPVR CALL.
                           2129 *     .
                           2130 *     THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
                           2131 *     .
                           2132 *     1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
                           2133 *     2. ERROR INTERRUPTS RECEIVED FROM SUPVR
                           2134 *
                           2135 *     THIS POUTINE HAS THE FOLLOWING ENTRIES:
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                         2137 * 1   BAL   $RKEW,R6               READ SECTOR ID SKEWED
                         2138 *
                         2139 * 2   BAL   $WKEW,R6               WRITE SECTOR ID SKEWED
                         2140 *
                         2141 * 3   BAL   $WSEC,R6               WRITE SECTOR ID
                         2142 *
                         2143 * 4   BAL   $DIAG,R6               DIAGNOSTIC
                         2144 *
                         2145 * 5   BAL   XIOCS,R6               CYCLE STEAL STATUS
                         2146 *
                         2147 * 6   BAL   $SEEK,R6               SEEK
                         2148 *
                         2149 * 7   BAL   $RECL,R6               RECALIBRATE
                         2150 *
                         2151 * 8   BAL   $RDID,R6               READ SECTOR ID
                         2152 *
                         2153 * 9   BAL   $RD,R6                 READ
                         2154 *
                         2155 * 10  BAL   $RDVY,R6               READ VERIFY
                         2156 *
                         2157 * 11  BAL   $WRT,R6                WRITE
                         2158 *
                         2159 * 12  BAL   $RDIM,R6               READ MULTI SECTOR IDS
                         2160 *
                         2161 ************************************************************
                         2162 *
0030E2 4020 32FA 3018    2163 $SEEK MVA   SKDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
0030E8 507F              2164       J     XIO
                         2165 *
0030EA 4020 32FA 2FE8    2166 $RECL MVA   CLDCB,IODCB           SET UP BLOCK FOR SVC CALL
0030F0 507B              2167       J     XIO
                         2168 *
0030F2 4020 32FA 3008    2169 $RDID MVA   RSDCB,IODCB           SET UP BLOCK FOR SVC CALL
0030F8 0BBB              2170       MVBI  X'BB',R3               SET BUFFER TO B'S
0030FA 4524 2F8E         2171       MVA   SCTID,R5               SETUP READ SECTOR ID BUFFER ADRS
0030FE 4724 0004         2172       MVWI  4,R7                   SETUP BUFFER LENGTH
003102 2BAC              2173       FFN   R3,(R5)                INIT READ SECTOR ID BUFFER
003104 4020 3016 2F8E    2174       MVA   SCTID,RSDCB+14         DATA ADDR
00310A 506E              2175       J     XIO
                         2176 *
00310C 4020 32FA 3088    2177 $RDIM MVA   RMDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003112 4724 0084         2178       MVWI  132,R7                 SET BUFFER LENGTH
003116 4524 30C2         2179       MVA   IDOO,R5                SET BUFFER ADDRESS
00311A 0BBB              2180       MVBI  X'BB',R3               SET CLEAR CHARACTERS
00311C 2BAC              2181       FFN   R3,(R5)                CLEAR THE BUFFER
00311E 5064              2182       J     XIO
                         2183 *
003120 0BFF              2184 $RD   MVBI  X'FF',R3               SETRD BUFFER TO ALL F'S
003122 6D08 3066         2185       MVW   RDDCB+14,R5            SET UP READ BUFFER ADRS
003126 6F08 3064         2186       MVW   RDDCB+12,R7            SET UP BUFFER LENGTH
00312A 2BAC              2187       FFN   R3,(R5)                CLEAR READ BUFFER
00312C 4020 32FA 3058    2188 $RD$  MVA   RDDCB,IODCB            SET UP BLOCK FOR SVC CALL
003132 505A              2189       J     XIO
                         2190 *
003134 4020 32FA 3048    2191 $RDVY MVA   VRDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
00313A 5056              2192       J     XIO
                         2193 *
00313C 4020 32FA 3038    2194 $WRT  MVA   WRDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
003142 5052              2195       J     XIO
                         2196 *
003144 4020 32FA 3078    2197 $RKEW MVA   RKDCB,IODCB             SET UP CONTROL BLOCK FOR SVC CALL
00314A 0BBB              2198       MVBI  X'BB',R3               SET BUFFER TO B'S
00314C 4524 2F8E         2199       MVA   SCTID,R5               SETUP READ SECTOR ID BUFFER ADRS
003150 4724 0004         2200       MVWI  4,R7                   SETUP BUFFER LENGTH
003154 2BAC              2201       FFN   R3,(R5)                INIT READ SECTOR ID BUFFER
003156 4020 3086 2F8E    2202       MVA   SCTID,RKDCB+14          DATA ADDR
00315C 5045              2203       J     XIO
                         2204 *
00315E 4020 32FA 3068    2205 $WKEW MVA   WKDCB,IODCB             SET UP CONTROL BLOCK FOR SVC CALL
003164 4020 3076 30A6    2206       MVA   WRSID,WKDCB+14         DATA ADDR
00316A 503E              2207       J     XIO
                         2208 *
00316C 4020 32FA 2FF8    2209 $WSEC MVA   WSDCB,IODCB             SET UP CONTROL BLOCK FOR SVC CALL
003172 4020 3006 30A6    2210       MVA   WRSID,WSDCB+14         DATA ADDR
003178 5037              2211       J     XIO
                         2212 *
00317A 4020 32FA 2FD8    2213 $DIAG MVA   DGDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
003180 5033              2214       J     XIO
                         2215 *
003182 6E0D 2F8C         2216 $WRT0 MVW   R6,LSTIO                SAVE IAR FOR RETRY IF REQUESTED
003186 0BFF              2217       MVBI  255,R3                 CLEAR CYCLE STATUS BUFFER
003188 4524 2FA6         2218       MVA   CSBUF,R5               *  TO ALL ONES  *
00318C 0F16              2219       MVBI  22,R7                  *
00318E 2BAC              2220       FFN   R3,(R5)                *
003190 4524 2F96         2221       MVA   DCBUF,R5               CLEAR DCB BUFFER TO ALL ONES
003194 0F10              2222       MVBI  16,R7                  *
003196 2BAC              2223       FFN   R3,(R5)                *
003198 4020 2F88 0708    2224       MVWI  X'0708',$IOIN          OVERLAY OLD CONDITION CODES
00319E CB25 2F8A         2225       MVWZ  $ISB,R3                ZERO OUT OLD ISB VALUE
0031A2 4CA3              2226       TBTR  (R4,IN)                CLEAR INTERRUPT RECEIVED CNTL BIT
0031A4 4CA1              2227       TBTR  (R4,ER)                RESET ANY ERROR BEFORE I/O COMMAND
0031A6 4C62              2228       TBTS  (R4,XI)                SET EXPECTED INTR CONTROL BIT
0031A8 4724 32F6         2229       MVA   IOBLK,R7               SET UP CONTROL BLK FOR SUPR
0031AC C020 32FD         2230       MVB   IOMOD+1,R0             GET IDCB FUNC/MODIFIER
0031B0 402D 32FC 00F0    2231       RBTWI X'00F0',IOMOD          REMOVE FUNCTION FROM 'IOMOD'
0031B6 3022              2232       SRL   4,R0                   PIGHT JUSTIFY FUNCTION BITS IN R0
0031B8 F005              2233       CBI   5,R0                   IDCB FUNCTION = 5?
