```
 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                              3         COPY  LOG7A24              ** MAP EC HISTORY **
                              4 ************************************************************************
                              5 *                                                                      *
                              6 *                     ***       PREREQUISITES        ***               *
                              7 *                                                                      *
                              8 *                                  NONE                                *
                              9 *                                                                      *
                             10 ************************************************************************
                             11 *                                                                      *
                             12 *                     ***       MODIFICATIONS        ***               *
                             13 *                                                                      *
                             14 *     CHANGES MADE TO CORRECT ERRORS FOUND WHILE IN TEST               *
                             15 *                                                                      *
                             16 ************************************************************************
                             17 *                                                                      *
                             18 *                     ***     REA'S INCORPORATED     ***               *
                             19 *                                                                      *
                             20 *                                  NONE                                *
                             21 *                                                                      *
                             22 ************************************************************************
                             23 *                                                                      *
                             24 *                     ***    SPECIAL INSTRUCTIONS    ***               *
                             25 *                                                                      *
                             26 *                                  NONE                                *
                             27 *                                                                      *
                             28 ************************************************************************
                             29 *                                                                      *
                             30 *                     ***       E. C. HISTORY        ***               *
                             31 *                                                                      *
                             32 *        DATE 17AUG78  DATE 02OCT78  DATE 10JAN79  DATE                *
                             33 *        E.C. 755391   E.C. 375102   E.C. 375222   E.C.                  *
                             34 *                                                                      *
                             35 ************************************************************************
002500                       37 I7A24    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  2DC2                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  26F4               315          DC    AL2(N00001)
002504  0001               316          DC    XL2'0001'
000001                     317 EQN00001 EQU       0001
002506  270C               318          DC    AL2(N00002)
002508  0002               319          DC    XL2'0002'
000002                     320 EQN00002 EQU       0002
00250A  2724               321          DC    AL2(N00003)
00250C  0003               322          DC    XL2'0003'
000003                     323 EQN00003 EQU       0003
00250E  273E               324          DC    AL2(N00004)
002510  0004               325          DC    XL2'0004'
000004                     326 EQN00004 EQU       0004
002512  2758               327          DC    AL2(N00005)
002514  0005               328          DC    XL2'0005'
000005                     329 EQN00005 EQU       0005
002516  2770               330          DC    AL2(N00006)
002518  0006               331          DC    XL2'0006'
000006                     332 EQN00006 EQU       0006
00251A  2774               333          DC    AL2(N00007)
00251C  0007               334          DC    XL2'0007'
000007                     335 EQN00007 EQU       0007
00251E  2778               336          DC    AL2(N00008)
002520  0008               337          DC    XL2'0008'
000008                     338 EQN00008 EQU       0008
002522  2792               339          DC    AL2(N00009)
002524  0009               340          DC    XL2'0009'
000009                     341 EQN00009 EQU       0009
002526  2796               342          DC    AL2(N00010)
002528  0010               343          DC    XL2'0010'
00000A                     344 EQN00010 EQU       0010
00252A  279A               345          DC    AL2(N00011)
00252C  0011               346          DC    XL2'0011'
00000B                     347 EQN00011 EQU       0011
00252E  27B4               348          DC    AL2(N00012)
002530  0012               349          DC    XL2'0012'
00000C                     350 EQN00012 EQU       0012
002532  27CC               351          DC    AL2(N00013)
002534  0013               352          DC    XL2'0013'
00000D                     353 EQN00013 EQU       0013
002536  27D0               354          DC    AL2(N00014)
002538  0014               355          DC    XL2'0014'
00000E                     356 EQN00014 EQU       0014
00253A  27D4               357          DC    AL2(N00015)
00253C  0015               358          DC    XL2'0015'
00000F                     359 EQN00015 EQU       0015
00253E  27D8               360          DC    AL2(N00016)
002540  0016               361          DC    XL2'0016'
000010                     362 EQN00016 EQU       0016
002542  27EA               363          DC    AL2(N00017)
002544  0017               364          DC    XL2'0017'
000011                     365 EQN00017 EQU       0017
002546  27EE               366          DC    AL2(N00018)
002548  0018               367          DC    XL2'0018'
000012                     368 EQN00018 EQU       0018
00254A  27F2               369          DC    AL2(N00019)
00254C  0019               370          DC    XL2'0019'
000013                     371 EQN00019 EQU       0019
00254E  27F6               372          DC    AL2(N00020)
002550  0020               373          DC    XL2'0020'
000014                     374 EQN00020 EQU       0020
002552  280E               375          DC    AL2(N00021)
002554  0021               376          DC    XL2'0021'
000015                     377 EQN00021 EQU       0021
002556  2828               378          DC    AL2(N00022)
002558  0022               379          DC    XL2'0022'
000016                     380 EQN00022 EQU       0022
00255A  2840               381          DC    AL2(N00023)
00255C  0023               382          DC    XL2'0023'
000017                     383 EQN00023 EQU       0023
00255E  2858               384          DC    AL2(N00024)
002560  0024               385          DC    XL2'0024'
000018                     386 EQN00024 EQU       0024
002562  2870               387          DC    AL2(N00025)
002564  0025               388          DC    XL2'0025'
000019                     389 EQN00025 EQU       0025
002566  2874               390          DC    AL2(N00026)
002568  0026               391          DC    XL2'0026'
00001A                     392 EQN00026 EQU       0026
00256A  288C               393          DC    AL2(N00027)
00256C  0027               394          DC    XL2'0027'
00001B                     395 EQN00027 EQU       0027
00256E  28A6               396          DC    AL2(N00028)
002570  0028               397          DC    XL2'0028'
00001C                     398 EQN00028 EQU       0028
002572  28AA               399          DC    AL2(N00029)
002574  0029               400          DC    XL2'0029'
00001D                     401 EQN00029 EQU       0029
002576  28AE               402          DC    AL2(N00030)
002578  0030               403          DC    XL2'0030'
00001E                     404 EQN00030 EQU       0030
00257A  28B2               405          DC    AL2(N00031)
00257C  0031               406          DC    XL2'0031'
00001F                     407 EQN00031 EQU       0031
00257E  28CA               408          DC    AL2(N00032)
002580  0032               409          DC    XL2'0032'
000020                     410 EQN00032 EQU       0032
002582  28CE               411          DC    AL2(N00033)
002584  0033               412          DC    XL2'0033'
000021                     413 EQN00033 EQU       0033
002586  28E8               414          DC    AL2(N00034)
002588  0034               415          DC    XL2'0034'
000022                     416 EQN00034 EQU       0034
00258A  28EC               417          DC    AL2(N00035)
00258C  0035               418          DC    XL2'0035'
000023                     419 EQN00035 EQU       0035
00258E  28F0               420          DC    AL2(N00036)
002590  0036               421          DC    XL2'0036'
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
000024                     422 EQN00036 EQU       0036
002592  2908               423          DC    AL2(N00037)
002594  0037               424          DC    XL2'0037'
000025                     425 EQN00037 EQU       0037
002596  2920               426          DC    AL2(N00038)
002598  0038               427          DC    XL2'0038'
000026                     428 EQN00038 EQU       0038
00259A  293A               429          DC    AL2(N00039)
00259C  0039               430          DC    XL2'0039'
000027                     431 EQN00039 EQU       0039
00259E  2952               432          DC    AL2(N00040)
0025A0  0040               433          DC    XL2'0040'
000028                     434 EQN00040 EQU       0040
0025A2  2964               435          DC    AL2(N00041)
0025A4  0041               436          DC    XL2'0041'
000029                     437 EQN00041 EQU       0041
0025A6  2968               438          DC    AL2(N00042)
0025A8  0042               439          DC    XL2'0042'
00002A                     440 EQN00042 EQU       0042
0025AA  296C               441          DC    AL2(N00043)
0025AC  0043               442          DC    XL2'0043'
00002B                     443 EQN00043 EQU       0043
0025AE  2984               444          DC    AL2(N00044)
0025B0  0044               445          DC    XL2'0044'
00002C                     446 EQN00044 EQU       0044
0025B2  2988               447          DC    AL2(N00045)
0025B4  0045               448          DC    XL2'0045'
00002D                     449 EQN00045 EQU       0045
0025B6  298C               450          DC    AL2(N00046)
0025B8  0046               451          DC    XL2'0046'
00002E                     452 EQN00046 EQU       0046
0025BA  2990               453          DC    AL2(N00047)
0025BC  0047               454          DC    XL2'0047'
00002F                     455 EQN00047 EQU       0047
0025BE  29A8               456          DC    AL2(N00048)
0025C0  0048               457          DC    XL2'0048'
000030                     458 EQN00048 EQU       0048
0025C2  29C0               459          DC    AL2(N00049)
0025C4  0049               460          DC    XL2'0049'
000031                     461 EQN00049 EQU       0049
0025C6  29DA               462          DC    AL2(N00050)
0025C8  0050               463          DC    XL2'0050'
000032                     464 EQN00050 EQU       0050
0025CA  29F2               465          DC    AL2(N00051)
0025CC  0051               466          DC    XL2'0051'
000033                     467 EQN00051 EQU       0051
0025CE  29F6               468          DC    AL2(N00052)
0025D0  0052               469          DC    XL2'0052'
000034                     470 EQN00052 EQU       0052
0025D2  29FA               471          DC    AL2(N00053)
0025D4  0053               472          DC    XL2'0053'
000035                     473 EQN00053 EQU       0053
0025D6  2A14               474          DC    AL2(N00054)
0025D8  0054               475          DC    XL2'0054'
000036                     476 EQN00054 EQU       0054
0025DA  2A18               477          DC    AL2(N00055)
0025DC  0055               478          DC    XL2'0055'
000037                     479 EQN00055 EQU       0055
0025DE  2A30               480          DC    AL2(N00056)
0025E0  0056               481          DC    XL2'0056'
000038                     482 EQN00056 EQU       0056
0025E2  2A34               483          DC    AL2(N00057)
0025E4  0057               484          DC    XL2'0057'
000039                     485 EQN00057 EQU       0057
0025E6  2A38               486          DC    AL2(N00058)
0025E8  0058               487          DC    XL2'0058'
00003A                     488 EQN00058 EQU       0058
0025EA  2A52               489          DC    AL2(N00059)
0025EC  0059               490          DC    XL2'0059'
00003B                     491 EQN00059 EQU       0059
0025EE  2A6A               492          DC    AL2(N00060)
0025F0  0060               493          DC    XL2'0060'
00003C                     494 EQN00060 EQU       0060
0025F2  2A82               495          DC    AL2(N00061)
0025F4  0061               496          DC    XL2'0061'
00003D                     497 EQN00061 EQU       0061
0025F6  2A86               498          DC    AL2(N00062)
0025F8  0062               499          DC    XL2'0062'
00003E                     500 EQN00062 EQU       0062
0025FA  2A8A               501          DC    AL2(N00063)
0025FC  0063               502          DC    XL2'0063'
00003F                     503 EQN00063 EQU       0063
0025FE  2A8E               504          DC    AL2(N00064)
002600  0064               505          DC    XL2'0064'
000040                     506 EQN00064 EQU       0064
002602  2AA6               507          DC    AL2(N00065)
002604  0065               508          DC    XL2'0065'
000041                     509 EQN00065 EQU       0065
002606  2ABE               510          DC    AL2(N00066)
002608  0066               511          DC    XL2'0066'
000042                     512 EQN00066 EQU       0066
00260A  2AC2               513          DC    AL2(N00067)
00260C  0067               514          DC    XL2'0067'
000043                     515 EQN00067 EQU       0067
00260E  2ADC               516          DC    AL2(N00068)
002610  0068               517          DC    XL2'0068'
000044                     518 EQN00068 EQU       0068
002612  2AF2               519          DC    AL2(N00069)
002614  0069               520          DC    XL2'0069'
000045                     521 EQN00069 EQU       0069
002616  2AF6               522          DC    AL2(N00070)
002618  0070               523          DC    XL2'0070'
000046                     524 EQN00070 EQU       0070
00261A  2AFA               525          DC    AL2(N00071)
00261C  0071               526          DC    XL2'0071'
000047                     527 EQN00071 EQU       0071
00261E  2AFE               528          DC    AL2(N00072)
002620  0072               529          DC    XL2'0072'
000048                     530 EQN00072 EQU       0072
002622  2B18               531          DC    AL2(N00073)
002624  0073               532          DC    XL2'0073'
000049                     533 EQN00073 EQU       0073
002626  2B1C               534          DC    AL2(N00074)
002628  0074               535          DC    XL2'0074'
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976

00004A                     536 EQN00074 EQU      0074
00262A  2B20               537          DC    AL2(N00075)
00262C  0075               538          DC    XL2'0075'
00004B                     539 EQN00075 EQU      0075
00262E  2B3A               540          DC    AL2(N00076)
002630  0076               541          DC    XL2'0076'
00004C                     542 EQN00076 EQU      0076
002632  2B3E               543          DC    AL2(N00077)
002634  0077               544          DC    XL2'0077'
00004D                     545 EQN00077 EQU      0077
002636  2B42               546          DC    AL2(N00078)
002638  0078               547          DC    XL2'0078'
00004E                     548 EQN00078 EQU      0078
00263A  2B5C               549          DC    AL2(N00079)
00263C  0079               550          DC    XL2'0079'
00004F                     551 EQN00079 EQU      0079
00263E  2B74               552          DC    AL2(N00080)
002640  0080               553          DC    XL2'0080'
000050                     554 EQN00080 EQU      0080
002642  2B8C               555          DC    AL2(N00081)
002644  0081               556          DC    XL2'0081'
000051                     557 EQN00081 EQU      0081
002646  2B90               558          DC    AL2(N00082)
002648  0082               559          DC    XL2'0082'
000052                     560 EQN00082 EQU      0082
00264A  2B94               561          DC    AL2(N00083)
00264C  0083               562          DC    XL2'0083'