0031BA 1003              2234       JE    $WRT1                  YES - ISSUE 'SVC  WRIT1'
0031BC 6010              2235       SVC   WRIT0                  ISSUE WRITE DPC '4X' OP
0031BE 6802 3242         2236       B     XIO8-4                 GO WAIT FOR THE INTERRUPT
0031C2 6011              2237 $WRT1 SVC   WRIT1                  ISSUE WRITE DPC '5X' OP
0031C4 6802 3242         2238       B     XIO8-4                 GO WAIT FOR THE INTERRUPT
                         2239 *
0031C8 4020 32FA 3038    2240 $DGWR MVA   WRDCB,IODCB             SET UP CONTROL BLK FOR SVC CALL
0031CE 6802 31EE         2241       B     XIODG                  ISSUE START CS DIAG CMD
                         2242 *
0031D2 4020 32FA 3058    2243 $DGRD MVA   RDDCB,IODCB             SET UP CONTROL BLK FOR SVC CALL
0031D8 6F08 3064         2244       MVW   RDDCB+12,R7            GET NO. OF BYTES TO CLEAR
0031DC 6D08 3066         2245       MVW   RDDCB+14,P5            ADDR OF READ BUFFER
0031E0 0BFF              2246       MVBI  X'FF',R3               CLEAR TO F'S
0031E2 2BAC              2247       FFN   R3,(R5)                *
0031E4 6802 31EE         2248       B     XIODG                  ISSUE START CS DIAG CMD
                         2250       COPY  COMEQU
                         2251 ************************************************************
```



```
 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                         2252 *                                                          *
                         2253 *              EQUATED NAMES FOR SUPPORTED SVC'S          *
                         2254 *                                                          *
                         2255 ************************************************************
000000                   2256 OUT    EQU   0                    OUT SVC
000001                   2257 OUTIN  EQU   1                    OUTIN SVC
000002                   2258 IDLE   EQU   2                    IDLE SVC
000003                   2259 IDLE5  EQU   3                    IDLE SVC - INDEPENDENT OF CPU TYPE
000004                   2260 CHNGE  EQU   4                    CHANGE LEVEL SVC
000005                   2261 PGMCK  EQU   5                    ALLOW RETURN ON PROGRAM CHECK SVC
000006                   2262 EXIT   EQU   6                    EXIT SVC
000007                   2263 TERM   EQU   7                    TERMINATE SVC
000008                   2264 RESET  EQU   8                    RESET DEVICE SVC
000009                   2265 RID    EQU   9                    READ ID SVC
00000A                   2266 START  EQU   10                   START CYCLE STEAL SVC
00000B                   2267 STCSS  EQU   11                   START CYCLE STEAL STATUS SVC
00000C                   2268 PREP   EQU   12                   PREPARE DEVICE SVC
00000D                   2269 READ0  EQU   13                   READ WITH FUNCTION BIT 3 OFF SVC
00000E                   2270 READ1  EQU   14                   READ WITH FUNCTION BIT 3 ON SVC
00000F                   2271 RSTAT  EQU   15                   READ STATUS SVC
000010                   2272 WRIT0  EQU   16                   WRITE WITH FUNCTION BIT 3 OFF SVC
000011                   2273 WRIT1  EQU   17                   WRITE WITH FUNCTION BIT 3 ON SVC
000012                   2274 CTRL   EQU   18                   CONTROL SVC
000013                   2275 RICB   EQU   19                   RELEASE INTERUPT CONTROL BLOCK SVC
000014                   2276 CICB   EQU   20                   CONNECT INTERUPT CONTROL BLOCK SVC
000015                   2277 HIO    EQU   21                   HALT ALL I/O
000016                   2278 REQSD  EQU   22                   REQUEST USE OF DCP DISK SVC
000017                   2279 RELSD  EQU   23                   RELEASE USE OF DCP DISK SVC
000018                   2280 HALT   EQU   24                   HALT SVC
000019                   2281 ETOH   EQU   25                   EBCDIC TO HEX SVC (STRING)
00001A                   2282 HTOE   EQU   26                   HEX TO EBCDIC SVC (STRING)
00001B                   2283 ATOH   EQU   27                   ASCII TO HEX SVC (STRING)
00001C                   2284 HTOA   EQU   28                   HEX TO ASCII SVC (STRING)
00001D                   2285 ETOA   EQU   29                   EBCDIC TO ASCII SVC (STRING)
00001E                   2286 ATOE   EQU   30                   ASCII TO EBCDIC SVC (STRING)
00001F                   2287 READI  EQU   31                   READ DATA SETS FOR MDL/UTIL
000020                   2288 WRITI  EQU   32                   WRITE DATA SETS FOR UTIL
                         2290 ************************************************************
                         2291 *                                                          *
                         2292 *              EQUATES USED BY TU'S AS CONSTANTS           *
                         2293 *                                                          *
                         2294 ************************************************************
00004E                   2295 PLUS   EQU   C'+'                 PLUS CHAR
000060                   2296 MINUS  EQU   C'-'                 MINUS CHAR
000000                   2298 ZERO   EQU   0
000001                   2299 ONE    EQU   1
000002                   2300 TWO    EQU   2
000003                   2301 THREE  EQU   3
000004                   2302 FOUR   EQU   4
000005                   2303 FIVE   EQU   5
000006                   2304 SIX    EQU   6
000007                   2305 SEVEN  EQU   7
000008                   2306 EIGHT  EQU   8
000009                   2307 NINE   EQU   9
00000A                   2308 TEN    EQU   10
00000B                   2309 ELEVN  EQU   11                                  11
00000C                   2310 TWELV  EQU   12                                  12
00000D                   2311 THRTN  EQU   13                                  13
00000F                   2312 FIVTN  EQU   15                                  15
000010                   2313 SIXTN  EQU   16                                  16
000020                   2314 THRY2  EQU   32                                  32
000040                   2315 SIXT4  EQU   64                                  64
000080                   2316 ONE28  EQU   128                                 128
000100                   2317 TWO56  EQU   256                                 256
000400                   2318 ONEK   EQU   1024                                1024
000800                   2319 TWOK   EQU   2048                                2048
000C00                   2320 THREK  EQU   3072                                3072
001000                   2321 FOURK  EQU   4096                                4096
FFFFFF                   2323 M1     EQU   -1                                  -1
FFFFFE                   2324 M2     EQU   -2                                  -2
FFFFFD                   2325 M3     EQU   -3                                  -3
FFFFFC                   2326 M4     EQU   -4                                  -4
                         2328 ************************************************************
                         2329 *                                                          *
                         2330 *    THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE      *
                         2331 *    BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.    *
                         2332 *                                                          *
                         2333 ************************************************************
000000                   2334 BS0    EQU   0
000001                   2335 BS1    EQU   1
000002                   2336 BS2    EQU   2
000003                   2337 BS3    EQU   3
000004                   2338 BS4    EQU   4
000005                   2339 BS5    EQU   5
000006                   2340 BS6    EQU   6
000007                   2341 BS7    EQU   7
000008                   2342 BS8    EQU   8
000009                   2343 BS9    EQU   9
00000A                   2344 BS10   EQU   10
00000B                   2345 BS11   EQU   11
00000C                   2346 BS12   EQU   12
00000D                   2347 BS13   EQU   13
00000E                   2348 BS14   EQU   14
00000F                   2349 BS15   EQU   15
                         2351       COPY  T7AXEQ                16MAR78
                         2352        PRINT OFF
                         2916       T7AXEQ
                         2917+************************************************************29JUL76**
                         2918+*
                         2919+* SUB-ROUTINE
                         2920+*
                         2921+*     EXECUTE INPUT AND OUTPUT COMMANDS
                         2922+*