000053                     563 EQN00083 EQU      0083
00264E  2BAE               564          DC    AL2(N00084)
002650  0084               565          DC    XL2'0084'
000054                     566 EQN00084 EQU      0084
002652  2BB2               567          DC    AL2(N00085)
002654  0085               568          DC    XL2'0085'
000055                     569 EQN00085 EQU      0085
002656  2BCA               570          DC    AL2(N00086)
002658  0086               571          DC    XL2'0086'
000056                     572 EQN00086 EQU      0086
00265A  2BCE               573          DC    AL2(N00087)
00265C  0087               574          DC    XL2'0087'
000057                     575 EQN00087 EQU      0087
00265E  2BE6               576          DC    AL2(N00088)
002660  0088               577          DC    XL2'0088'
000058                     578 EQN00088 EQU      0088
002662  2BEA               579          DC    AL2(N00089)
002664  0089               580          DC    XL2'0089'
000059                     581 EQN00089 EQU      0089
002666  2C02               582          DC    AL2(N00090)
002668  0090               583          DC    XL2'0090'
00005A                     584 EQN00090 EQU      0090
00266A  2C06               585          DC    AL2(N00091)
00266C  0091               586          DC    XL2'0091'
00005B                     587 EQN00091 EQU      0091
00266E  2C0A               588          DC    AL2(N00092)
002670  0092               589          DC    XL2'0092'
00005C                     590 EQN00092 EQU      0092
002672  2C22               591          DC    AL2(N00093)
002674  0093               592          DC    XL2'0093'
00005D                     593 EQN00093 EQU      0093
002676  2C26               594          DC    AL2(N00094)
002678  0094               595          DC    XL2'0094'
00005E                     596 EQN00094 EQU      0094
00267A  2C2A               597          DC    AL2(N00095)
00267C  0095               598          DC    XL2'0095'
00005F                     599 EQN00095 EQU      0095
00267E  2C42               600          DC    AL2(N00096)
002680  0096               601          DC    XL2'0096'
000060                     602 EQN00096 EQU      0096
002682  2C5A               603          DC    AL2(N00097)
002684  0097               604          DC    XL2'0097'
000061                     605 EQN00097 EQU      0097
002686  2C5E               606          DC    AL2(N00098)
002688  0098               607          DC    XL2'0098'
000062                     608 EQN00098 EQU      0098
00268A  2C76               609          DC    AL2(N00099)
00268C  0099               610          DC    XL2'0099'
000063                     611 EQN00099 EQU      0099
00268E  2C7A               612          DC    AL2(N00100)
002690  0100               613          DC    XL2'0100'
000064                     614 EQN00100 EQU      0100
002692  2C7E               615          DC    AL2(N00101)
002694  0101               616          DC    XL2'0101'
000065                     617 EQN00101 EQU      0101
002696  2C96               618          DC    AL2(N00102)
002698  0102               619          DC    XL2'0102'
000066                     620 EQN00102 EQU      0102
00269A  2C9A               621          DC    AL2(N00103)
00269C  0103               622          DC    XL2'0103'
000067                     623 EQN00103 EQU      0103
00269E  2C9E               624          DC    AL2(N00104)
0026A0  0104               625          DC    XL2'0104'
000068                     626 EQN00104 EQU      0104
0026A2  2CB6               627          DC    AL2(N00105)
0026A4  0105               628          DC    XL2'0105'
000069                     629 EQN00105 EQU      0105
0026A6  2CD0               630          DC    AL2(N00106)
0026A8  0106               631          DC    XL2'0106'
00006A                     632 EQN00106 EQU      0106
0026AA  2CD4               633          DC    AL2(N00107)
0026AC  0107               634          DC    XL2'0107'
00006B                     635 EQN00107 EQU      0107
0026AE  2CEC               636          DC    AL2(N00108)
0026B0  0108               637          DC    XL2'0108'
00006C                     638 EQN00108 EQU      0108
0026B2  2CF0               639          DC    AL2(N00109)
0026B4  0109               640          DC    XL2'0109'
00006D                     641 EQN00109 EQU      0109
0026B6  2D08               642          DC    AL2(N00110)
0026B8  0110               643          DC    XL2'0110'
00006E                     644 EQN00110 EQU      0110
0026BA  2D0C               645          DC    AL2(N00111)
0026BC  0111               646          DC    XL2'0111'
00006F                     647 EQN00111 EQU      0111
0026BE  2D10               648          DC    AL2(N00112)
0026C0  0112               649          DC    XL2'0112'
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976

000070                     650 EQN00112 EQU      0112
0026C2  2D28               651          DC    AL2(N00113)
0026C4  0113               652          DC    XL2'0113'
000071                     653 EQN00113 EQU      0113
0026C6  2D40               654          DC    AL2(N00114)
0026C8  0114               655          DC    XL2'0114'
000072                     656 EQN00114 EQU      0114
0026CA  2D44               657          DC    AL2(N00115)
0026CC  0115               658          DC    XL2'0115'
000073                     659 EQN00115 EQU      0115
0026CE  2D48               660          DC    AL2(N00116)
0026D0  0116               661          DC    XL2'0116'
000074                     662 EQN00116 EQU      0116
0026D2  2D60               663          DC    AL2(N00117)
0026D4  0117               664          DC    XL2'0117'
000075                     665 EQN00117 EQU      0117
0026D6  2D7A               666          DC    AL2(N00118)
0026D8  0118               667          DC    XL2'0118'
000076                     668 EQN00118 EQU      0118
0026DA  2D94               669          DC    AL2(N00119)
0026DC  0119               670          DC    XL2'0119'
000077                     671 EQN00119 EQU      0119
0026DE  2D98               672          DC    AL2(N00120)
0026E0  0120               673          DC    XL2'0120'
000078                     674 EQN00120 EQU      0120
0026E2  2DB0               675          DC    AL2(N00121)
0026E4  0121               676          DC    XL2'0121'
000079                     677 EQN00121 EQU      0121
0026E6  2DB4               678          DC    AL2(N00122)
0026E8  0122               679          DC    XL2'0122'
00007A                     680 EQN00122 EQU      0122
0026EA  2DB8               681          DC    AL2(N00123)
0026EC  0123               682          DC    XL2'0123'
00007B                     683 EQN00123 EQU      0123
0026EE  2DBC               684          DC    AL2(N00124)
0026F0  0124               685          DC    XL2'0124'
00007C                     686 EQN00124 EQU      0124
0026F2  0000               687          DC    AL2(DUMMY)
                           688 ************************************************************************
                           689 ************************************************************************
                           690 **                                                                    **
                           691 **                      RULE INFORMATION TABLE                        **
                           692 **                                                                    **
                           693 ************************************************************************
                           694 ************************************************************************
                           695 N00001   $TUXX T7A10,8,0000001000000010,OF,QT=(Q00006),YES=N00019,     X
0026F4  0500               696+N00001   DC    A(@TUXX)
0026F6  27F2               697+         DC    AL2(N00019)
0026F8  3402               698+         DC    A(T7A10)
0026FA  0202               699+         DC    AL2(OF)
0026FC  0008               700+         DC    AL2(8)
0026FE  0000001000000010   701+         DC    X'0000001000000010'
                           702+         ALIGN WORD
002706  0000               703+         DC    AL2(0)
002708  C1C1               704+         DC    C'AA'
                           705+         ALIGN WORD
00270A  196E               706+         DC     AL2(PARMARA)
                           707 N00002   $TUXX T7A02,8,0000000200000002,OF,QT=(Q00006),YES=N00016,     X
00270C  0500               708+N00002   DC    A(@TUXX)
00270E  27D8               709+         DC    AL2(N00016)
002710  2EBE               710+         DC    A(T7A02)
002712  0202               711+         DC    AL2(OF)
002714  0008               712+         DC    AL2(8)
002716  0000000200000002   713+         DC    X'0000000200000002'
                           714+         ALIGN WORD
00271E  0000               715+         DC    AL2(0)
002720  C1C1               716+         DC    C'AA'
                           717+         ALIGN WORD
002722  196E               718+         DC     AL2(PARMARA)
                           719 N00003   $TUXX T7A02,9,0000000010000001,OF,QT=(Q00006),YES=N00011,     X
002724  0500               720+N00003   DC    A(@TUXX)
002726  279A               721+         DC    AL2(N00011)
002728  2EBE               722+         DC    A(T7A02)
00272A  0202               723+         DC    AL2(OF)
00272C  0009               724+         DC    AL2(9)
00272E  0000000010000000   725+         DC    X'0000000010000000'
002737  00                 726+         ALIGN WORD
002738  0000               727+         DC    AL2(0)
00273A  C1C1               728+         DC    C'AA'
                           729+         ALIGN WORD
00273C  196E               730+         DC     AL2(PARMARA)
                           731 N00004   $TUXX T7A02,9,0000000000000010,ON,QT=(Q00007),YES=N00008,     X
00273E  0500               732+N00004   DC    A(@TUXX)
002740  2778               733+         DC    AL2(N00008)
002742  2EBE               734+         DC    A(T7A02)
002744  0200               735+         DC    AL2(ON)
002746  0009               736+         DC    AL2(9)
002748  0000000000000001   737+         DC    X'0000000000000010'
002751  00                 738+         ALIGN WORD
002752  0000               739+         DC    AL2(0)
002754  C1C1               740+         DC    C'AA'
                           741+         ALIGN WORD
002756  196E               742+         DC     AL2(PARMARA)
                           743 N00005   $TUXX T7A02,7,0000200000020,OF,QT=(Q00006),YES=N00007,     X
002758  0500               744+N00005   DC    A(@TUXX)
00275A  2774               745+         DC    AL2(N00007)
00275C  2EBE               746+         DC    A(T7A02)
00275E  0202               747+         DC    AL2(OF)
002760  0007               748+         DC    AL2(7)
002762  0000200000020      749+         DC    X'0000200000020'
002769  00                 750+         ALIGN WORD
00276A  0000               751+         DC    AL2(0)
00276C  C1C1               752+         DC    C'AA'
                           753+         ALIGN WORD
00276E  196E               754+         DC     AL2(PARMARA)
                           755 N00006   $FIXT FT=(F00075),GTO=((7A72,H))
002770  0101               756+N00006   DC    A(@FIXT)
002772  2DCC               757+         DC    A(F00075)
                           758 N00007   $FIXT FT=(F00052),GTO=((7A70,E))
002774  0101               759+N00007   DC    A(@FIXT)
002776  2DD8               760+         DC    A(F00052)
                           761 N00008   $TUXX T7A02,9,0000000008000000,OF,QT=(Q00006),YES=N00010,     X
002778  0500               762+N00008   DC    A(@TUXX)
00277A  2796               763+         DC    AL2(N00010)
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 LOCTR  OBJECT TEXT         STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

00277C  2EBE                764+         DC    A(T7A02)
00277E  0202                765+         DC    AL2(OF)
002780  0009                766+         DC    AL2(9)
002782  0000000008000000    767+         DC    X'0000000008000000'
00278B  00                  768+         ALIGN WORD
00278C  0000                769+         DC    AL2(0)
00278E  C1C1                770+         DC    C'AA'
                            771+         ALIGN WORD
002790  196E                772+         DC     AL2(PARMARA)
                            773 N00009   $FIXT FT=(F00074),GTO=((7A72,F))
002792  0101                774+N00009   DC    A(@FIXT)
002794  2DE6                775+         DC    A(F00074)
                            776 N00010   $FIXT FT=(F00077),GTO=((7A76,A))
002796  0101                777+N00010   DC    A(@FIXT)
002798  2DF2                778+         DC    A(F00077)
                            779 N00011   $TUXX T7A02,9,0000000008000000080,OF,QT=(Q00006),YES=N00015,    X
00279A  0500                780+N00011   DC    A(@TUXX)
00279C  27D4                781+         DC    AL2(N00015)
00279E  2EBE                782+         DC    A(T7A02)
0027A0  0202                783+         DC    AL2(OF)
0027A2  0009                784+         DC    AL2(9)
0027A4  0000000800000008    785+         DC    X'0000000080000000'
0027AD  00                  786+         ALIGN WORD
0027AE  0000                787+         DC    AL2(0)
0027B0  C1C1                788+         DC    C'AA'
                            789+         ALIGN WORD
0027B2  196E                790+         DC     AL2(PARMARA)
                            791 N00012   $TUXX T7A02,8,0000004000000040,OF,QT=(Q00006),YES=N00014,     X
0027B4  0500                792+N00012   DC    A(@TUXX)
0027B6  27D0                793+         DC    AL2(N00014)
0027B8  2EBE                794+         DC    A(T7A02)
0027BA  0202                795+         DC    AL2(OF)
0027BC  0008                796+         DC    AL2(8)
0027BE  0000004000000040    797+         DC    X'0000004000000040'
                            798+         ALIGN WORD
0027C6  0000                799+         DC    AL2(0)
0027C8  C1C1                800+         DC    C'AA'
                            801+         ALIGN WORD
0027CA  196E                802+         DC     AL2(PARMARA)
                            803 N00013   $FIXT FT=(F00075),GTO=((7A72,H))
0027CC  0101                804+N00013   DC    A(@FIXT)
0027CE  2DCC                805+         DC    A(F00075)
                            806 N00014   $FIXT FT=(F00077),GTO=((7A76,A))
0027D0  0101                807+N00014   DC    A(@FIXT)
0027D2  2DF2                808+         DC    A(F00077)
                            809 N00015   $FIXT FT=(F00075),GTO=((7A72,H))
0027D4  0101                810+N00015   DC    A(@FIXT)
0027D6  2DCC                811+         DC    A(F00075)
                            812 N00016   $TUXX T7A02,2,0002,OF,QT=(Q00006),YES=N00018,CT=(C00032)
0027D8  0500                813+N00016   DC    A(@TUXX)
0027DA  27EE                814+         DC    AL2(N00018)
0027DC  2EBE                815+         DC    A(T7A02)
0027DE  0202                816+         DC    AL2(OF)
0027E0  0002                817+         DC    AL2(2)
0027E2  0002                818+         DC    X'0002'
                            819+         ALIGN WORD
0027E4  0000                820+         DC    AL2(0)
0027E6  C1C1                821+         DC    C'AA'
                            822+         ALIGN WORD
0027E8  196E                823+         DC     AL2(PARMARA)
                            824 N00017   $FIXT FT=(F00033),GTO=((7A70,C))
0027EA  0101                825+N00017   DC    A(@FIXT)
0027EC  2DFE                826+         DC    A(F00033)
                            827 N00018   $FIXT FT=(F00078),GTO=((7A76,B))
0027EE  0101                828+N00018   DC    A(@FIXT)
0027F0  2E0C                829+         DC    A(F00078)
                            830 N00019   $FIXT FT=(F00079),GTO=((7A76,C))
0027F2  0101                831+N00019   DC    A(@FIXT)
0027F4  2E18                832+         DC    A(F00079)
                            833 N00020   $TUXX T7A10,8,0000001000000010,OF,QT=(Q00006),YES=N00104,     X
0027F6  0500                834+N00020   DC    A(@TUXX)
0027F8  2C9E                835+         DC    AL2(N00104)
0027FA  3402                836+         DC    A(T7A10)
0027FC  0202                837+         DC    AL2(OF)
0027FE  0008                838+         DC    AL2(8)
002800  0000001000000010    839+         DC    X'0000001000000010'
                            840+         ALIGN WORD
002808  0000                841+         DC    AL2(0)
00280A  C1C1                842+         DC    C'AA'
                            843+         ALIGN WORD
00280C  196E                844+         DC     AL2(PARMARA)
                            845 N00021   $TUXX T7A02,9,0000000010000001,OF,QT=(Q00006),YES=N00095,    X
00280E  0500                846+N00021   DC    A(@TUXX)
002810  2C2A                847+         DC    AL2(N00095)
002812  2EBE                848+         DC    A(T7A02)
002814  0202                849+         DC    AL2(OF)
002816  0009                850+         DC    AL2(9)
002818  0000000010000000    851+         DC    X'0000000010000000'
002821  00                  852+         ALIGN WORD
002822  0000                853+         DC    AL2(0)
002824  C1C1                854+         DC    C'AA'
                            855+         ALIGN WORD
002826  196E                856+         DC     AL2(PARMARA)