                         2923+* PURPOSE
                         2924+*
                         2925+*     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                         2926+*     THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
                         2927+*
                         2928+*     1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
                         2929+*        THE I/O COMMAND.
                         2930+*     2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
                         2931+*        ISSUED BY THIS SUBROUTINE.
                         2932+*     3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
                         2933+*        START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
```

CROSS-REFERENCE LISTING

```
DECLARED  NAME      ATTRIBUTES AND REFERENCES
  3219    $CONC      ADDRESS. HEX LOCATION(0000330A) IN CSECT(I7A26   ) LENGTH(2)
                    3365
  3288    $CONX      ADDRESS. HEX LOCATION(000033A0) IN CSECT(I7A26   ) LENGTH(1)
                    3371
  3261    $ERR$      ADDRESS. HEX LOCATION(0000333E) IN CSECT(I7A26   ) LENGTH(6)
                    3366
  1925    $INTL      ADDRESS. HEX LOCATION(00002FC6) IN CSECT(I7A26   ) LENGTH(2)
                    3136  3228
  1890    $IOIN      ADDRESS. HEX LOCATION(00002F88) IN CSECT(I7A26   ) LENGTH(2)
                    2224  2990  3050  3130  3167  3230
  1891    $ISB       ADDRESS. HEX LOCATION(00002F8A) IN CSECT(I7A26   ) LENGTH(2)
                    2225  2991  3131  3172  3231
  1875    $LE        ABSOLUTE. HEX VALUE(00000026)
                    2996  3138
  1889    $TUID      ADDRESS. HEX LOCATION(00002F86) IN CSECT(I7A26   ) LENGTH(2)
                    1935  3285  3323  3363
  2237    $WRT1      ADDRESS. HEX LOCATION(000031C2) IN CSECT(I7A26   ) LENGTH(2)
                    2234
   102    @DCADD1    ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7A26   ) LENGTH(1)
                    3282
   103    @DCADD2    ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7A26   ) LENGTH(1)
                    3283
    39    @FIXT      ABSOLUTE. HEX VALUE(00000101)
                     789   864   867   870   873   888   891   942   945
                     948   963   966   981   984  1023  1026  1041  1044
                    1083  1086  1101  1128  1143  1146  1149  1200  1227
                    1242  1257  1272  1275  1278  1281  1284  1287  1326
                    1329  1332  1383  1386  1389  1404  1407  1410  1449
                    1476  1479  1494  1521  1524  1527  1554  1557  1560
                    1611  1626  1629  1668  1683  1686  1701  1704  1707
                    1722  1725  1740  1755  1758
    41    @GOTO      ABSOLUTE. HEX VALUE(00000200)
                     747
    45    @TUXX      ABSOLUTE. HEX VALUE(00000500)
                     735   753   765   777   792   804   816   828   840
                     852   876   894   906   918   930   951   969   987
                     999  1011  1029  1047  1059  1071  1089  1104  1116
                    1131  1152  1164  1176  1188  1203  1215  1230  1245
                    1260  1290  1302  1314  1335  1347  1359  1371  1392
                    1413  1425  1437  1452  1464  1482  1497  1509  1530
                    1542  1563  1575  1587  1599  1614  1632  1644  1656
                    1671  1689  1710  1728  1743
  3293    BEGIN      ADDRESS. HEX LOCATION(000033AA) IN CSECT(I7A26   ) LENGTH(2)
                    3314
  3318    BIT0080    ABSOLUTE. HEX VALUE(00000080)
                    3284
  3313    BUFPT      ADDRESS. HEX LOCATION(00003506) IN CSECT(I7A26   ) LENGTH(2)
                    3269
  1879    CE         ABSOLUTE. HEX VALUE(0000002A)
                    2975  3089  3159
  2276    CICB       ABSOLUTE. HEX VALUE(00000014)
                    3225
  1960    CLDCB      ADDRESS. HEX LOCATION(00002FE8) IN CSECT(I7A26   ) LENGTH(2)
                    2166
  1877    CS         ABSOLUTE. HEX VALUE(00000028)
                    2976  2979  3087  3128  3157
  1878    CSA        ABSOLUTE. HEX VALUE(00000029)
                    3162
  1908    CSBUF      ADDRESS. HEX LOCATION(00002FA6) IN CSECT(I7A26   ) LENGTH(1)
                    2005  2218  2987
  1998    CSDCB      ADDRESS. HEX LOCATION(00003028) IN CSECT(I7A26   ) LENGTH(2)
                    2977
  1898    DCBUF      ADDRESS. HEX LOCATION(00002F96) IN CSECT(I7A26   ) LENGTH(1)
                    2221  2982
  3314    DC2PT      ADDRESS. HEX LOCATION(00003508) IN CSECT(I7A26   ) LENGTH(2)
                    3283
   105    DEVADD     ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7A26   ) LENGTH(1)
                    1928  3180  3189  3289
  1893    DEV1       ADDRESS. HEX LOCATION(00002F8E) IN CSECT(I7A26   ) LENGTH(2)
                    1897  3221
  1896    DEV4       ADDRESS. HEX LOCATION(00002F94) IN CSECT(I7A26   ) LENGTH(2)
                    3090  3091
  1949    DGDCB      ADDRESS. HEX LOCATION(00002FD8) IN CSECT(I7A26   ) LENGTH(2)
                    2213
    67    DUMMY      ABSOLUTE. HEX VALUE(00000000)
                     726  1760  1772
  1761    ENTPT      ADDRESS. HEX LOCATION(00002EBC) IN CSECT(I7A26   ) LENGTH(1)
                     198
  1870    ER         ABSOLUTE. HEX VALUE(00000021)
                    2227  2993  3014  3097  3139  3164
  2262    EXIT       ABSOLUTE. HEX VALUE(00000006)
                    3146
  3316    FAKETU     ADDRESS. HEX LOCATION(0000350C) IN CSECT(I7A26   ) LENGTH(2)
                    3282
  1788    F00018     ADDRESS. HEX LOCATION(00002EDC) IN CSECT(I7A26   ) LENGTH(1)
                     865   943   982  1027  1723
  1816    F00034     ADDRESS. HEX LOCATION(00002F4C) IN CSECT(I7A26   ) LENGTH(1)
                    1201  1273  1279  1522  1555  1627  1687  1702
  1784    F00045     ADDRESS. HEX LOCATION(00002FCE) IN CSECT(I7A26   ) LENGTH(1)
                     790
  1804    F00046     ADDRESS. HEX LOCATION(00002F24) IN CSECT(I7A26   ) LENGTH(1)
                     892   946
  1828    F00048     ADDRESS. HEX LOCATION(00002F72) IN CSECT(I7A26   ) LENGTH(1)
                    1759
  1808    F00053     ADDRESS. HEX LOCATION(00002F32) IN CSECT(I7A26   ) LENGTH(1)
                    1045  1087  1144  1150  1285  1726
  1780    F00076     ADDRESS. HEX LOCATION(00002EC2) IN CSECT(I7A26   ) LENGTH(1)
                     748
  1812    F00078     ADDRESS. HEX LOCATION(00002F40) IN CSECT(I7A26   ) LENGTH(1)
                    1102  1330  1387  1390  1405  1756
  1824    F00079     ADDRESS. HEX LOCATION(00002F66) IN CSECT(I7A26   ) LENGTH(1)
                    1450  1480  1684  1708  1741
  1796    F00084     ADDRESS. HEX LOCATION(00002F0C) IN CSECT(I7A26   ) LENGTH(1)
                     874   964  1024  1084  1327  1333  1477  1495  1525
                    1528  1558  1630  1669  1705
  1792    F00085     ADDRESS. HEX LOCATION(00002F00) IN CSECT(I7A26   ) LENGTH(1)
                     868   871   985  1042  1129  1147  1228  1243  1258
                    1276  1282  1384  1612
  1800    F00086     ADDRESS. HEX LOCATION(00002F18) IN CSECT(I7A26   ) LENGTH(1)
                     889   949   967  1288  1561
  1820    F00090     ADDRESS. HEX LOCATION(00002F5A) IN CSECT(I7A26   ) LENGTH(1)
```


CROSS-REFERENCE LISTING

```
DECLARED  NAME      ATTRIBUTES AND REFERENCES
                    1408  1411
  3322    HEBLK      ADDRESS. HEX LOCATION(0000350E) IN CSECT(I7A26   ) LENGTH(2)
                    3262
  2282    HTOE       ABSOLUTE. HEX VALUE(0000001A)
                    3263
  2258    IDLE       ABSOLUTE. HEX VALUE(00000002)
                    3008  3010
  2090    IDOO       ADDRESS. HEX LOCATION(000030C2) IN CSECT(I7A26   ) LENGTH(2)
                    2071  2179
  1872    IN         ABSOLUTE. HEX VALUE(00000023)
                    2226  2994  3006  3127
  3189    INTBL      ADDRESS. HEX LOCATION(00003302) IN CSECT(I7A26   ) LENGTH(2)
                    3224
  3084    INTER      ADDRESS. HEX LOCATION(00003266) IN CSECT(I7A26   ) LENGTH(2)
                    3191
  3093    INTES      ADDRESS. HEX LOCATION(0000327E) IN CSECT(I7A26   ) LENGTH(2)
                    3088
  3097    INTET      ADDRESS. HEX LOCATION(00003286) IN CSECT(I7A26   ) LENGTH(2)
                    3094
  3124    INTOK      ADDRESS. HEX LOCATION(0000328A) IN CSECT(I7A26   ) LENGTH(2)
                    3190
  3146    INTRX      ADDRESS. HEX LOCATION(000032BA) IN CSECT(I7A26   ) LENGTH(2)
                    3141  3144
  3127    INTR1      ADDRESS. HEX LOCATION(00003292) IN CSECT(I7A26   ) LENGTH(2)
                    3092  3096  3098
  3132    INTR2      ADDRESS. HEX LOCATION(000032A0) IN CSECT(I7A26   ) LENGTH(1)
                    3129
  3140    INTR3      ADDRESS. HEX LOCATION(000032AE) IN CSECT(I7A26   ) LENGTH(2)
                    3137
  3180    IOBLK      ADDRESS. HEX LOCATION(000032F6) IN CSECT(I7A26   ) LENGTH(2)