                            857 N00022   $TUXX T7A02,9,0000000800000008,OF,QT=(Q00006),YES=N00036,     X
002828  0500                858+N00022   DC    A(@TUXX)
00282A  28F0                859+         DC    AL2(N00036)
00282C  2EBE                860+         DC    A(T7A02)
00282E  0202                861+         DC    AL2(OF)
002830  0009                862+         DC    AL2(9)
002832  0000000800000008    863+         DC    X'0000000800000008'
                            864+         ALIGN WORD
00283A  0000                865+         DC    AL2(0)
00283C  C1C1                866+         DC    C'AA'
                            867+         ALIGN WORD
00283E  196E                868+         DC     AL2(PARMARA)
                            869 N00023   $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00031,     X
002840  0500                870+N00023   DC    A(@TUXX)
002842  28B2                871+         DC    AL2(N00031)
002844  2EBE                872+         DC    A(T7A02)
002846  0200                873+         DC    AL2(ON)
002848  0007                874+         DC    AL2(7)
00284A  0000000000000020    875+         DC    X'0000000000000020'
002851  00                  876+         ALIGN WORD
002852  0000                877+         DC    AL2(0)
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 LOCTR  OBJECT TEXT         STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

002854  C1C1                878+         DC    C'AA'
                            879+         ALIGN WORD
002856  196E                880+         DC     AL2(PARMARA)
                            881 N00024   $TUXX T7A02,7,0000010000000001,OF,QT=(Q00006),YES=N00026,     X
002858  0500                882+N00024   DC    A(@TUXX)
00285A  2874                883+         DC    AL2(N00026)
00285C  2EBE                884+         DC    A(T7A02)
00285E  0202                885+         DC    AL2(OF)
002860  0007                886+         DC    AL2(7)
002862  0000010000000001    887+         DC    X'0000010000000001'
002869  00                  888+         ALIGN WORD
00286A  0000                889+         DC    AL2(0)
00286C  C1C1                890+         DC    C'AA'
                            891+         ALIGN WORD
00286E  196E                892+         DC     AL2(PARMARA)
                            893 N00025   $FIXT FT=(F00082),GTO=((7A76,R))
002870  0101                894+N00025   DC    A(@FIXT)
002872  2E24                895+         DC    A(F00082)
                            896 N00026   $TUXX T7A02,7,0000400000040,OF,QT=(Q00006),YES=N00030,     X
002874  0500                897+N00026   DC    A(@TUXX)
002876  28AE                898+         DC    AL2(N00030)
002878  2EBE                899+         DC    A(T7A02)
00287A  0202                900+         DC    AL2(OF)
00287C  0007                901+         DC    AL2(7)
00287E  0000400000040       902+         DC    X'0000400000040'
002885  00                  903+         ALIGN WORD
002886  0000                904+         DC    AL2(0)
002888  C1C1                905+         DC    C'AA'
                            906+         ALIGN WORD
00288A  196E                907+         DC     AL2(PARMARA)
                            908 N00027   $TUXX T7A02,9,0000000010000000,OF,QT=(Q00006),YES=N00029,     X
00288C  0500                909+N00027   DC    A(@TUXX)
00288E  28AA                910+         DC    AL2(N00029)
002890  2EBE                911+         DC    A(T7A02)
002892  0202                912+         DC    AL2(OF)
002894  0009                913+         DC    AL2(9)
002896  0000000100000001    914+         DC    X'0000000010000000'
00289F  00                  915+         ALIGN WORD
0028A0  0000                916+         DC    AL2(0)
0028A2  C1C1                917+         DC    C'AA'
                            918+         ALIGN WORD
0028A4  196E                919+         DC     AL2(PARMARA)
                            920 N00028   $FIXT FT=(F00082),GTO=((7A76,R))
0028A6  0101                921+N00028   DC    A(@FIXT)
0028A8  2E24                922+         DC    A(F00082)
                            923 N00029   $FIXT FT=(F00033),GTO=((7A70,C))
0028AA  0101                924+N00029   DC    A(@FIXT)
0028AC  2DFE                925+         DC    A(F00033)
                            926 N00030   $FIXT FT=(F00033),GTO=((7A70,C))
0028AE  0101                927+N00030   DC    A(@FIXT)
0028B0  2DFE                928+         DC    A(F00033)
                            929 N00031   $TUXX T7A02,7,0000010000000001,OF,QT=(Q00006),YES=N00033,     X
0028B2  0500                930+N00031   DC    A(@TUXX)
0028B4  28CE                931+         DC    AL2(N00033)
0028B6  2EBE                932+         DC    A(T7A02)
0028B8  0202                933+         DC    AL2(OF)
0028BA  0007                934+         DC    AL2(7)
0028BC  0000010000000001    935+         DC    X'0000010000000001'
0028C3  00                  936+         ALIGN WORD
0028C4  0000                937+         DC    AL2(0)
0028C6  C1C1                938+         DC    C'AA'
                            939+         ALIGN WORD
0028C8  196E                940+         DC     AL2(PARMARA)
                            941 N00032   $FIXT FT=(F00052),GTO=((7A70,E))
0028CA  0101                942+N00032   DC    A(@FIXT)
0028CC  2DD8                943+         DC    A(F00052)
                            944 N00033   $TUXX T7A02,9,0000000008000000080,OF,QT=(Q00006),YES=N00035,    X
0028CE  0500                945+N00033   DC    A(@TUXX)
0028D0  28EC                946+         DC    AL2(N00035)
0028D2  2EBE                947+         DC    A(T7A02)
0028D4  0202                948+         DC    AL2(OF)
0028D6  0009                949+         DC    AL2(9)
0028D8  0000000800000008    950+         DC    X'0000000008000000080'
0028E1  00                  951+         ALIGN WORD
0028E2  0000                952+         DC    AL2(0)
0028E4  C1C1                953+         DC    C'AA'
                            954+         ALIGN WORD
0028E6  196E                955+         DC     AL2(PARMARA)
                            956 N00034   $FIXT FT=(F00033),GTO=((7A70,C))
0028E8  0101                957+N00034   DC    A(@FIXT)
0028EA  2DFE                958+         DC    A(F00033)
                            959 N00035   $FIXT FT=(F00074),GTO=((7A72,F))
0028EC  0101                960+N00035   DC    A(@FIXT)
0028EE  2DE6                961+         DC    A(F00074)
                            962 N00036   $TUXX T7A02,7,0000400000040,OF,QT=(Q00006),YES=N00078,     X
0028F0  0500                963+N00036   DC    A(@TUXX)
0028F2  2B42                964+         DC    AL2(N00078)
0028F4  2EBE                965+         DC    A(T7A02)
0028F6  0202                966+         DC    AL2(OF)
0028F8  0007                967+         DC    AL2(7)
0028FA  0000400000040       968+         DC    X'0000400000040'
002901  00                  969+         ALIGN WORD
002902  0000                970+         DC    AL2(0)
002904  C1C1                971+         DC    C'AA'
                            972+         ALIGN WORD
002906  196E                973+         DC     AL2(PARMARA)
                            974 N00037   $TUXX T7A02,7,0000010000000001,OF,QT=(Q00006),YES=N00047,     X
002908  0500                975+N00037   DC    A(@TUXX)
00290A  2990                976+         DC    AL2(N00047)
00290C  2EBE                977+         DC    A(T7A02)
00290E  0202                978+         DC    AL2(OF)
002910  0007                979+         DC    AL2(7)
002912  0000010000000001    980+         DC    X'0000010000000001'
00291B  00                  981+         ALIGN WORD
00291A  0000                982+         DC    AL2(0)
00291C  C1C1                983+         DC    C'AA'
                            984+         ALIGN WORD
00291E  196E                985+         DC     AL2(PARMARA)
                            986 N00038   $TUXX T7A02,9,0000000000000001,ON,QT=(Q00007),YES=N00046,    X
002920  0500                987+N00038   DC    A(@TUXX)
002922  298C                988+         DC    AL2(N00046)
002924  2EBE                989+         DC    A(T7A02)
002926  0200                990+         DC    AL2(ON)
002928  0009                991+         DC    AL2(9)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

00292A  00000000000000000   992+          DC    X'0000000000000000001'
002933  00                  993+          ALIGN WORD
002934  0000                994+          DC    AL2(0)
002936  C1C1                995+          DC    C'AA'
                            996+          ALIGN WORD
002938  196E                997+          DC     AL2(PARMARA)
                            998 N00039    $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00043,      X
00293A  0500                999+N00039    DC    A(@TUXX)
00293C  296C               1000+          DC    AL2(N00043)
00293E  2EBE               1001+          DC    A(T7A02)
002940  0202               1002+          DC    AL2(OF)
002942  0008               1003+          DC    AL2(8)
002944  0000002000000020   1004+          DC    X'0000002000000020'
                           1005+          ALIGN WORD
00294C  0000               1006+          DC    AL2(0)
00294E  C1C1               1007+          DC    C'AA'
                           1008+          ALIGN WORD
002950  196E               1009+          DC     AL2(PARMARA)
                           1010 N00040    $TUXX T7A02,2,0002,OF,QT=(Q00006),YES=N00042,CT=(C00032)
002952  0500               1011+N00040    DC    A(@TUXX)
002954  2968               1012+          DC    AL2(N00042)
002956  2EBE               1013+          DC    A(T7A02)
002958  0202               1014+          DC    AL2(OF)
00295A  0002               1015+          DC    AL2(2)
00295C  0002               1016+          DC    X'0002'
                           1017+          ALIGN WORD
00295E  0000               1018+          DC    AL2(0)
002960  C1C1               1019+          DC    C'AA'
                           1020+          ALIGN WORD
002962  196E               1021+          DC     AL2(PARMARA)
                           1022 N00041    $FIXT FT=(F00047),GTO=((7A70,B))
002964  0101               1023+N00041    DC    A(@FIXT)
002966  2E30               1024+          DC    A(F00047)
                           1025 N00042    $FIXT FT=(F00074),GTO=((7A72,F))
002968  0101               1026+N00042    DC    A(@FIXT)
00296A  2DE6               1027+          DC    A(F00074)
                           1028 N00043    $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00045,      X
00296C  0500               1029+N00043    DC    A(@TUXX)
00296E  2988               1030+          DC    AL2(N00045)
002970  2EBE               1031+          DC    A(T7A02)
002972  0200               1032+          DC    AL2(ON)
002974  0007               1033+          DC    AL2(7)
002976  00000000000020     1034+          DC    X'00000000000020'
00297D  00                 1035+          ALIGN WORD
00297E  0000               1036+          DC    AL2(0)
002980  C1C1               1037+          DC    C'AA'
                           1038+          ALIGN WORD
002982  196E               1039+          DC     AL2(PARMARA)
                           1040 N00044    $FIXT FT=(F00076),GTO=((7A72,U))
002984  0101               1041+N00044    DC    A(@FIXT)
002986  2E3E               1042+          DC    A(F00076)
                           1043 N00045    $FIXT FT=(F00083),GTO=((7A76,U))
002988  0101               1044+N00045    DC    A(@FIXT)
00298A  2E4A               1045+          DC    A(F00083)
                           1046 N00046    $FIXT FT=(F00076),GTO=((7A72,U))
00298C  0101               1047+N00046    DC    A(@FIXT)
00298E  2E3E               1048+          DC    A(F00076)
                           1049 N00047    $TUXX T7A02,7,00000800000008,OF,QT=(Q00006),YES=N00075,      X
002990  0500               1050+N00047    DC    A(@TUXX)
002992  2B20               1051+          DC    AL2(N00075)
002994  2EBE               1052+          DC    A(T7A02)
002996  0202               1053+          DC    AL2(OF)
002998  0007               1054+          DC    AL2(7)
00299A  00000800000008     1055+          DC    X'00000800000008'
0029A1  00                 1056+          ALIGN WORD
0029A2  0000               1057+          DC    AL2(0)
0029A4  C1C1               1058+          DC    C'AA'
                           1059+          ALIGN WORD
0029A6  196E               1060+          DC     AL2(PARMARA)
                           1061 N00048    $TUXX T7A02,8,0000000800000008,OF,QT=(Q00006),YES=N00053,      X
0029A8  0500               1062+N00048    DC    A(@TUXX)
0029AA  2A38               1063+          DC    AL2(N00058)
0029AC  2EBE               1064+          DC    A(T7A02)
0029AE  0202               1065+          DC    AL2(OF)
0029B0  0008               1066+          DC    AL2(8)
0029B2  0000000800000008   1067+          DC    X'0000000800000008'
                           1068+          ALIGN WORD
0029BA  0000               1069+          DC    AL2(0)
0029BC  C1C1               1070+          DC    C'AA'
                           1071+          ALIGN WORD
0029BE  196E               1072+          DC     AL2(PARMARA)
                           1073 N00049    $TUXX T7A02,9,0000000008000000080,OF,QT=(Q00006),YES=N00053,    X
0029C0  0500               1074+N00049    DC    A(@TUXX)
0029C2  29FA               1075+          DC    AL2(N00053)
0029C4  2EBE               1076+          DC    A(T7A02)
0029C6  0202               1077+          DC    AL2(OF)
0029C8  0009               1078+          DC    AL2(9)
0029CA  00000000800000008  1079+          DC    X'0000000008000000080'
0029D3  00                 1080+          ALIGN WORD
0029D4  0000               1081+          DC    AL2(0)
0029D6  C1C1               1082+          DC    C'AA'
                           1083+          ALIGN WORD
0029D8  196E               1084+          DC     AL2(PARMARA)
                           1085 N00050    $TUXX T7A02,8,0000008000000080,OF,QT=(Q00006),YES=N00052,      X
0029DA  0500               1086+N00050    DC    A(@TUXX)
0029DC  29F6               1087+          DC    AL2(N00052)
0029DE  2EBE               1088+          DC    A(T7A02)
0029E0  0202               1089+          DC    AL2(OF)
0029E2  0008               1090+          DC    AL2(8)
0029E4  0000008000000080   1091+          DC    X'0000008000000080'
                           1092+          ALIGN WORD
0029EC  0000               1093+          DC    AL2(0)
0029EE  C1C1               1094+          DC    C'AA'
                           1095+          ALIGN WORD
0029F0  196E               1096+          DC     AL2(PARMARA)
                           1097 N00051    $FIXT FT=(F00081),GTO=((7A76,O))
0029F2  0101               1098+N00051    DC    A(@FIXT)
0029F4  2E56               1099+          DC    A(F00081)
                           1100 N00052    $FIXT FT=(F00074),GTO=((7A72,F))
0029F6  0101               1101+N00052    DC    A(@FIXT)
0029F8  2DE6               1102+          DC    A(F00074)
                           1103 N00053    $TUXX T7A02,9,0000000000000000001,ON,QT=(Q00007),YES=N00055,    X
0029FA  0500               1104+N00053    DC    A(@TUXX)
0029FC  2A18               1105+          DC    AL2(N00055)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

0029FE  2EBE               1106+          DC    A(T7A02)
002A00  0200               1107+          DC    AL2(ON)
002A02  0009               1108+          DC    AL2(9)
002A04  0000000000000001   1109+          DC    X'0000000000000001'
002A0D  00                 1110+          ALIGN WORD
002A0E  0000               1111+          DC    AL2(0)
002A10  C1C1               1112+          DC    C'AA'
                           1113+          ALIGN WORD
002A12  196E               1114+          DC     AL2(PARMARA)
                           1115 N00054    $FIXT FT=(F00074),GTO=((7A72,F))
002A14  0101               1116+N00054    DC    A(@FIXT)
002A16  2DE6               1117+          DC    A(F00074)
                           1118 N00055    $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00057,      X
002A18  0500               1119+N00055    DC    A(@TUXX)
002A1A  2A34               1120+          DC    AL2(N00057)
002A1C  2EBE               1121+          DC    A(T7A02)
002A1E  0200               1122+          DC    AL2(ON)
002A20  0007               1123+          DC    AL2(7)
002A22  00000000000020     1124+          DC    X'00000000000020'
002A29  00                 1125+          ALIGN WORD
002A2A  0000               1126+          DC    AL2(0)
002A2C  C1C1               1127+          DC    C'AA'
                           1128+          ALIGN WORD
002A2E  196E               1129+          DC     AL2(PARMARA)
                           1130 N00056    $FIXT FT=(F00047),GTO=((7A70,B))
002A30  0101               1131+N00056    DC    A(@FIXT)
002A32  2E30               1132+          DC    A(F00047)
                           1133 N00057    $FIXT FT=(F00081),GTO=((7A76,O))
002A34  0101               1134+N00057    DC    A(@FIXT)
002A36  2E56               1135+          DC    A(F00081)
                           1136 N00058    $TUXX T7A02,9,0000000008000000080,OF,QT=(Q00006),YES=N00064,    X
002A38  0500               1137+N00058    DC    A(@TUXX)
002A3A  2A8E               1138+          DC    AL2(N00064)
002A3C  2EBE               1139+          DC    A(T7A02)
002A3E  0202               1140+          DC    AL2(OF)
002A40  0009               1141+          DC    AL2(9)
002A42  00000000800000008  1142+          DC    X'0000000008000000080'