                    2229  2995  3229
  3182    IODCB      ADDRESS. HEX LOCATION(000032FA) IN CSECT(I7A26   ) LENGTH(2)
                    2163  2166  2169  2177  2188  2191  2194  2197  2205
                    2209  2213  2240  2243  2977  2983  3228
  3183    IOMOD      ADDRESS. HEX LOCATION(000032FC) IN CSECT(I7A26   ) LENGTH(2)
                    2230  2231  2969  2972  2978
    37    I7A26      CSECT. START(00002500) LENGTH(4152) ESDID(1)
                     37
  3299    LINE1      ADDRESS. HEX LOCATION(000033E2) IN CSECT(I7A26   ) LENGTH(40)
                    3270
  1892    LSTIO      ADDRESS. HEX LOCATION(00002F8C) IN CSECT(I7A26   ) LENGTH(2)
                    2216  2981  3232
  1869    MI         ABSOLUTE. HEX VALUE(00000020)
                    3142
  3273    MVBUF      ADDRESS. HEX LOCATION(0000336E) IN CSECT(I7A26   ) LENGTH(2)
                    3277  3280
  1881    NG         ABSOLUTE. HEX VALUE(0000002C)
                    3145
  1876    NI         ABSOLUTE. HEX VALUE(00000027)
                    3000
   735    N00001     ADDRESS. HEX LOCATION(00002728) IN CSECT(I7A26   ) LENGTH(2)
                     315  1771
   747    N00002     ADDRESS. HEX LOCATION(00002740) IN CSECT(I7A26   ) LENGTH(2)
                     318
   753    N00003     ADDRESS. HEX LOCATION(0000274C) IN CSECT(I7A26   ) LENGTH(2)
                     321   736
   765    N00004     ADDRESS. HEX LOCATION(00002766) IN CSECT(I7A26   ) LENGTH(2)
                     324
   777    N00005     ADDRESS. HEX LOCATION(00002780) IN CSECT(I7A26   ) LENGTH(2)
                     327
   789    N00006     ADDRESS. HEX LOCATION(00002792) IN CSECT(I7A26   ) LENGTH(2)
                     330
   792    N00007     ADDRESS. HEX LOCATION(00002796) IN CSECT(I7A26   ) LENGTH(2)
                     333   778
   804    N00008     ADDRESS. HEX LOCATION(000027AE) IN CSECT(I7A26   ) LENGTH(2)
                     336
   816    N00009     ADDRESS. HEX LOCATION(000027C0) IN CSECT(I7A26   ) LENGTH(2)
                     339
   828    N00010     ADDRESS. HEX LOCATION(000027D8) IN CSECT(I7A26   ) LENGTH(2)
                     342
   840    N00011     ADDRESS. HEX LOCATION(000027F0) IN CSECT(I7A26   ) LENGTH(2)
                     345
   852    N00012     ADDRESS. HEX LOCATION(0000280A) IN CSECT(I7A26   ) LENGTH(2)
                     348
   864    N00013     ADDRESS. HEX LOCATION(00002822) IN CSECT(I7A26   ) LENGTH(2)
                     351
   867    N00014     ADDRESS. HEX LOCATION(00002826) IN CSECT(I7A26   ) LENGTH(2)
                     354   853
   870    N00015     ADDRESS. HEX LOCATION(0000282A) IN CSECT(I7A26   ) LENGTH(2)
                     357   841
   873    N00016     ADDRESS. HEX LOCATION(0000282E) IN CSECT(I7A26   ) LENGTH(2)
                     360   829
   876    N00017     ADDRESS. HEX LOCATION(00002832) IN CSECT(I7A26   ) LENGTH(2)
                     363   817
   888    N00018     ADDRESS. HEX LOCATION(0000284A) IN CSECT(I7A26   ) LENGTH(2)
                     366
   891    N00019     ADDRESS. HEX LOCATION(0000284E) IN CSECT(I7A26   ) LENGTH(2)
                     369   877
   894    N00020     ADDRESS. HEX LOCATION(00002852) IN CSECT(I7A26   ) LENGTH(2)
                     372   805
   906    N00021     ADDRESS. HEX LOCATION(0000286A) IN CSECT(I7A26   ) LENGTH(2)
                     375
   918    N00022     ADDRESS. HEX LOCATION(00002884) IN CSECT(I7A26   ) LENGTH(2)
                     378
   930    N00023     ADDRESS. HEX LOCATION(0000289C) IN CSECT(I7A26   ) LENGTH(2)
                     381
   942    N00024     ADDRESS. HEX LOCATION(000028B4) IN CSECT(I7A26   ) LENGTH(2)
                     384
   945    N00025     ADDRESS. HEX LOCATION(000028B8) IN CSECT(I7A26   ) LENGTH(2)
                     387   931
   948    N00026     ADDRESS. HEX LOCATION(000028BC) IN CSECT(I7A26   ) LENGTH(2)
                     390   919
   951    N00027     ADDRESS. HEX LOCATION(000028C0) IN CSECT(I7A26   ) LENGTH(2)
                     393   907
   963    N00028     ADDRESS. HEX LOCATION(000028D8) IN CSECT(I7A26   ) LENGTH(2)
                     396
   966    N00029     ADDRESS. HEX LOCATION(000028DC) IN CSECT(I7A26   ) LENGTH(2)
                     399   952
   969    N00030     ADDRESS. HEX LOCATION(000028E0) IN CSECT(I7A26   ) LENGTH(2)
                     402   895
   981    N00031     ADDRESS. HEX LOCATION(000028F8) IN CSECT(I7A26   ) LENGTH(2)
```