002A4B  00                 1143+          ALIGN WORD
002A4C  0000               1144+          DC    AL2(0)
002A4E  C1C1               1145+          DC    C'AA'
                           1146+          ALIGN WORD
002A50  196E               1147+          DC     AL2(PARMARA)
                           1148 N00059    $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00063,      X
002A52  0500               1149+N00059    DC    A(@TUXX)
002A54  2A8A               1150+          DC    AL2(N00063)
002A56  2EBE               1151+          DC    A(T7A02)
002A58  0200               1152+          DC    AL2(ON)
002A5A  0007               1153+          DC    AL2(7)
002A5C  00000000000020     1154+          DC    X'00000000000020'
002A63  00                 1155+          ALIGN WORD
002A64  0000               1156+          DC    AL2(0)
002A66  C1C1               1157+          DC    C'AA'
                           1158+          ALIGN WORD
002A68  196E               1159+          DC     AL2(PARMARA)
                           1160 N00060    $TUXX T7A02,7,00000200000002,OF,QT=(Q00006),YES=N00062,      X
002A6A  0500               1161+N00060    DC    A(@TUXX)
002A6C  2A86               1162+          DC    AL2(N00062)
002A6E  2EBE               1163+          DC    A(T7A02)
002A70  0202               1164+          DC    AL2(OF)
002A72  0007               1165+          DC    AL2(7)
002A74  00000200000002     1166+          DC    X'00000200000002'
002A7B  00                 1167+          ALIGN WORD
002A7C  0000               1168+          DC    AL2(0)
002A7E  C1C1               1169+          DC    C'AA'
                           1170+          ALIGN WORD
002A80  196E               1171+          DC     AL2(PARMARA)
                           1172 N00061    $FIXT FT=(F00047),GTO=((7A70,B))
002A82  0101               1173+N00061    DC    A(@FIXT)
002A84  2E30               1174+          DC    A(F00047)
                           1175 N00062    $FIXT FT=(F00083),GTO=((7A76,U))
002A86  0101               1176+N00062    DC    A(@FIXT)
002A88  2E4A               1177+          DC    A(F00083)
                           1178 N00063    $FIXT FT=(F00081),GTO=((7A76,O))
002A8A  0101               1179+N00063    DC    A(@FIXT)
002A8C  2E56               1180+          DC    A(F00081)
                           1181 N00064    $TUXX T7A02,8,0000008000000080,OF,QT=(Q00006),YES=N00072,      X
002A8E  0500               1182+N00064    DC    A(@TUXX)
002A90  2AFE               1183+          DC    AL2(N00072)
002A92  2EBE               1184+          DC    A(T7A02)
002A94  0202               1185+          DC    AL2(OF)
002A96  0008               1186+          DC    AL2(8)
002A98  0000008000000080   1187+          DC    X'0000008000000080'
                           1188+          ALIGN WORD
002AA0  0000               1189+          DC    AL2(0)
002AA2  C1C1               1190+          DC    C'AA'
                           1191+          ALIGN WORD
002AA4  196E               1192+          DC     AL2(PARMARA)
                           1193 N00065    $TUXX T7A02,7,00000200000002,OF,QT=(Q00006),YES=N00067,      X
002AA6  0500               1194+N00065    DC    A(@TUXX)
002AA8  2A82               1195+          DC    AL2(N00067)
002AAA  2EBE               1196+          DC    A(T7A02)
002AAC  0202               1197+          DC    AL2(OF)
002AAE  0007               1198+          DC    AL2(7)
002AB0  00000200000002     1199+          DC    X'00000200000002'
002AB7  00                 1200+          ALIGN WORD
002AB8  0000               1201+          DC    AL2(0)
002ABA  C1C1               1202+          DC    C'AA'
                           1203+          ALIGN WORD
002ABC  196E               1204+          DC     AL2(PARMARA)
                           1205 N00066    $FIXT FT=(F00047),GTO=((7A70,B))
002ABE  0101               1206+N00066    DC    A(@FIXT)
002AC0  2E30               1207+          DC    A(F00047)
                           1208 N00067    $TUXX T7A02,9,0000000000000000001,ON,QT=(Q00007),YES=N00071,    X
002AC2  0500               1209+N00067    DC    A(@TUXX)
002AC4  2AFA               1210+          DC    AL2(N00071)
002AC6  2EBE               1211+          DC    A(T7A02)
002AC8  0200               1212+          DC    AL2(ON)
002ACA  0009               1213+          DC    AL2(9)
002ACC  0000000000000000   1214+          DC    X'0000000000000000001'
002AD5  00                 1215+          ALIGN WORD
002AD6  0000               1216+          DC    AL2(0)
002AD8  C1C1               1217+          DC    C'AA'
                           1218+          ALIGN WORD
002ADA  196E               1219+          DC     AL2(PARMARA)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

                          1220 N00068   $TUXX T7A02,06,000000000080,OF,QT=(Q00034),YES=N00070
002ADC  0500              12211+N00068  DC    A(@TUXX)
002ADE  2AF6              1222+         DC    AL2(N00070)
002AE0  2EBE              1223+         DC    A(T7A02)
002AE2  0202              1224+         DC    AL2(OF)
002AE4  0006              1225+         DC    AL2(06)
002AE6  000000000080      1226+         DC    X'000000000080'
                          1227+         ALIGN WORD
002AEC  0000              1228+         DC    AL2(0)
002AEE  C1C1              1229+         DC    C'AA'
                          1230+         ALIGN WORD
002AF0  196E              1231+         DC     AL2(PARMARA)
                          1232 N00069   $FIXT FT=(F00081),GTO=((7A76,O))
002AF2  0101              1233+N00069   DC    A(@FIXT)
002AF4  2E56              1234+         DC    A(F00081)
                          1235 N00070   $FIXT FT=(F00074),GTO=((7A72,F))
002AF6  0101              1236+N00070   DC    A(@FIXT)
002AF8  2DE6              1237+         DC    A(F00074)
                          1238 N00071   $FIXT FT=(F00047),GTO=((7A70,B))
002AFA  0101              1239+N00071   DC    A(@FIXT)
002AFC  2E30              1240+         DC    A(F00047)
                          1241 N00072   $TUXX T7A02,9,0000000000000001,ON,QT=(Q00007),YES=N00074,    X
002AFE  0500              1242+N00072   DC    A(@TUXX)
002B00  2B1C              1243+         DC    AL2(N00074)
002B02  2EBE              1244+         DC    A(T7A02)
002B04  0200              1245+         DC    AL2(ON)
002B06  0009              1246+         DC    AL2(9)
002B08  00000000000000000 1247+         DC    X'0000000000000001'
002B11  00                1248+         ALIGN WORD
002B12  0000              1249+         DC    AL2(0)
002B14  C1C1              1250+         DC    C'AA'
                          1251+         ALIGN WORD
002B16  196E              1252+         DC     AL2(PARMARA)
                          1253 N00073   $FIXT FT=(F00074),GTO=((7A72,F))
002B18  0101              1254+N00073   DC    A(@FIXT)
002B1A  2DE6              1255+         DC    A(F00074)
                          1256 N00074   $FIXT FT=(F00047),GTO=((7A70,B))
002B1C  0101              1257+N00074   DC    A(@FIXT)
002B1E  2E30              1258+         DC    A(F00047)
                          1259 N00075   $TUXX T7A02,9,0000000080000080,OF,QT=(Q00006),YES=N00077,    X
002B20  0500              1260+N00075   DC    A(@TUXX)
002B22  2B3E              1261+         DC    AL2(N00077)
002B24  2EBE              1262+         DC    A(T7A02)
002B26  0202              1263+         DC    AL2(OF)
002B28  0009              1264+         DC    AL2(9)
002B2A  00000000800000008 1265+         DC    X'0000000080000080'
002B33  00                1266+         ALIGN WORD
002B34  0000              1267+         DC    AL2(0)
002B36  C1C1              1268+         DC    C'AA'
                          1269+         ALIGN WORD
002B38  196E              1270+         DC     AL2(PARMARA)
                          1271 N00076   $FIXT FT=(F00083),GTO=((7A76,U))
002B3A  0101              1272+N00076   DC    A(@FIXT)
002B3C  2E4A              1273+         DC    A(F00083)
                          1274 N00077   $FIXT FT=(F00076),GTO=((7A72,U))
002B3E  0101              1275+N00077   DC    A(@FIXT)
002B40  2E3E              1276+         DC    A(F00076)
                          1277 N00078   $TUXX T7A02,9,0000000000000001,ON,QT=(Q00007),YES=N00092,    X
002B42  0500              1278+N00078   DC    A(@TUXX)
002B44  2C0A              1279+         DC    AL2(N00092)
002B46  2EBE              1280+         DC    A(T7A02)
002B48  0200              1281+         DC    AL2(ON)
002B4A  0009              1282+         DC    AL2(9)
002B4C  00000000000000000 1283+         DC    X'0000000000000001'
002B55  00                1284+         ALIGN WORD
002B56  0000              1285+         DC    AL2(0)
002B58  C1C1              1286+         DC    C'AA'
                          1287+         ALIGN WORD
002B5A  196E              1288+         DC     AL2(PARMARA)
                          1289 N00079   $TUXX T7A02,7,000001000000001,OF,QT=(Q00006),YES=N00083,       X
002B5C  0500              1290+N00079   DC    A(@TUXX)
002B5E  2B94              1291+         DC    AL2(N00083)
002B60  2EBE              1292+         DC    A(T7A02)
002B62  0202              1293+         DC    AL2(OF)
002B64  0007              1294+         DC    AL2(7)
002B66  00000100000001    1295+         DC    X'000001000000001'
002B6D  00                1296+         ALIGN WORD
002B6E  0000              1297+         DC    AL2(0)
002B70  C1C1              1298+         DC    C'AA'
                          1299+         ALIGN WORD
002B72  196E              1300+         DC     AL2(PARMARA)
                          1301 N00080   $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00082,     X
002B74  0500              1302+N00080   DC    A(@TUXX)
002B76  2B90              1303+         DC    AL2(N00082)
002B78  2EBE              1304+         DC    A(T7A02)
002B7A  0202              1305+         DC    AL2(OF)
002B7C  0008              1306+         DC    AL2(8)
002B7E  0000002000000020  1307+         DC    X'0000002000000020'
                          1308+         ALIGN WORD
002B86  0000              1309+         DC    AL2(0)
002B88  C1C1              1310+         DC    C'AA'
                          1311+         ALIGN WORD
002B8A  196E              1312+         DC     AL2(PARMARA)
                          1313 N00081   $FIXT FT=(F00083),GTO=((7A76,U))
002B8C  0101              1314+N00081   DC    A(@FIXT)
002B8E  2E4A              1315+         DC    A(F00083)
                          1316 N00082   $FIXT FT=(F00033),GTO=((7A70,C))
002B90  0101              1317+N00082   DC    A(@FIXT)
002B92  2DFE              1318+         DC    A(F00033)
                          1319 N00083   $TUXX T7A02,9,0000000080000080,OF,QT=(Q00006),YES=N00085,    X
002B94  0500              1320+N00083   DC    A(@TUXX)
002B96  2BB2              1321+         DC    AL2(N00085)
002B98  2EBE              1322+         DC    A(T7A02)
002B9A  0202              1323+         DC    AL2(OF)
002B9C  0009              1324+         DC    AL2(9)
002B9E  00000000800000008 1325+         DC    X'0000000080000080'
002BA7  00                1326+         ALIGN WORD
002BA8  0000              1327+         DC    AL2(0)
002BAA  C1C1              1328+         DC    C'AA'
                          1329+         ALIGN WORD
002BAC  196E              1330+         DC     AL2(PARMARA)
                          1331 N00084   $FIXT FT=(F00083),GTO=((7A76,U))
002BAE  0101              1332+N00084   DC    A(@FIXT)
002BB0  2E4A              1333+         DC    A(F00083)
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                          1334 N00085   $TUXX T7A02,8,0000008000000080,OF,QT=(Q00006),YES=N00087,     X
002BB2  0500              1335+N00085   DC    A(@TUXX)
002BB4  2BCE              1336+         DC    AL2(N00087)
002BB6  2EBE              1337+         DC    A(T7A02)
002BB8  0202              1338+         DC    AL2(OF)
002BBA  0008              1339+         DC    AL2(8)
002BBC  0000008000000080  1340+         DC    X'0000008000000080'
                          1341+         ALIGN WORD
002BC4  0000              1342+         DC    AL2(0)
002BC6  C1C1              1343+         DC    C'AA'
                          1344+         ALIGN WORD
002BC8  196E              1345+         DC     AL2(PARMARA)
                          1346 N00086   $FIXT FT=(F00081),GTO=((7A76,O))
002BCA  0101              1347+N00086   DC    A(@FIXT)
002BCC  2E56              1348+         DC    A(F00081)
                          1349 N00087   $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00089,       X
002BCE  0500              1350+N00087   DC    A(@TUXX)
002BD0  2BEA              1351+         DC    AL2(N00089)
002BD2  2EBE              1352+         DC    A(T7A02)
002BD4  0200              1353+         DC    AL2(ON)
002BD6  0007              1354+         DC    AL2(7)
002BD8  00000000000020    1355+         DC    X'00000000000020'
002BDF  00                1356+         ALIGN WORD
002BE0  0000              1357+         DC    AL2(0)
002BE2  C1C1              1358+         DC    C'AA'
                          1359+         ALIGN WORD
002BE4  196E              1360+         DC     AL2(PARMARA)
                          1361 N00088   $FIXT FT=(F00074),GTO=((7A72,F))
002BE6  0101              1362+N00088   DC    A(@FIXT)
002BE8  2DE6              1363+         DC    A(F00074)
                          1364 N00089   $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00091,     X
002BEA  0500              1365+N00089   DC    A(@TUXX)
002BEC  2C06              1366+         DC    AL2(N00091)
002BEE  2EBE              1367+         DC    A(T7A02)
002BF0  0202              1368+         DC    AL2(OF)
002BF2  0008              1369+         DC    AL2(8)
002BF4  0000002000000020  1370+         DC    X'0000002000000020'
                          1371+         ALIGN WORD
002BFC  0000              1372+         DC    AL2(0)
002BFE  C1C1              1373+         DC    C'AA'
                          1374+         ALIGN WORD
002C00  196E              1375+         DC     AL2(PARMARA)
                          1376 N00090   $FIXT FT=(F00081),GTO=((7A76,O))
002C02  0101              1377+N00090   DC    A(@FIXT)
002C04  2E56              1378+         DC    A(F00081)
                          1379 N00091   $FIXT FT=(F00074),GTO=((7A72,F))
002C06  0101              1380+N00091   DC    A(@FIXT)
002C08  2DE6              1381+         DC    A(F00074)
                          1382 N00092   $TUXX T7A02,7,0000000200000002,OF,QT=(Q00006),YES=N00094,     X
002C0A  0500              1383+N00092   DC    A(@TUXX)
002C0C  2C26              1384+         DC    AL2(N00094)
002C0E  2EBE              1385+         DC    A(T7A02)
002C10  0202              1386+         DC    AL2(OF)
002C12  0007              1387+         DC    AL2(7)
002C14  0000000200000002  1388+         DC    X'0000000200000002'
                          1389+         ALIGN WORD
002C1C  0000              1390+         DC    AL2(0)
002C1E  C1C1              1391+         DC    C'AA'
                          1392+         ALIGN WORD
002C20  196E              1393+         DC     AL2(PARMARA)
                          1394 N00093   $FIXT FT=(F00047),GTO=((7A70,B))
002C22  0101              1395+N00093   DC    A(@FIXT)
002C24  2E30              1396+         DC    A(F00047)
                          1397 N00094   $FIXT FT=(F00081),GTO=((7A76,O))
002C26  0101              1398+N00094   DC    A(@FIXT)
002C28  2E56              1399+         DC    A(F00081)
                          1400 N00095   $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00101,       X
002C2A  0500              1401+N00095   DC    A(@TUXX)
002C2C  2C7E              1402+         DC    AL2(N00101)
002C2E  2EBE              1403+         DC    A(T7A02)
002C30  0202              1404+         DC    AL2(OF)
002C32  0007              1405+         DC    AL2(7)
002C34  00004000000040    1406+         DC    X'00004000000040'
002C3B  00                1407+         ALIGN WORD
002C3C  0000              1408+         DC    AL2(0)
002C3E  C1C1              1409+         DC    C'AA'
                          1410+         ALIGN WORD
002C40  196E              1411+         DC     AL2(PARMARA)
                          1412 N00096   $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00098,       X
002C42  0500              1413+N00096   DC    A(@TUXX)
002C44  2C5E              1414+         DC    AL2(N00098)
002C46  2EBE              1415+         DC    A(T7A02)
002C48  0200              1416+         DC    AL2(ON)
002C4A  0007              1417+         DC    AL2(7)
002C4C  00000000000020    1418+         DC    X'00000000000020'
002C53  00                1419+         ALIGN WORD
002C54  0000              1420+         DC    AL2(0)
002C56  C1C1              1421+         DC    C'AA'
                          1422+         ALIGN WORD
002C58  196E              1423+         DC     AL2(PARMARA)
                          1424 N00097   $FIXT GTO=((7A76,F))
002C5A  0101              1425+N00097   DC    A(@FIXT)
002C5C  0000              1426+         DC    A(EQ)
                          1427 N00098   $TUXX T7A02,8,0000002000000020,OF,QT=(Q00006),YES=N00100,     X
002C5E  0500              1428+N00098   DC    A(@TUXX)
002C60  2C7A              1429+         DC    AL2(N00100)
002C62  2EBE              1430+         DC    A(T7A02)
002C64  0202              1431+         DC    AL2(OF)
002C66  0008              1432+         DC    AL2(8)
002C68  0000002000000020  1433+         DC    X'0000002000000020'
                          1434+         ALIGN WORD
002C70  0000              1435+         DC    AL2(0)
002C72  C1C1              1436+         DC    C'AA'
                          1437+         ALIGN WORD
002C74  196E              1438+         DC     AL2(PARMARA)
                          1439 N00099   $FIXT GTO=((7A76,F))
002C76  0101              1440+N00099   DC    A(@FIXT)
002C78  0000              1441+         DC    A(EQ)
                          1442 N00100   $FIXT FT=(F00052),GTO=((7A70,E))
002C7A  0101              1443+N00100   DC    A(@FIXT)
002C7C  2DD8              1444+         DC    A(F00052)
                          1445 N00101   $TUXX T7A02,7,00000000000008,ON,QT=(Q00007),YES=N00103,       X
002C7E  0500              1446+N00101   DC    A(@TUXX)
002C80  2C9A              1447+         DC    AL2(N00103)
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002C82  2EBE              1448+          DC    A(T7A02)
002C84  0200              1449+          DC    AL2(ON)
002C86  0007              1450+          DC    AL2(7)
002C88  00000000000008    1451+          DC    X'00000000000008'
002C8F  00                1452+          ALIGN WORD
002C90  0000              1453+          DC    AL2(0)
002C92  C1C1              1454+          DC    C'AA'
                          1455+          ALIGN WORD
002C94  196E              1456+          DC     AL2(PARMARA)
                          1457 N00102    $FIXT FT=(F00033),GTO=((7A70,C))
002C96  0101              1458+N00102    DC    A(@FIXT)
002C98  2DFE              1459+          DC    A(F00033)
                          1460 N00103    $FIXT FT=(F00082),GTO=((7A76,R))
002C9A  0101              1461+N00103    DC    A(@FIXT)
002C9C  2E24              1462+          DC    A(F00082)
                          1463 N00104    $TUXX T7A02,7,00004000000040,OF,QT=(Q00006),YES=N00112,       X
002C9E  0500              1464+N00104    DC    A(@TUXX)
002CA0  2D10              1465+          DC    AL2(N00112)
002CA2  2EBE              1466+          DC    A(T7A02)
002CA4  0202              1467+          DC    AL2(OF)
002CA6  0007              1468+          DC    AL2(7)
002CA8  00004000000040    1469+          DC    X'00004000000040'
002CAF  00                1470+          ALIGN WORD
002CB0  0000              1471+          DC    AL2(0)
002CB2  C1C1              1472+          DC    C'AA'
                          1473+          ALIGN WORD
002CB4  196E              1474+          DC     AL2(PARMARA)
                          1475 N00105    $TUXX T7A02,9,0000000080000000080,OF,QT=(Q00006),YES=N00107,   X
002CB6  0500              1476+N00105    DC    A(@TUXX)
002CB8  2CD4              1477+          DC    AL2(N00107)
002CBA  2EBE              1478+          DC    A(T7A02)
002CBC  0202              1479+          DC    AL2(OF)
002CBE  0009              1480+          DC    AL2(9)
002CC0  00000000800000008 1481+          DC    X'0000000080000000080'
002CC9  00                1482+          ALIGN WORD
002CCA  0000              1483+          DC    AL2(0)
002CCC  C1C1              1484+          DC    C'AA'
                          1485+          ALIGN WORD
002CCE  196E              1486+          DC     AL2(PARMARA)
                          1487 N00106    $FIXT FT=(F00082),GTO=((7A76,R))
002CD0  0101              1488+N00106    DC    A(@FIXT)
002CD2  2E24              1489+          DC    A(F00082)
                          1490 N00107    $TUXX T7A02,7,00000800000008,OF,QT=(Q00006),YES=N00109,       X
002CD4  0500              1491+N00107    DC    A(@TUXX)
002CD6  2CF0              1492+          DC    AL2(N00109)
002CD8  2EBE              1493+          DC    A(T7A02)
002CDA  0202              1494+          DC    AL2(OF)
002CDC  0007              1495+          DC    AL2(7)
002CDE  00000800000008    1496+          DC    X'00000800000008'
002CE5  00                1497+          ALIGN WORD
002CE6  0000              1498+          DC    AL2(0)
002CE8  C1C1              1499+          DC    C'AA'
                          1500+          ALIGN WORD
002CEA  196E              1501+          DC     AL2(PARMARA)
                          1502 N00108    $FIXT FT=(F00074),GTO=((7A72,F))
002CEC  0101              1503+N00108    DC    A(@FIXT)
002CEE  2DE6              1504+          DC    A(F00074)
                          1505 N00109    $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00111,       X
002CF0  0500              1506+N00109    DC    A(@TUXX)
002CF2  2D0C              1507+          DC    AL2(N00111)
002CF4  2EBE              1508+          DC    A(T7A02)
002CF6  0200              1509+          DC    AL2(ON)
002CF8  0007              1510+          DC    AL2(7)
002CFA  00000000000020    1511+          DC    X'00000000000020'
002D01  00                1512+          ALIGN WORD
002D02  0000              1513+          DC    AL2(0)
002D04  C1C1              1514+          DC    C'AA'
                          1515+          ALIGN WORD
002D06  196E              1516+          DC     AL2(PARMARA)
                          1517 N00110    $FIXT FT=(F00074),GTO=((7A72,F))
002D08  0101              1518+N00110    DC    A(@FIXT)
002D0A  2DE6              1519+          DC    A(F00074)
                          1520 N00111    $FIXT FT=(F00080),GTO=((7A76,K))
002D0C  0101              1521+N00111    DC    A(@FIXT)
002D0E  2E62              1522+          DC    A(F00080)
                          1523 N00112    $TUXX T7A02,7,00000100000001,OF,QT=(Q00006),YES=N00116,       X
002D10  0500              1524+N00112    DC    A(@TUXX)
002D12  2D48              1525+          DC    AL2(N00116)
002D14  2EBE              1526+          DC    A(T7A02)
002D16  0202              1527+          DC    AL2(OF)
002D18  0007              1528+          DC    AL2(7)
002D1A  00000100000001    1529+          DC    X'00000100000001'
002D21  00                1530+          ALIGN WORD
002D22  0000              1531+          DC    AL2(0)
002D24  C1C1              1532+          DC    C'AA'
                          1533+          ALIGN WORD
002D26  196E              1534+          DC     AL2(PARMARA)
                          1535 N00113    $TUXX T7A02,7,00000800000008,OF,QT=(Q00006),YES=N00115,       X
002D28  0500              1536+N00113    DC    A(@TUXX)
002D2A  2D44              1537+          DC    AL2(N00115)
002D2C  2EBE              1538+          DC    A(T7A02)
002D2E  0202              1539+          DC    AL2(OF)
002D30  0007              1540+          DC    AL2(7)
002D32  00000800000008    1541+          DC    X'00000800000008'
002D39  00                1542+          ALIGN WORD
002D3A  0000              1543+          DC    AL2(0)
002D3C  C1C1              1544+          DC    C'AA'
                          1545+          ALIGN WORD
002D3E  196E              1546+          DC     AL2(PARMARA)
                          1547 N00114    $FIXT FT=(F00074),GTO=((7A72,F))
002D40  0101              1548+N00114    DC    A(@FIXT)
002D42  2DE6              1549+          DC    A(F00074)
                          1550 N00115    $FIXT FT=(F00033),GTO=((7A70,C))
002D44  0101              1551+N00115    DC    A(@FIXT)
002D46  2DFE              1552+          DC    A(F00033)
                          1553 N00116    $TUXX T7A02,7,00000000000020,ON,QT=(Q00007),YES=N00124,       X
002D48  0500              1554+N00116    DC    A(@TUXX)
002D4A  2DBC              1555+          DC    AL2(N00124)
002D4C  2EBE              1556+          DC    A(T7A02)
002D4E  0200              1557+          DC    AL2(ON)
002D50  0007              1558+          DC    AL2(7)
002D52  00000000000020    1559+          DC    X'00000000000020'
002D59  00                1560+          ALIGN WORD
002D5A  0000              1561+          DC    AL2(0)
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002D5C  C1C1              1562+          DC    C'AA'
                          1563+          ALIGN WORD
002D5E  196E              1564+          DC     AL2(PARMARA)
                          1565 N00117    $TUXX T7A02,9,0000000000000000001,ON,QT=(Q00007),YES=N00123,   X
002D60  0500              1566+N00117    DC    A(@TUXX)
002D62  2DB8              1567+          DC    AL2(N00123)
002D64  2EBE              1568+          DC    A(T7A02)
002D66  0200              1569+          DC    AL2(ON)
002D68  0009              1570+          DC    AL2(9)
002D6A  00000000000000000 1571+          DC    X'00000000000000001'
002D73  00                1572+          ALIGN WORD
002D74  0000              1573+          DC    AL2(0)
002D76  C1C1              1574+          DC    C'AA'
                          1575+          ALIGN WORD
002D78  196E              1576+          DC     AL2(PARMARA)
                          1577 N00118    $TUXX T7A02,9,0000000800000008,OF,QT=(Q00006),YES=N00120,      X
002D7A  0500              1578+N00118    DC    A(@TUXX)
002D7C  2D98              1579+          DC    AL2(N00120)
002D7E  2EBE              1580+          DC    A(T7A02)
002D80  0202              1581+          DC    AL2(OF)
002D82  0009              1582+          DC    AL2(9)
002D84  00000000080000000 1583+          DC    X'0000000080000008'
002D8D  00                1584+          ALIGN WORD
002D8E  0000              1585+          DC    AL2(0)
002D90  C1C1              1586+          DC    C'AA'
                          1587+          ALIGN WORD
002D92  196E              1588+          DC     AL2(PARMARA)
                          1589 N00119    $FIXT FT=(F00033),GTO=((7A70,C))
002D94  0101              1590+N00119    DC    A(@FIXT)
002D96  2DFE              1591+          DC    A(F00033)
                          1592 N00120    $TUXX T7A02,7,00008000000080,OF,QT=(Q00006),YES=N00122,       X
002D98  0500              1593+N00120    DC    A(@TUXX)
002D9A  2DB4              1594+          DC    AL2(N00122)
002D9C  2EBE              1595+          DC    A(T7A02)
002D9E  0202              1596+          DC    AL2(OF)
002DA0  0007              1597+          DC    AL2(7)
002DA2  00008000000080    1598+          DC    X'00008000000080'
002DA9  00                1599+          ALIGN WORD
002DAA  0000              1600+          DC    AL2(0)
002DAC  C1C1              1601+          DC    C'AA'
                          1602+          ALIGN WORD
002DAE  196E              1603+          DC     AL2(PARMARA)
                          1604 N00121    $FIXT FT=(F00033),GTO=((7A70,C))
002DB0  0101              1605+N00121    DC    A(@FIXT)
002DB2  2DFE              1606+          DC    A(F00033)
                          1607 N00122    $FIXT FT=(F00082),GTO=((7A76,R))
002DB4  0101              1608+N00122    DC    A(@FIXT)
002DB6  2E24              1609+          DC    A(F00082)
                          1610 N00123    $FIXT FT=(F00082),GTO=((7A76,R))
002DB8  0101              1611+N00123    DC    A(@FIXT)
002DBA  2E24              1612+          DC    A(F00082)
                          1613 N00124    $FIXT FT=(F00082),GTO=((7A76,R))
002DBC  0101              1614+N00124    DC    A(@FIXT)
002DBE  2E24              1615+          DC    A(F00082)
002DC0  0000              1616           DC    AL2(DUMMY)
002DC2                    1617 ENTPT     EQU   *
                          1618 ********************************************************************
                          1619 ********************************************************************
                          1620 **                                                                **
                          1621 **                    ENTRY POINT TABLE                           **
                          1622 **                                                                **
                          1623 ********************************************************************
                          1624 ********************************************************************
                          1625           ENTPT EP=G,STEP=00001
002DC2  C740              1626+          DC    CL2'G'
002DC4  26F4              1627+          DC    A(N00001)
                          1628           ENTPT EP=H,STEP=00020
002DC6  C840              1629+          DC    CL2'H'
002DC8  27F6              1630+          DC    A(N00020)
002DCA  0000              1631           DC    AL2(DUMMY)
                          1632 ********************************************************************
                          1633 ********************************************************************
                          1634 **                                                                **
                          1635 **                    MESSAGE TABLE                               **
                          1636 **                                                                **
                          1637 ********************************************************************
                          1638 ********************************************************************
002DCC                    1639 F00075    EQU   *
002DCC  0001              1640           DC    AL2(0001)
002DCE  0008              1641           DC    A(0008)
002DD0  D4C1D7F7C1F7F2C8  1642           DC    CL0008'MAP7A72H'
002DD8                    1643 F00052    EQU   *
002DD8  0001              1644           DC    AL2(0001)
002DDA  000A              1645           DC    A(0010)
002DDC  D4C1D7F7C1F7F060C 1646           DC    CL0010'MAP7A70-E '
002DE6                    1647 F00074    EQU   *
002DE6  0001              1648           DC    AL2(0001)
002DE8  0008              1649           DC    A(0008)
002DEA  D4C1D7F7C1F7F2C6  1650           DC    CL0008'MAP7A72F'
002DF2                    1651 F00077    EQU   *
002DF2  0001              1652           DC    AL2(0001)
002DF4  0008              1653           DC    A(0008)
002DF6  D4C1D7F7C1F7F6C1  1654           DC    CL0008'MAP7A76A'
002DFE                    1655 F00033    EQU   *
002DFE  0001              1656           DC    AL2(0001)
002E00  000A              1657           DC    A(0010)
002E02  D4C1D7F7C1F7F060C 1658           DC    CL0010'MAP7A70-C '
002E0C                    1659 F00078    EQU   *
002E0C  0001              1660           DC    AL2(0001)
002E0E  0008              1661           DC    A(0008)
002E10  D4C1D7F7C1F7F6C2  1662           DC    CL0008'MAP7A76B'
002E18                    1663 F00079    EQU   *
002E18  0001              1664           DC    AL2(0001)
002E1A  0008              1665           DC    A(0008)
002E1C  D4C1D7F7C1F7F6C3  1666           DC    CL0008'MAP7A76C'
002E24                    1667 F00082    EQU   *
002E24  0001              1668           DC    AL2(0001)
002E26  0008              1669           DC    A(0008)
002E28  D4C1D7F7C1F7F6D9  1670           DC    CL0008'MAP7A76R'
002E30                    1671 F00047    EQU   *
002E30  0001              1672           DC    AL2(0001)
002E32  000A              1673           DC    A(0010)
002E34  D4C1D7F7C1F7F060C 1674           DC    CL0010'MAP7A70-B '
002E3E                    1675 F00076    EQU   *
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT
002E3E  0001               1676          DC    AL2(0001)
002E40  0008               1677          DC    A(0008)
002E42  D4C1D7F7C1F7F2E4   1678          DC    CL0008'MAP7A72U'
002E4A                     1679 F00083   EQU   *
002E4A  0001               1680          DC    AL2(0001)
002E4C  0008               1681          DC    A(0008)
002E4E  D4C1D7F7C1F7F6E4   1682          DC    CL0008'MAP7A76U'
002E56                     1683 F00081   EQU   *
002E56  0001               1684          DC    AL2(0001)
002E58  0008               1685          DC    A(0008)
002E5A  D4C1D7F7C1F7F6D6   1686          DC    CL0008'MAP7A76O'
002E62                     1687 F00080   EQU   *
002E62  0001               1688          DC    AL2(0001)
002E64  0008               1689          DC    A(0008)
002E66  D4C1D7F7C1F7F6D2   1690          DC    CL0008'MAP7A76K'
                           1691          PDIT  00
002E6E  0000               1693+OPTN1 DC      X'0000'                    PROGRAM OPTION CONTROL WORD 1
                           1694+*
002E70  0000               1695+OPTN2 DC      X'0000'                    PROGRAM OPTION CONTROL WORD 2
                           1696+*                      BIT    HEX
000010                     1697+B48   EQU   16     0      8           PROBLEM PROGRAM CONTROL BITS
000011                     1698+B49   EQU   17     1      4           *
000012                     1699+B50   EQU   18     2      2           * THESE BITS ARE USED WITH THE
000013                     1700+B51   EQU   19     3      1           * SECOND OPTION WD   AND ARE TO
000014                     1701+B52   EQU   20     4      8           * BE ASSIGNED BY EACH PROGRAMMER
000015                     1702+B53   EQU   21     5      4           *
000016                     1703+B54   EQU   22     6      2           *
000017                     1704+B55   EQU   23     7      1           *
000018                     1705+B56   EQU   24     8      8           *
000019                     1706+B57   EQU   25     9      4           *
00001A                     1707+B58   EQU   26     10     2           *
00001B                     1708+B59   EQU   27     11     1           *
00001C                     1709+B60   EQU   28     12     8           *
00001D                     1710+B61   EQU   29     13     4           *
00001E                     1711+B62   EQU   30     14     2           *
00001F                     1712+B63   EQU   31     15     1           *
00001E                     1713+CH    EQU   30     14     2           CHARACTER SUPPLIED
00001F                     1714+CMP   EQU   31     15     1           COMPARE OPERATION