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
		405
984	N00032	ADDRESS. HEX LOCATION(000028FC) IN CSECT(I7A26) LENGTH(2)
		408 970
987	N00033	ADDRESS. HEX LOCATION(00002900) IN CSECT(I7A26) LENGTH(2)
		411 793
999	N00034	ADDRESS. HEX LOCATION(00002918) IN CSECT(I7A26) LENGTH(2)
		414
1011	N00035	ADDRESS. HEX LOCATION(00002930) IN CSECT(I7A26) LENGTH(2)
		417
1023	N00036	ADDRESS. HEX LOCATION(00002948) IN CSECT(I7A26) LENGTH(2)
		420
1026	N00037	ADDRESS. HEX LOCATION(0000294C) IN CSECT(I7A26) LENGTH(2)
		423 1012
1029	N00038	ADDRESS. HEX LOCATION(00002950) IN CSECT(I7A26) LENGTH(2)
		426 1000
1041	N00039	ADDRESS. HEX LOCATION(00002968) IN CSECT(I7A26) LENGTH(2)
		429
1044	N00040	ADDRESS. HEX LOCATION(0000296C) IN CSECT(I7A26) LENGTH(2)
		432 1030
1047	N00041	ADDRESS. HEX LOCATION(00002970) IN CSECT(I7A26) LENGTH(2)
		435 988
1059	N00042	ADDRESS. HEX LOCATION(0000298A) IN CSECT(I7A26) LENGTH(2)
		438
1071	N00043	ADDRESS. HEX LOCATION(000029A4) IN CSECT(I7A26) LENGTH(2)
		441
1083	N00044	ADDRESS. HEX LOCATION(000029BC) IN CSECT(I7A26) LENGTH(2)
		444
1086	N00045	ADDRESS. HEX LOCATION(000029C0) IN CSECT(I7A26) LENGTH(2)
		447 1072
1089	N00046	ADDRESS. HEX LOCATION(000029C4) IN CSECT(I7A26) LENGTH(2)
		450 1060
1101	N00047	ADDRESS. HEX LOCATION(000029DE) IN CSECT(I7A26) LENGTH(2)
		453
1104	N00048	ADDRESS. HEX LOCATION(000029E2) IN CSECT(I7A26) LENGTH(2)
		456 1090
1116	N00049	ADDRESS. HEX LOCATION(000029FA) IN CSECT(I7A26) LENGTH(2)
		459
1128	N00050	ADDRESS. HEX LOCATION(00002A12) IN CSECT(I7A26) LENGTH(2)
		462
1131	N00051	ADDRESS. HEX LOCATION(00002A16) IN CSECT(I7A26) LENGTH(2)
		465 1117
1143	N00052	ADDRESS. HEX LOCATION(00002A2E) IN CSECT(I7A26) LENGTH(2)
		468
1146	N00053	ADDRESS. HEX LOCATION(00002A32) IN CSECT(I7A26) LENGTH(2)
		471 1132
1149	N00054	ADDRESS. HEX LOCATION(00002A36) IN CSECT(I7A26) LENGTH(2)
		474 1105
1152	N00055	ADDRESS. HEX LOCATION(00002A3A) IN CSECT(I7A26) LENGTH(2)
		477 1048
1164	N00056	ADDRESS. HEX LOCATION(00002A52) IN CSECT(I7A26) LENGTH(2)
		480
1176	N00057	ADDRESS. HEX LOCATION(00002A6A) IN CSECT(I7A26) LENGTH(2)
		483
1188	N00058	ADDRESS. HEX LOCATION(00002A82) IN CSECT(I7A26) LENGTH(2)
		486
1200	N00059	ADDRESS. HEX LOCATION(00002A9A) IN CSECT(I7A26) LENGTH(2)
		489
1203	N00060	ADDRESS. HEX LOCATION(00002A9E) IN CSECT(I7A26) LENGTH(2)
		492 1189
1215	N00061	ADDRESS. HEX LOCATION(00002AB8) IN CSECT(I7A26) LENGTH(2)
		495
1227	N00062	ADDRESS. HEX LOCATION(00002AD0) IN CSECT(I7A26) LENGTH(2)
		498
1230	N00063	ADDRESS. HEX LOCATION(00002AD4) IN CSECT(I7A26) LENGTH(2)
		501 1216
1242	N00064	ADDRESS. HEX LOCATION(00002AEA) IN CSECT(I7A26) LENGTH(2)
		504
1245	N00065	ADDRESS. HEX LOCATION(00002AEE) IN CSECT(I7A26) LENGTH(2)
		507 1231
1257	N00066	ADDRESS. HEX LOCATION(00002B06) IN CSECT(I7A26) LENGTH(2)
		510
1260	N00067	ADDRESS. HEX LOCATION(00002B0A) IN CSECT(I7A26) LENGTH(2)
		513 1246
1272	N00068	ADDRESS. HEX LOCATION(00002B28) IN CSECT(I7A26) LENGTH(2)
		516
1275	N00069	ADDRESS. HEX LOCATION(00002B2C) IN CSECT(I7A26) LENGTH(2)
		519 1261
1278	N00070	ADDRESS. HEX LOCATION(00002B30) IN CSECT(I7A26) LENGTH(2)
		522 1204
1281	N00071	ADDRESS. HEX LOCATION(00002B34) IN CSECT(I7A26) LENGTH(2)
		525 1177
1284	N00072	ADDRESS. HEX LOCATION(00002B38) IN CSECT(I7A26) LENGTH(2)
		528 1165
1287	N00073	ADDRESS. HEX LOCATION(00002B3C) IN CSECT(I7A26) LENGTH(2)
		531 1153
1290	N00074	ADDRESS. HEX LOCATION(00002B40) IN CSECT(I7A26) LENGTH(2)
		534 766
1302	N00075	ADDRESS. HEX LOCATION(00002B5A) IN CSECT(I7A26) LENGTH(2)
		537
1314	N00076	ADDRESS. HEX LOCATION(00002B72) IN CSECT(I7A26) LENGTH(2)
		540
1326	N00077	ADDRESS. HEX LOCATION(00002B90) IN CSECT(I7A26) LENGTH(2)
		543
1329	N00078	ADDRESS. HEX LOCATION(00002B94) IN CSECT(I7A26) LENGTH(2)
		546 1315
1332	N00079	ADDRESS. HEX LOCATION(00002B98) IN CSECT(I7A26) LENGTH(2)
		549 1303
1335	N00080	ADDRESS. HEX LOCATION(00002B9C) IN CSECT(I7A26) LENGTH(2)
		552 1291
1347	N00081	ADDRESS. HEX LOCATION(00002BB6) IN CSECT(I7A26) LENGTH(2)
		555
1359	N00082	ADDRESS. HEX LOCATION(00002BCE) IN CSECT(I7A26) LENGTH(2)
		558
1371	N00083	ADDRESS. HEX LOCATION(00002BE6) IN CSECT(I7A26) LENGTH(2)
		561
1383	N00084	ADDRESS. HEX LOCATION(00002BFE) IN CSECT(I7A26) LENGTH(2)
		564
1386	N00085	ADDRESS. HEX LOCATION(00002C02) IN CSECT(I7A26) LENGTH(2)
		567 1372
1389	N00086	ADDRESS. HEX LOCATION(00002C06) IN CSECT(I7A26) LENGTH(2)
		570 1360

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
1392	N00087	ADDRESS. HEX LOCATION(00002C0A) IN CSECT(I7A26) LENGTH(2)