002E72  0000               1716+OPTN3 DC      X'0000'                    PROGRAM OPTION CONTROL WORD 3
                           1717+*
                           1718+*  0  MYSTERY INTERRUPT     MI        8  CS STATUS IN PROGRESS    CS
                           1719+*  1  ERROR INTERRUPT       ER        9  CS AVAILABLE             CSA
                           1720+*  2  EXPECTED INTERRUPT    XI       10  CS STATUS INTERRUPT ERR CE
                           1721+*  3  INTERRUPT RECEIVED    IN       11  ISB BITS ON (1-7)        ISBON
                           1722+*
                           1723+*  4  EXPECTED ERR/ATTENT   XE       12  TEST UNIT RESULTS VOID   NG
                           1724+*  5  HARD ERROR FOUND      HE       13  OIO CC ERROR             IOCC
                           1725+*  6  WRONG INTR LEVEL      $LE      14  NO INTERRUPT             NOIN
                           1726+*  7  NO INTR EXPECTED      NI       15  INTERRUPT CC ERROR       INCC
                           1727+*                      BIT    HEX
000020                     1728+MI    EQU   32     0      8           MYSTERY INTERRUPT HAPPENED
000021                     1729+ER    EQU   33     1      4           ERROR RECEIVED ON INTERRUPT
000022                     1730+XI    EQU   34     2      2           EXPECTED INTERRUPT CONTROL BIT
000023                     1731+IN    EQU   35     3      1           INTERRUPT RECEIVED CONTROL BIT
000024                     1732+XE    EQU   36     4      8           EXPECTED ERROR RESPONSE
000025                     1733+HE    EQU   37     5      4           HARD ERROR, 8 RETRIES
000026                     1734+$LE   EQU   38     6      2           INTERRUPT ON WRONG LEVEL ERROR
000027                     1735+NI    EQU   39     7      1           NO INTERRUPT EXPECTED E
000028                     1736+CS    EQU   40     8      8           CYCLE STATUS IN PROGRESS
000029                     1737+CSA   EQU   41     9      4           CYCLE STEAL AVAILABLE
00002A                     1738+CE    EQU   42     10     2           CYCLE STEAL STATUS INERRRUPT ERROR
00002B                     1739+ISBON EQU   43     11     1           ISB BITS ON (1-7)
00002C                     1740+NG    EQU   44     12     8           TEST UNIT RESULTS NO GOOD
00002D                     1741+IOCC  EQU   45     13     4           OIO CC ERROR
00002E                     1742+NOIN  EQU   46     14     2           NO INTERRUPT
00002F                     1743+INCC  EQU   47     15     1           INTERRUPT CC ERROR
                           1744+*
                           1745+*     COMMON BUFFER FOR PRINTING DATA
                           1746+*
002E74  0000               1748+$TUID DC    A(*-*)                     TEST UNIT IDENTIFICATION
002E76  0000               1749+$IOIN DC    A(*-*)                     I/O AND INTR CONDITION CODES
002E78  0000               1750+$ISB  DC    A(*-*)                     R7 - INTR STATUS BYTE & DEV ADRS
002E7A  0000               1751+LSTIO DC    A(*-*)                     ADRS OF LAST I/O + 4 BYTES
002E7C  0000               1752+DEV1  DC    A(*-*)                     DEVICE DEPENDENT DATA
002E7E  0000               1753+DEV2  DC    A(*-*)                     *
002E80  0000               1754+DEV3  DC    A(*-*)                     *
002E82  0000               1755+DEV4  DC    A(*-*)                     CS STATUS ERROR ISB & INTR CC
002E7C                     1756+SCTID EQU   DEV1                       READ ID BUFFER FOR IBIS & TERN
002E84                     1757+DCBUF EQU   *                          DCB BUFFER FOR LAST DCB USED
002E84  0000               1758+DCB1  DC    A(*-*)                     LAST DCB TABLE, CONTROL WORD
002E86  0000               1759+DCB2  DC    A(*-*)                     LAST DCB TABLE, DEV DEP WORD
002E88  0000               1760+DCB3  DC    A(*-*)                     LAST DCB TABLE, DEV DEP WORD
002E8A  0000               1761+DCB4  DC    A(*-*)                     LAST DCB TABLE, DEV DEP WORD
002E8C  0000               1762+DCB5  DC    A(*-*)                     LAST DCB TABLE, DEV DEP WORD
002E8E  0000               1763+DCB6  DC    A(*-*)                     LAST DCB TABLE, CHAIN ADRS
002E90  0000               1764+DCB7  DC    A(*-*)                     LAST DCB TABLE, BYTE COUNT
002E92  0000               1765+DCB8  DC    A(*-*)                     LAST DCB TABLE, BUFFER ADDRESS
                           1766+*
002E94                     1767+CSBUF EQU   *                          CYCLE STEAL DATA BUFFER
002E94  0000               1768+CSTL1 DC    A(*-*)                     CS STATUS WD 0, RESIDUAL ADDRESS
002E96  0000               1769+CSTL2 DC    A(*-*)                     CS STATUS WD 1, RESIDUAL COUNT
002E98  0000               1770+CSTL3 DC    A(*-*)                     CS STATUS WD 2, RETRY CNT WD 1
002E9A  0000               1771+CSTL4 DC    A(*-*)                     CS STATUS WD 3, RETRY CNT WD 2
002E9C  0000               1772+CSTL5 DC    A(*-*)                     CS STATUS WD 4, ERROR STATUS WD 1
002E9E  0000               1773+CSTL6 DC    A(*-*)                     CS STATUS WD 5, ERROR STATUS WD 2
002EA0  0000               1774+CSTL7 DC    A(*-*)                     CS STATUS WD 6, LAST DCB ADDRESS
002EA2  0000               1775+CSTL8 DC    A(*-*)                     CS STATUS WD 7, PREVIOUS HD/CYL
002EA4  0000               1776+CSTL9 DC    A(*-*)                     CS STATUS WD 8, CURRENT HD/CYL
002EA6  0000               1777+CST10 DC    A(*-*)                     CS STATUS WD 9, FLAG/SECTOR
002EA8  0000               1778+CST11 DC    A(*-*)                     CS STATUS WD 10, HEAD/CYLINDER
002EAA  0000               1779+CST12 DC    A(*-*)                     CS STATUS WD 11, DIAG BYTES 1, 2,
002EAC  0000               1780+CST13 DC    A(*-*)                     CS STATUS WD 12, AND 3 + WRAP BYTE
                           1781+*
002EAE  0000               1782+$SUBN DC    A(*-*)                     LAST SUBROUTINE ADDRESS USED
002EB0  00000000           1783+$DATA DC    2A(*-*)                    OPTIONAL DATA
002EB4  0021               1784+$INTL DC    X'0021'                    INTERRUPT LEVEL REQUESTED
002EB6  0000               1785+TURTN DC    A(*-*)                     TEST UNIT RETURN ADRS TO MDI
002EB8  00                 1786+$DVID DC    X'00'                      DEVICE ID
002EBA  19D0               1787+SVCAL DC    A(DEVADD)                  ADRS OF DEVICE ADDRESS
002EBC  0000               1788+          DC    A(*-*)                 IBIS CYLINDER ADDRESS
                           1789+*
                           1790+*     THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
                           1791+*     FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
                           1792+*     STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT
                           1793+*
002EBE  4020 2E74 7A02     1794+T7A02 MVWI  X'7A02',$TUID              SET UP TEST UNIT ID
002EC4  5700               1795+      BXS   (R7)                       RETURN TO MDI SUPVR
                           1797       COPY  COMEQU
                           1798 ********************************************************************
                           1799 *                                                                  *
                           1800 *                EQUATED NAMES FOR SUPPORTED SVC'S                 *
                           1801 *                                                                  *
                           1802 ********************************************************************
000000                     1803 OUT   EQU   0                           OUT SVC
000001                     1804 OUTIN EQU   1                           OUTIN SVC
000002                     1805 IDLE  EQU   2                           IDLE SVC
000003                     1806 IDLE5 EQU   3                           IDLE SVC - INDEPENDENT OF CPU TYPE
000004                     1807 CHNGE EQU   4                           CHANGE LEVEL SVC
000005                     1808 PGMCK EQU   5                           ALLOW RETURN ON PROGRAM CHECK SVC
000006                     1809 EXIT  EQU   6                           EXIT SVC
000007                     1810 TERM  EQU   7                           TERMINATE SVC
000008                     1811 RESET EQU   8                           RESET DEVICE SVC
000009                     1812 RID   EQU   9                           READ ID SVC
00000A                     1813 START EQU   10                          START CYCLE STEAL SVC
00000B                     1814 STCSS EQU   11                          START CYCLE STEAL STATUS SVC
00000C                     1815 PREP  EQU   12                          PREPARE DEVICE SVC
00000D                     1816 READ0 EQU   13                          READ WITH FUNCTION BIT 3 OFF SVC
00000E                     1817 READ1 EQU   14                          READ WITH FUNCTION BIT 3 ON SVC
00000F                     1818 RSTAT EQU   15                          READ STATUS SVC
000010                     1819 WRIT0 EQU   16                          WRITE WITH FUNCTION BIT 3 OFF SVC
000011                     1820 WRIT1 EQU   17                          WRITE WITH FUNCTION BIT 3 ON SVC
000012                     1821 CTRL  EQU   18                          CONTROL SVC
000013                     1822 RICB  EQU   19                          RELEASE INTERUPT CONTROL BLOCK SVC
000014                     1823 CICB  EQU   20                          CONNECT INTERUPT CONTROL BLOCK SVC
000015                     1824 HIO   EQU   21                          HALT ALL I/O
000016                     1825 REQSD EQU   22                          REQUEST USE OF DCP DISK SVC
000017                     1826 RELSD EQU   23                          RELEASE USE OF DCP DISK SVC
000018                     1827 HALT  EQU   24                          HALT SVC
000019                     1828 ATOH  EQU   25                          EBCDIC TO HEX SVC (STRING)
00001A                     1829 HTOE  EQU   26                          HEX TO EBCDIC SVC (STRING)
00001B                     1830 ATOH  EQU   27                          ASCII TO HEX SVC (STRING)
00001C                     1831 HTOA  EQU   28                          HEX TO ASCII SVC (STRING)
00001D                     1832 ETOA  EQU   29                          EBCDIC TO ASCII SVC (STRING)
00001E                     1833 ATOE  EQU   30                          ASCII TO EBCDIC SVC (STRING)
00001F                     1834 READI EQU   31                          READ DATA SETS FOR MDI/UTIL
000020                     1835 WRITI EQU   32                          WRITE DATA SETS FOR UTIL
                           1837 ********************************************************************
                           1838 *                                                                  *
                           1839 *                EQUATES USED BY TU'S AS CONSTANTS                 *
                           1840 *                                                                  *
                           1841 ********************************************************************
00004E                     1842 PLUS  EQU   C'+'                        PLUS CHAR
000060                     1843 MINUS EQU   C'-'                        MINUS CHAR
000000                     1845 ZERO  EQU   0
000001                     1846 ONE   EQU   1
000002                     1847 TWO   EQU   2
000003                     1848 THREE EQU   3
000004                     1849 FOUR  EQU   4
000005                     1850 FIVE  EQU   5
000006                     1851 SIX   EQU   6
000007                     1852 SEVEN EQU   7
000008                     1853 EIGHT EQU   8
000009                     1854 NINE  EQU   9
00000A                     1855 TEN   EQU   10
00000B                     1856 ELEVN EQU   11                                    11
00000C                     1857 TWELV EQU   12                                    12
00000D                     1858 THRTN EQU   13                                    13
00000F                     1859 FIVTN EQU   15                                    15
000010                     1860 SIXTN EQU   16                                    16
000020                     1861 THRY2 EQU   32                                    32
000040                     1862 SIXT4 EQU   64                                    64
000080                     1863 ONE28 EQU   128                                   128
000100                     1864 TWO56 EQU   256                                   256
000400                     1865 ONEK  EQU   1024                                  1024
000800                     1866 TWOK  EQU   2048                                  2048
000C00                     1867 THREK EQU   3072                                  3072
001000                     1868 FOURK EQU   4096                                  4096
FFFFFF                     1870 M1    EQU   -1                                    -1
FFFFFE                     1871 M2    EQU   -2                                    -2
FFFFFD                     1872 M3    EQU   -3                                    -3
FFFFFC                     1873 M4    EQU   -4                                    -4
                           1875 ********************************************************************
                           1876 *                                                                  *
                           1877 *     THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE     *
                           1878 *     BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.   *
                           1879 *                                                                  *
                           1880 ********************************************************************
000000                     1881 BS0   EQU   0
000001                     1882 BS1   EQU   1
000002                     1883 BS2   EQU   2
000003                     1884 BS3   EQU   3
000004                     1885 BS4   EQU   4
000005                     1886 BS5   EQU   5
000006                     1887 BS6   EQU   6
000007                     1888 BS7   EQU   7
000008                     1889 BS8   EQU   8
000009                     1890 BS9   EQU   9
00000A                     1891 BS10  EQU   10
00000B                     1892 BS11  EQU   11
00000C                     1893 BS12  EQU   12
00000D                     1894 BS13  EQU   13
00000E                     1895 BS14  EQU   14
00000F                     1896 BS15  EQU   15
                           1898       COPY  T7A00DCB              23JAN78
                           1899 ** (T7A00DCB)
                           1900 *
                           1901 ***************************************************4/28/77**********
                           1902 *
                           1903 *     DCB TABLES AND DC'S
                           1904 *
                           1905 ********************************************************************
                           1906 *
                           1907 ***** DIAGNOSTIC DCB   ********
002EC6  2008               1909 DGDCB DC    X'2008'                    DIAGNOSTIC DCB
002EC8  0000               1910       DC    A(*-*)                     FLAG / PHYSICAL SECTOR#
002ECA  0000               1911       DC    A(*-*)                     HEAD / CYLINDER#'S
002ECC  0000               1912       DC    X'0000'                    NOT USED
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
002ECE  2FA0             1913        DC    A(RSBA)                RSB ADDRESS
002ED0  0000             1914        DC    A(*-*)                 CHAINING ADDRESS
002ED2  0100             1915        DC    X'0100'                BYTE COUNT
002ED4  0000             1916        DC    A(*-*)                 DATA ADDRESS
                         1917 *
                         1918 ***** RECALIBRATE DCB  ********
                         1919 *
002ED6  0001             1920 CLDCB  DC    X'0001'                RECALIBRATE DCB
002ED8  0000000000000000 1921        DC    7A(*-*)
                         1922 *
                         1923 ***** WRITE SECTOR ID  ********
                         1924 *
002EE6  002D             1925 WSDCB  DC    X'002D'                WRITE SECTOR ID CNTL WORD
002EE8  0000             1926        DC    A(*-*)                 FLAG / PHYSICAL SECTOR#
002EEA  0000             1927        DC    A(*-*)                 HEAD / CYLINDER#'S
002EEC  0000             1928        DC    X'0000'                NOT USED
002EEE  2FA0             1929        DC    A(RSBA)                RSB ADDRESS
002EF0  0000             1930        DC    A(*-*)                 CHAIN ADDRESS
002EF2  0004             1931        DC    X'0004'                BYTE COUNT
002EF4  2F94             1932        DC    A(WRSID)               ADDR OF SECTOR ID DATA
                         1933 *
                         1934 ***** READ SECTOR ID DCB  *******
                         1935 *
002EF6  201C             1936 RSDCB  DC    X'201C'                READ SECTOR ID CNTL WORD
002EF8  0000             1937        DC    A(*-*)                 FLAG / PHYSICAL SECTOR#
002EFA  0000             1938        DC    X'0000'                HEAD / CYLINDER#'S
002EFC  0000             1939        DC    X'0000'                NOT USED
002EFE  2FA0             1940        DC    A(RSBA)                RSB ADDRESS
002F00  0000             1941        DC    A(*-*)                 CHAIN ADDRESS
002F02  0004             1942        DC    X'0004'                BYTE COUNT FOR READ SECTOR ID
002F04  2E7C             1943        DC    A(SCTID)               SECTOR ID DATA ADDRESS
                         1944 *
                         1945 ***** SEEK DCB  ********
                         1946 *
002F06  0000             1947 SKDCB  DC    X'0000'                SEEK DCB CONTROL WORD
002F08  0000             1948        DC    X'0000'                NOT USED
002F0A  0000             1949        DC    A(*-*)                 HEAD / CYLINDER#'S
002F0C  0000             1950        DC    X'0000'                NOT USED
002F0E  2FA0             1951        DC    A(RSBA)                RSB ADDRESS
002F10  0000             1952        DC    A(*-*)                 CHAIN ADDRESS
002F12  0000             1953        DC    X'0000'                NOT USED
002F14  0000             1954        DC    X'0000'                NOT USED
                         1955 *
                         1956 ***** CYCLE STEAL STATUS DCB  ********
                         1957 *
002F16  2000             1958 CSDCB  DC    X'2000'                CONTROL WORD
002F18  0000             1959        DC    F'0'                   NOT USED
002F1A  0000             1960        DC    F'0'                   NOT USED
002F1C  0000             1961        DC    F'0'                   NOT USED
002F1E  0000             1962        DC    F'0'                   NOT USED
002F20  0000             1963        DC    F'0'                   NOT USED
002F22  001A             1964        DC    X'001A'                13 WORDS OF STATUS
002F24  2E94             1965        DC    A(CSBUF)               ADDRESS OF CYCLE STEAL STATUS DATA
                         1966 *
                         1967 ***** WRITE DCB  **********
                         1968 *
002F26  0028             1969 WRDCB  DC    X'0028'                WRITE DATA DCB CNTL WORD
002F28  0000             1970        DC    A(*-*)                 FLAG / RECORD#
002F2A  0000             1971        DC    A(*-*)                 HEAD / CYLINDER#'S
002F2C  0000             1972        DC    A(*-*)                 SCAN / REPEAT COUNT
002F2E  2FA0             1973        DC    A(RSBA)                RSB ADDRESS
002F30  0000             1974        DC    A(*-*)                 CHAIN ADDRESS
002F32  0100             1975        DC    X'0100'                BYTE COUNT
002F34  0000             1976        DC    A(*-*)                 WRITE DATA ADDRESS
                         1977 *
                         1978 ***** VERIFY DCB   *******
                         1979 *
002F36  0019             1980 VRDCB  DC    X'0019'                CONTROL WORD
002F38  0000             1981        DC    A(*-*)                 FLAG / RECORD#
002F3A  0000             1982        DC    A(*-*)                 HEAD / CYLINDER#'S
002F3C  0000             1983        DC    A(*-*)                 SCAN / REPEAT COUNT
002F3E  2FA0             1984        DC    A(RSBA)                RSB ADDRESS
002F40  0000             1985        DC    A(*-*)                 CHAIN ADDRESS
002F42  0000             1986        DC    A(*-*)                 BYTE COUNT
002F44  0000             1987        DC    F'0'                   NOT USED
                         1988 *
                         1989 ***** READ DCB   *******
                         1990 *
002F46  2018             1991 RDDCB  DC    X'2018'                READ DCB CONTROL WORD
002F48  0000             1992        DC    A(*-*)                 FLAG / RECORD#
002F4A  0000             1993        DC    A(*-*)                 HEAD / CYLINDER#'S
002F4C  0000             1994        DC    A(*-*)                 SCAN / REPEAT COUNT
002F4E  2FA0             1995        DC    A(RSBA)                RSB ADDRESS
002F50  0000             1996        DC    A(*-*)                 CHAIN ADDRESS
002F52  0100             1997        DC    X'0100'                BYTE COUNT
002F54  0000             1998        DC    A(*-*)                 READ DATA ADDRESS
                         1999 *
                         2000 ****  WRITE SECTOR ID SKEWED    ****
                         2001 *
002F56  002F             2002 WKDCB  DC    X'002F'                CONTROL WORD
002F58  0000             2003        DC    A(*-*)                 FLAG / PHYSICAL SECTOR#
002F5A  0000             2004        DC    A(*-*)                 HEAD / CYLINDER#'S
002F5C  0000             2005        DC    F'0'                   NOT USED
002F5E  2FA0             2006        DC    A(RSBA)                RSB ADDRESS
002F60  0000             2007        DC    A(*-*)                 CHAIN ADDRESS
002F62  0004             2008        DC    X'0004'                BYTE COUNT
002F64  2F94             2009        DC    A(WRSID)               ADDR OF SECTOR ID DATA
                         2010 *
                         2011 ****  READ SECTOR ID SKEWED    ****
                         2012 *
002F66  201D             2013 RKDCB  DC    X'201D'                CONTROL WORD
002F68  0000             2014        DC    A(*-*)                 FLAG / PHYSICAL SECTOR#
002F6A  0000             2015        DC    A(*-*)                 HEAD / CYLINDER#'S
002F6C  0000             2016        DC    F'0'                   NOT USED
002F6E  2FA0             2017        DC    A(RSBA)                RSB ADDRESS
002F70  0000             2018        DC    A(*-*)                 CHAIN ADDRESS
002F72  0004             2019        DC    X'0004'                BYTE COUNT
002F74  2E7C             2020        DC    A(SCTID)               SECTOR ID DATA ADDRESS
                         2021 *
                         2022 ****  READ MULTIPLE SECTOR IDS     ****
                         2023 *
002F76  201C             2024 RMDCB  DC    X'201C'                CONTROL WORD
002F78  0000             2025        DC    A(*-*)                 FLAG / PHYSICAL SECTOR#
002F7A  0000             2026        DC    A(*-*)                 HEAD / CYLINDER#'S
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
002F7C  0000             2027        DC    F'0'                   NOT USED
002F7E  2FA0             2028        DC    A(RSBA)                RSB ADDRESS
002F80  0000             2029        DC    A(*-*)                 CHAIN ADDRESS
002F82  0084             2030        DC    X'0084'                BYTE COUNT
002F84  2FB0             2031        DC    A(ID00)                DATA AREA ADDRESS
                         2032 *
                         2033 *     CONSTANTS AND DEFINED STORAGE  LOCATIONS
002F86  0000             2034 ZER00  DC    X'0000'                CONSTANT ZERO
002F88  0001             2035 ONE1   DC    X'0001'                CONSTANT ONE
002F8A  0000             2036 RAY    DC    A(*-*)                 WRITE PARAMETER POINTER
002F8C  EB6D             2037 WDATA  DC    X'EB6D'                WRITE DATA
002F8E  6BDB             2038        DC    X'6BDB'                *
002F90  0000             2039 LGSEC  DC    X'0000'                LOGICAL SECTOR #
002F92  0000             2040 PHYSC  DC    X'0000'                CONVERTED PHYSICAL SEC #
002F94  0000             2041 WRSID  DC    X'0000'                FLAG,SECTOR    (WRT SECTOR ID DATA)
002F96  0000             2042        DC    X'0000'                HEAD,CYLINDER
002F98  FF34             2043 WSIDT  DC    X'FF34'                WRITE SECTOR ID TEST DATA
002F9A  5678             2044        DC    X'5678'                *
002F9C  0000             2045 SCTST  DC    X'0000'                READ SECTOR ID TEST DATA BUFFER
002F9E  0000             2046        DC    X'0000'
002FA0  00000000000000000 2047 RSBA   DC    6A(*-*)                RESIDUAL STATUS BLOCK
002FAC  0000             2048 CTR02  DC    X'0000'                COUNTER
002FAE  0000             2049 CTR03  DC    X'0000'                COUNTER
002FB0  0000             2050 ID00   DC    X'0000'                ID ADDRESS TO BE SET BY USER
002FB2  1010             2051 PDATA  DC    X'1010'                WRITE DIAG WORD 1 DATA PATTERNS
002FB4  5555             2052        DC    X'5555'                *
002FB6  AAAA             2053        DC    X'AAAA'                *
002FB8  FFFF             2054        DC    X'FFFF'                *
                         2055 *
                         2056 ****************************4/06/77**********************************
                         2057 *
                         2058 *  SUBROUTINE
                         2059 *
                         2060 *     PURPOSE
                         2061 *
                         2062 *          COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
                         2063 *
                         2064 *     CALLING SEQUENCE
                         2065 *
                         2066 *          BAL  CMPRW,R6          (NORMAL)
                         2067 *
                         2068 *     RETURN
                         2069 *
                         2070 *          BXS (R6,2)     -   NORMAL
                         2071 *
                         2072 *
                         2073 ************************************************************************
                         2074 *
002FBA  4724 0004        2075 CMPRW  MVWI   4,R7                   COMPARE BYTE COUNT
002FBE  4324 2E7C        2076        MVA    SCTID,R3               ADDR OF RD SEC ID DATA
002FC2  4524 2F94        2077        MVA    WRSID,R5               ADDR OF WR SEC ID DATA
002FC6  2BA6             2078        CFNEN  (R3),(R5)              COMPARE ID DATA
002FC8  68C0 0002        2079        BE     (R6,2)                 BCH IF WRITE ID DATA OK
002FCC  68D2 0000        2080        B      (R6)*                  COMPARE ERROR
                         2082 ************************************************************************
                         2083 *
                         2084 *     EXECUTE INPUT & OUTPUT COMMANDS
                         2085 *     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                         2086 *     EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
                         2087 *     LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
                         2088 *     SUPVR CALL.
                         2089 *
                         2090 *     THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
                         2091 *
                         2092 *     1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
                         2093 *     2. ERROR INTERRUPTS RECEIVED FROM SUPVR
                         2094 *
                         2095 *     THIS ROUTINE HAS THE FOLLOWING ENTRIES:
                         2096 *
                         2097 *  1  BAL   $RKEW,R6              READ SECTOR ID SKEWED
                         2098 *
                         2099 *  2  BAL   $WKEW,R6              WRITE SECTOR ID SKEWED
                         2100 *
                         2101 *  3  BAL   $WSEC,R6              WRITE SECTOR ID
                         2102 *
                         2103 *  4  BAL   $DIAG,R6              DIAGNOSTIC
                         2104 *
                         2105 *  5  BAL   XIOCS,R6              CYCLE STEAL STATUS
                         2106 *
                         2107 *  6  BAL   $SEEK,R6              SEEK
                         2108 *
                         2109 *  7  BAL   $RECL,R6              RECALIBRATE
                         2110 *
                         2111 *  8  BAL   $RDID,R6              READ SECTOR ID
                         2112 *
                         2113 *  9  BAL   $RD,R6                READ
                         2114 *
                         2115 *  10 BAL   $RDVY,R6              READ VERIFY
                         2116 *
                         2117 *  11 BAL   $WRT,R6               WRITE
                         2118 *
                         2119 *  12 BAL   $RDIM,R6              READ MULTI SECTOR IDS
                         2120 *
                         2121 ************************************************************************
                         2122 *
002FD0  4020 31E8 2F06   2123 $SEEK MVA    SKDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
002FD6  507F             2124        J      XIO
                         2125 *
002FD8  4020 31E8 2ED6   2126 $RECL MVA    CLDCB,IODCB            SET UP BLOCK FOR SVC CALL
002FDE  507B             2127        J      XIO
                         2128 *
002FE0  4020 31E8 2EF6   2129 $RDID MVA    RSDCB,IODCB            SET UP BLOCK FOR SVC CALL
002FE6  0BBB             2130        MVBI   X'BB',R3               SET BUFFER TO B'S
002FE8  4524 2E7C        2131        MVA    SCTID,R5               SETUP READ SECTOR ID BUFFER ADRS
002FEC  4724 0004        2132        MVWI   4,R7                   SETUP BUFFER LENGTH
002FF0  2BAC             2133        FFN    R3,(R5)                INIT READ SECTOR ID BUFFER
002FF2  4020 2F04 2E7C   2134        MVA    SCTID,RSDCB+14         DATA ADDR
002FF8  506E             2135        J      XIO
                         2136 *
002FFA  4020 31E8 2F76   2137 $RDIM MVA    RMDCB,IODCB            SET UP CONTROL BLOCK FOR SVC CALL
003000  4724 0084        2138        MVWI   132,R7                 SET BUFFER LENGTH
003004  4524 2FB0        2139        MVA    ID00,R5                SET BUFFER ADDRESS
003008  0BBB             2140        MVBI   X'BB',R3               SET CLEAR CHARACTERS
00300A  2BAC             2141        FFN    R3,(R5)                CLEAR THE BUFFER
```

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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976

00300C  5064                2142        J     XIO
                            2143 *
00300E  0BFF                2144 $RD    MVBI  X'FF',R3             SETRD BUFFER TO ALL F'S
003010  6D08 2F54           2145        MVW   RDDCB+14,R5          SET UP READ BUFFER ADRS
003014  6F08 2F52           2146        MVW   RDDCB+12,R7          SET UP BUFFER LENGTH
003018  2BAC                2147        FFN   R3,(R5)              CLEAR READ BUFFER
00301A  4020 31E8 2F46      2148 $RD$   MVA   RDDCB,IODCB          SET UP BLOCK FOR SVC CALL
003020  505A                2149        J     XIO
                            2150 *
003022  4020 31E8 2F36      2151 $RDVY  MVA   VRDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
003028  5056                2152        J     XIO
                            2153 *
00302A  4020 31E8 2F26      2154 $WRT   MVA   WRDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
003030  5052                2155        J     XIO
                            2156 *
003032  4020 31E8 2F66      2157 $RKEW  MVA   RKDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003038  0BBB                2158        MVBI  X'BB',R3             SET BUFFER TO B'S
00303A  4524 2E7C           2159        MVA   SCTID,R5             SETUP READ SECTOR ID BUFFER ADRS
00303E  4724 0004           2160        MVWI  4,R7                 SETUP BUFFER LENGTH
003042  2BAC                2161        FFN   R3,(R5)              INIT READ SECTOR ID BUFFER
003044  4020 2F74 2E7C      2162        MVA   SCTID,RKDCB+14        DATA ADDR
00304A  5045                2163        J     XIO
                            2164 *
00304C  4020 31E8 2F56      2165 $WKEW  MVA   WKDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003052  4020 2F64 2F94      2166        MVA   WRSID,WKDCB+14       DATA ADDR
003058  503E                2167        J     XIO
                            2168 *
00305A  4020 31E8 2EE6      2169 $WSEC  MVA   WSDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
003060  4020 2EF4 2F94      2170        MVA   WRSID,WSDCB+14       DATA ADDR
003066  5037                2171        J     XIO
                            2172 *
003068  4020 31E8 2EC6      2173 $DIAG  MVA   DGDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
00306E  5033                2174        J     XIO
                            2175 *
003070  6E0D 2E7A           2176 $WRTO  MVW   R6,LSTIO             SAVE IAR FOR RETRY IF REQUESTED
003074  0BFF                2177        MVBI  255,R3               CLEAR CYCLE STATUS BUFFER
003076  4524 2E94           2178        MVA   CSBUF,R5             *  TO ALL ONES  *
00307A  0F16                2179        MVBI  22,R7                *
00307C  2BAC                2180        FFN   R3,(R5)              *
00307E  4524 2E84           2181        MVA   DCBUF,R5             CLEAR DCB BUFFER TO ALL ONES
003082  0F10                2182        MVBI  16,R7                *
003084  2BAC                2183        FFN   R3,(R5)              *
003086  4020 2E76 0708      2184        MVWI  X'0708',$IOIN        OVERLAY OLD CONDITION CODES
00308C  CB25 2E78           2185        MVWZ  $ISB,R3              ZERO OUT OLD ISB VALUE
003090  4CA3                2186        TBTR  (R4,IN)              CLEAR INTERRUPT RECEIVED CNTL BIT
003092  4CA1                2187        TBTR  (R4,ER)              RESET ANY ERROR BEFORE I/O COMMAND
003094  4C62                2188        TBTS  (R4,XI)              SET EXPECTED INTR CONTROL BIT
003096  4724 31E4           2189        MVA   IOBLK,R7             SET UP CONTROL BLK FOR SUPR
00309A  C020 31EB           2190        MVB   IOMOD+1,R0           GET IDCB FUNC/MODIFIER
00309E  402D 31EA 00F0      2191        RBTWI X'00F0',IOMOD        REMOVE FUNCTION FROM 'IOMOD'
0030A4  3022                2192        SRL   4,R0                 RIGHT JUSTIFY FUNCTION BITS IN R0
0030A6  F005                2193        CBI   5,R0                 IDCB FUNCTION = 5?