		573 1348
1404	N00088	ADDRESS. HEX LOCATION(00002C22) IN CSECT(I7A26) LENGTH(2)
		576
1407	N00089	ADDRESS. HEX LOCATION(00002C26) IN CSECT(I7A26) LENGTH(2)
		579 1393
1410	N00090	ADDRESS. HEX LOCATION(00002C2A) IN CSECT(I7A26) LENGTH(2)
		582 1336
1413	N00091	ADDRESS. HEX LOCATION(00002C2E) IN CSECT(I7A26) LENGTH(2)
		585 754
1425	N00092	ADDRESS. HEX LOCATION(00002C46) IN CSECT(I7A26) LENGTH(2)
		588
1437	N00093	ADDRESS. HEX LOCATION(00002C60) IN CSECT(I7A26) LENGTH(2)
		591
1449	N00094	ADDRESS. HEX LOCATION(00002C72) IN CSECT(I7A26) LENGTH(2)
		594
1452	N00095	ADDRESS. HEX LOCATION(00002C76) IN CSECT(I7A26) LENGTH(2)
		597 1438
1464	N00096	ADDRESS. HEX LOCATION(00002C8E) IN CSECT(I7A26) LENGTH(2)
		600
1476	N00097	ADDRESS. HEX LOCATION(00002CA6) IN CSECT(I7A26) LENGTH(2)
		603
1479	N00098	ADDRESS. HEX LOCATION(00002CAA) IN CSECT(I7A26) LENGTH(2)
		606 1465
1482	N00099	ADDRESS. HEX LOCATION(00002CAE) IN CSECT(I7A26) LENGTH(2)
		609 1453
1494	N00100	ADDRESS. HEX LOCATION(00002CC6) IN CSECT(I7A26) LENGTH(2)
		612
1497	N00101	ADDRESS. HEX LOCATION(00002CCA) IN CSECT(I7A26) LENGTH(2)
		615 1483
1509	N00102	ADDRESS. HEX LOCATION(00002CE8) IN CSECT(I7A26) LENGTH(2)
		618
1521	N00103	ADDRESS. HEX LOCATION(00002D00) IN CSECT(I7A26) LENGTH(2)
		621
1524	N00104	ADDRESS. HEX LOCATION(00002D04) IN CSECT(I7A26) LENGTH(2)
		624 1510
1527	N00105	ADDRESS. HEX LOCATION(00002D08) IN CSECT(I7A26) LENGTH(2)
		627 1498
1530	N00106	ADDRESS. HEX LOCATION(00002D0C) IN CSECT(I7A26) LENGTH(2)
		630 1426
1542	N00107	ADDRESS. HEX LOCATION(00002D24) IN CSECT(I7A26) LENGTH(2)
		633
1554	N00108	ADDRESS. HEX LOCATION(00002D3E) IN CSECT(I7A26) LENGTH(2)
		636
1557	N00109	ADDRESS. HEX LOCATION(00002D42) IN CSECT(I7A26) LENGTH(2)
		639 1543
1560	N00110	ADDRESS. HEX LOCATION(00002D46) IN CSECT(I7A26) LENGTH(2)
		642 1531
1563	N00111	ADDRESS. HEX LOCATION(00002D4A) IN CSECT(I7A26) LENGTH(2)
		645 1414
1575	N00112	ADDRESS. HEX LOCATION(00002D64) IN CSECT(I7A26) LENGTH(2)
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1587	N00113	ADDRESS. HEX LOCATION(00002D7C) IN CSECT(I7A26) LENGTH(2)
		651
1599	N00114	ADDRESS. HEX LOCATION(00002D96) IN CSECT(I7A26) LENGTH(2)
		654
1611	N00115	ADDRESS. HEX LOCATION(00002DA8) IN CSECT(I7A26) LENGTH(2)
		657
1614	N00116	ADDRESS. HEX LOCATION(00002DAC) IN CSECT(I7A26) LENGTH(2)
		660 1600
1626	N00117	ADDRESS. HEX LOCATION(00002DC4) IN CSECT(I7A26) LENGTH(2)
		663
1629	N00118	ADDRESS. HEX LOCATION(00002DC8) IN CSECT(I7A26) LENGTH(2)
		666 1615
1632	N00119	ADDRESS. HEX LOCATION(00002DCC) IN CSECT(I7A26) LENGTH(2)
		669 1588
1644	N00120	ADDRESS. HEX LOCATION(00002DE4) IN CSECT(I7A26) LENGTH(2)
		672
1656	N00121	ADDRESS. HEX LOCATION(00002DFE) IN CSECT(I7A26) LENGTH(2)
		675
1668	N00122	ADDRESS. HEX LOCATION(00002E16) IN CSECT(I7A26) LENGTH(2)
		678
1671	N00123	ADDRESS. HEX LOCATION(00002E1A) IN CSECT(I7A26) LENGTH(2)
		681 1657
1683	N00124	ADDRESS. HEX LOCATION(00002E30) IN CSECT(I7A26) LENGTH(2)
		684
1686	N00125	ADDRESS. HEX LOCATION(00002E34) IN CSECT(I7A26) LENGTH(2)
		687 1672
1689	N00126	ADDRESS. HEX LOCATION(00002E38) IN CSECT(I7A26) LENGTH(2)
		690 1645
1701	N00127	ADDRESS. HEX LOCATION(00002E50) IN CSECT(I7A26) LENGTH(2)
		693
1704	N00128	ADDRESS. HEX LOCATION(00002E54) IN CSECT(I7A26) LENGTH(2)
		696 1690
1707	N00129	ADDRESS. HEX LOCATION(00002E58) IN CSECT(I7A26) LENGTH(2)
		699 1633
1710	N00130	ADDRESS. HEX LOCATION(00002E5C) IN CSECT(I7A26) LENGTH(2)
		702 1576
1722	N00131	ADDRESS. HEX LOCATION(00002E74) IN CSECT(I7A26) LENGTH(2)
		705
1725	N00132	ADDRESS. HEX LOCATION(00002E78) IN CSECT(I7A26) LENGTH(2)
		708 1711
1728	N00133	ADDRESS. HEX LOCATION(00002E7C) IN CSECT(I7A26) LENGTH(2)
		711 1564
1740	N00134	ADDRESS. HEX LOCATION(00002E94) IN CSECT(I7A26) LENGTH(2)
		714
1743	N00135	ADDRESS. HEX LOCATION(00002E98) IN CSECT(I7A26) LENGTH(2)
		717 1729
1755	N00136	ADDRESS. HEX LOCATION(00002EB2) IN CSECT(I7A26) LENGTH(2)
		720
1758	N00137	ADDRESS. HEX LOCATION(00002EB6) IN CSECT(I7A26) LENGTH(2)
		723 1744
58	OF	ABSOLUTE. HEX VALUE(00000202)
		756 768 780 795 807 819 831 843 855
		879 897 909 933 972 990 1014 1032 1050
		1092 1107 1119 1134 1155 1179 1191 1218 1233
		1248 1263 1293 1317 1338 1350 1362 1374 1395
		1416 1428 1440 1455 1467 1485 1500 1512 1533
		1545 1566 1590 1602 1617 1635 1647 1659 1674
		1692 1713 1731 1746
57	ON	ABSOLUTE. HEX VALUE(00000200)

CROSS-REFERENCE LISTING

CROSS-REFEPENCE LISTING

********** LAST PAGE **********