0030A8  1003                2194        JE    $WRT1                YES - ISSUE 'SVC  WRIT1'
0030AA  6010                2195        SVC   WRITO                ISSUE WRITE DPC '4X' OP
0030AC  6802 3130           2196        B     XIO8-4               GO WAIT FOR THE INTERRUPT
0030B0  6011                2197 $WRT1  SVC   WRIT1                ISSUE WRITE DPC '5X' OP
0030B2  6802 3130           2198        B     XIO8-4               GO WAIT FOR THE INTERRUPT
                            2199 *
0030B6  4020 31E8 2F26      2200 $DGWR  MVA   WRDCB,IODCB          SET UP CONTROL BLK FOR SVC CALL
0030BC  6802 30DC           2201        B     XIODG                ISSUE START CS DIAG CMD
                            2202 *
0030C0  4020 31E8 2F46      2203 $DGRD  MVA   RDDCB,IODCB          SET UP CONTROL BLK FOR SVC CALL
0030C6  6F08 2F52           2204        MVW   RDDCB+12,R7          GET NO. OF BYTES TO CLEAR
0030CA  6D08 2F54           2205        MVW   RDDCB+14,R5          ADDR OF READ BUFFER
0030CE  0BFF                2206        MVBI  X'FF',R3             CLEAR TO F'S
0030D0  2BAC                2207        FFN   R3,(R5)              *
0030D2  6802 30DC           2208        B     XIODG                ISSUE START CS DIAG CMD
                            2210        COPY  T7AXEQ               09MAR78
                            2211         PRINT OFF
                            2775        T7AXEQ
                            2776+*****************************************************29JUL76**
                            2777+*
                            2778+* SUB-ROUTINE
                            2779+*
                            2780+*     EXECUTE INPUT AND OUTPUT COMMANDS
                            2781+*
                            2782+* PURPOSE
                            2783+*
                            2784+*     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                            2785+*     THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
                            2786+*
                            2787+*        1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
                            2788+*           THE I/O COMMAND.
                            2789+*        2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
                            2790+*           ISSUED BY THIS SUBROUTINE.
                            2791+*        3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
                            2792+*           START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
                            2793+*        4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
                            2794+*           SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
                            2795+*           MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
                            2796+*        5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
                            2797+*           EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC  START'.
                            2798+*        6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
                            2799+*           STARTS TO DETERMINE A LOST INTERRUPT.
                            2800+*        7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
                            2801+*           WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
                            2802+*        8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
                            2803+*        9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
                            2804+*       10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
                            2805+*       11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
                            2806+*       12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
                            2807+*           ISSUED BY THIS SUBROUTINE.
                            2808+*       13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
                            2809+*           CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
                            2810+*           COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
                            2811+*
                            2812+* CALLING SEQUENCE
                            2813+*
                            2814+*     THIS ROUTINE HAS THE FOLLOWING ENTRIES:
                            2815+*
                            2816+* --> BAL   XIO        OR          XEQ ANY CYCLE STEAL COMMAND, MOD=0
                            2817+* --> BAL   XIO1                   MOD PARM PRELOADED IN 'IOMOD'
                            2818+* --> BAL   XIOCS,R6   OR          XEQ START CYCLE STEAL STATUS, MOD=F
                            2819+* --> BAL   XIOCS-4,R6            AUTO CS STATUS (FOLLOWING OTHER XIO
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976

                            2820+*        .                          AND DOES NOT POST INTERRUPT STATUS)
                            2821+*
                            2822+* RETURN CONTROL
                            2823+*
                            2824+*        BXS    (R6,2)              RETURN TO USER NO ERROR
                            2825+* OR     B      (R6)*               RETURN AND RETRY ON ERROR
                            2826+*****************************************************************
0030D6  CB25 31EA           2828+XIO    MVWZ  IOMOD,R3              SET MOF OF 0 FOR CYCLE STEAL OP
0030DA  500E                2829+       J     XIO1                  CS I/O'S ARE NOT RETRIED
                            2830+*
0030DC  4020 31EA 000D      2831+XIODG  MVWI  X'000D',IOMOD           SET MODIFIER FOR DIAGNOSTIC OPS
0030E2  500A                2832+       J     XIO1                  GO TO CS OPS
                            2833+*
0030E4  4CAA                2834+       TBTR  (R4,CE)               RESET CS STATUS INTER ERROR INDICAT.
0030E6  4C68                2835+       TBTS  (R4,CS)               SET 'CYCLE STEAL STATUS' IN PROGRESS
0030E8  4020 31E8 2F16      2836+XIOCS  MVA   CSDCB,IODCB           SET UP CONTROL BLOCK FOR SVC CALL
0030EE  4020 31EA 000F      2837+       MVWI  X'000F',IOMOD         SET CYCLE STEAL MODIFIER
0030F4  4C28                2838+       TBT   (R4,CS)               IS CS IN PROGRESS, ERROR CONDITION
0030F6  1213                2839+       JON   XIO2                  * YES, BYPASS SAVING I/O ADRS
0030F8  6E0D 2E7A           2840+XIO1   MVW   R6,LSTIO              SAVE IAR FOR RETRY IF REQUESTED
0030FC  4324 2E84           2841+       MVA   DCBUF,R3              SET UP TO ADRS TO MOVE DCB TABLE
003100  6D08 31E8           2842+       MVW   IODCB,R5              * AND THE FROM ADRS, ALONG WITH
003104  0F1A                2843+       MVBI  26,R7                 * THE NUMBER OF MOVES
003106  2D64                2844+       MVFN  (R5),(R3)             MOVE 1 STATUS WORD AND ADJUST
003108  0BFF                2845+       MVBI  255,R3                CLEAR CYCLE STATUS BUFFER
00310A  4524 2E94           2846+       MVA   CSBUF,R5              *  TO ALL ONES  *
00310E  0F1A                2847+       MVBI  26,R7                 *
003110  2BAC                2848+       FFN   R3,(R5)               *
003112  4020 2E76 0708      2849+       MVWI  X'0708',$IOIN         OVERLAY OLD CONDITION CODES
003118  CB25 2E78           2850+       MVWZ  $ISB,R3               ZERO OUT OLD ISB VALUE
                            2851+*
00311C  4CA1                2852+       TBTR  (R4,ER)               RESET ANY ERROR BEFORE I/O COMMAND
00311E  4CA3                2853+XIO2   TBTR  (R4,IN)               CLEAR INTERRUPT RECEIVED CNTL BIT
003120  4724 31E4           2854+       MVA   IOBLK,R7              SET UP CONTROL BLOCK FOR SUPVR
003124  4CA6                2855+       TBTR  (R4,$LE)              RESET LEVEL ERROR INDICATOR
003126  4C62                2856+       TBTS  (R4,XI)               SET EXPECTED INTR CONTROL BIT
003128  600A                2857+       SVC   START                 CALL SUPVR FOR I/O COMMAND
                            2858+*
00312A  4CA7                2859+       TBTR  (R4,NI)               IS AN INTR EXPECTED
00312C  6AC0 0002           2860+       BN    (R6,2)                * NO, RETURN TO USER
                            2861+*
                            2862+*           THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
                            2863+*
003130  4524 0000           2864+       MVWI  0,R5                  SET UP WORK REG FOR 'LOST INTR'
003134  4CA3                2865+XIO8   TBTR  (R4,IN)               HAS INTERRUPT BEEN RECEIVED
003136  1239                2866+       JNZ   XR4,ER                * YES, CHECK IF ALL WAS SATISFACTORY
003138  6002                2867+       SVC   IDLE                  ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                            2868+*                                  SUPVR WILL RETURN HERE
00313A  6002                2869+       SVC   IDLE                  ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                            2870+*                                  SUPVR WILL RETURN HERE
00313C  7DA1 0001           2871+       AWI   1,R5                  ADVANCE TIME OUT COUNT
003140  18F9                2872+       JNZ   XIO8                  BCH IF TIME OUT NOT REACHED
003142  4C61                2873+       TBTS  (R4,ER)               SET ON ERROR CONTROL BIT
003144  68D2 0000           2874+       B     (R6)*                 ERR 'NO INTERRUPT'
                            2876+*****************************************************03FEB76**
                            2877+*
                            2878+* SUBROUTINE
                            2879+*
                            2880+*     I/O EXECUTE ERROR HANDLING ROUTINE
                            2881+*
                            2882+* PURPOSE
                            2883+*
                            2884+*     THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
                            2885+*     PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
                            2886+*     SUPERVISOR AND IT WAS NOT ACCEPTED.
                            2887+*
                            2888+* CALLING SEQUENCE
                            2889+*
                            2890+*     SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
                            2891+*
                            2892+* RETURN CONTROL
                            2893+*
                            2894+*     B      (R6)*                 RETURN TO USERS ERROR HANDLER
                            2895+*
                            2896+*****************************************************************
                            2897+*
                            2898+* CC        0= DEVICE NOT ATTACHED
                            2899+* FOR       1= DEVICE BUSY
                            2900+* I/O       2= DEVICE BUSY AFTER RESET
                            2901+*           3= COMMAND REJECT
                            2902+*           4= INTERVENTION REQUIRED
                            2903+*           5= INTERFACE DATA CHECK
                            2904+*           6= CONTROLLER BUSY
                            2905+*           7= I/O COMMAND EXCEPTED
                            2906+*
003148  706E                2907+XIOER CPLSR R3                       COPY STATUS ANY LEVEL INTO R3
00314A  336A                2908+      SRL   13,R3                    POSITION CC CODE TO BITS 13-15
00314C  C328 2E76           2909+      MVB   R3,$IOIN                 * PUT IN LOG OUT AREA
003150  68D2 0000           2910+      B     (R6)*                    RETURN TO USER ERROR HANDLER
                            2912+*****************************************************14APR76**
                            2913+*                                                                IL
                            2914+* SUB-ROUTINE                                                    IL
                            2915+*                                                                IL
                            2916+*     ERROR INTERRUPT             RUNS ON INTERRUPT LEVEL '$INTL'  IL
                            2917+*                                                                IL
                            2918+* PURPOSE                                                       IL
                            2919+*                                                                IL
                            2920+*     THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR IL
                            2921+*     OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE   IL
                            2922+*     EXPECTED CODE.                                             IL
                            2923+*                                                                IL
                            2924+* CALLING SEQUENCE                                              IL
                            2925+*                                                                IL
                            2926+*     SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT   IL
                            2927+*                                                                IL
                            2928+* RETURN CONTROL                                                IL
                            2929+*                                                                IL
                            2930+*     SVC    EXIT                 RETURN TO USER VIA SUPVR       IL
                            2931+*                                                                IL
                            2932+*****************************************************************IL
                            2933+*                                                                IL
                            2934+* CC        0= CONTROLLER END              ISB   0= ADD STATUS   IL
                            2935+* FOR       1= PROGRAM CONTROL INTERRUPT   BITS  1= COMD REJECT  IL
                            2936+* INTR      2= EXCEPTION INTERRUPT         FOR   2= INCOR LENGTH IL
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                COPYRIGHT IBM CORP 1976

                           2937+*          3= DEVICE END INTERRUPT          INTR  3= DCB SPEC CK    IL
                           2938+*          4= ATTENTION INTERRUPT                 4= STG DATA CK    IL
                           2939+*          5= ATTENTION / PROGRAM CNTL INTR       5= INV STG ADRS   IL
                           2940+*          6= ATTENTION / EXCEPTION INTR          6= PROTRCT CK     IL
                           2941+*          7= ATTENTION / DEVICE END INTR         7= I-FACE DATA    IL
                           2942+*                                                                   IL
003154  706E               2943+INTER CPLSR R3                  COPY STATUS ANY LEVEL INTO R3       IL
003156  336A               2944+      SRL   13,R3               POSITION INDICATORS IN R3           IL
003158  4424  2E6E         2945+      MVA   OPTN1,R4            SET UP BASE ADRS                    IL
00315C  4C28               2946+      TBT   (R4,CS)             IS CS IN PROGRESS                   IL
00315E  1006               2947+      JOFF  INTES               * NO                                IL
003160  4C6A               2948+      TBTS  (R4,CE)             TURN ON CYCLE STEAL INTER ERROR     IL
003162  6F0D  2E82         2949+      MVW   R7,DEV4             SAVE CS ERR ISB VALUE, BITS 0-7     IL
003166  C328  2E83         2950+      MVB   R3,DEV4+1           * AND THE COND CODE                 IL
00316A  500A               2951+      J     INTR1                                                 IL
00316C  4C24               2952+INTES TBT   (R4,XE)             TEST  EXPECTED ATTEN / ERROR IND    IL
00316E  1002               2953+      JOFF  INTET               BCH  IF NOT EXPECTED                IL
003170  F304               2954+      CBI   4,R3                IS THIS AN 'ATTENTION' INTR          IL
003172  1006               2955+      JE    INTR1               * YES, BCH TO END INTR SEQUENCE      IL
003174  4C61               2956+INTET TBTS  (R4,ER)             SET ERROR ON I/O COMMAND CNTL BIT    IL
003176  5004               2957+      J     INTR1                                                   IL
                           2958+*                               THE ERROR INTERRUPT USES THE SAME   IL
                           2959+*                               ENDING SEQUENCE AS THE NORMAL INTP  IL
                           2961+*************************************************************14APR76IL
                           2962+*                                                                   IL
                           2963+* SOUBROUTINE                                                      IL
                           2964+*                                                                   IL
                           2965+*     OKAY  INTERRUPT           RUNS ON INTERRUPT LEVEL '$INTL'     IL
                           2966+*                                                                   IL
                           2967+* PURPOSE                                                         IL
                           2968+*                                                                   IL
                           2969+*     TO CHECK THE INTERRUPT AND CONTINUE THE TEST                  IL
                           2970+*                                                                   IL
                           2971+* CALLING SEQUENCE                                               IL
                           2972+*                                                                   IL
                           2973+*     SUPERVISOR WILL ENTER HERE  IF INTR CC IS AS REQUESTED       IL
                           2974+*     THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE       IL
                           2975+*     AFTER THE SPECIAL PART HAS BEEN COMPLETED  AND THE            IL
                           2976+*     COMMON SECTION IS HANDLED HERE.                               IL
                           2977+*                                                                   IL
                           2978+* RETURN CONTROL                                                  IL
                           2979+*                                                                   IL
                           2980+*     SVC   EXIT                RETURN TO USER VIA SUPVR            IL
                           2981+*                                                                   IL
                           2982+*************************************************************************IL
003178  706E               2983+INTOK CPLSR R3                  COPY STATUS ANY LEVEL INTO R3       IL
00317A  336A               2984+      SRL   13,R3               POSITION INDICATORS IN R3           IL
00317C  4424  2E6E         2985+      MVA   OPTN1,R4            SET UP BASE ADRS                    IL
003180  4C63               2986+INTR1 TBTS  (R4,IN)             SET  INTERRUPT RECEIVED             IL
003182  4C28               2987+      TBT   (R4,CS)             IS 'CS IN PROGRESS' ON              IL
003184  1204               2988+      JON   INTR2               * YES, BCH AROUND UPDATE            IL
003186  C328  2E77         2989+      MVB   R3,$IOIN+1          SAVE INTERRUPTING CC CODE           IL
00318A  6F0D  2E78         2990+      MVW   R7,$ISB             SAVE INTR STATUS AND DEV ADRS       IL
00318E                     2991+INTR2 EQU   *                                                     IL
                           2992+*     CPCL  R5                  CURRENT LEVEL COPIED BY DCP         IL
00318E  3521               2993+      SLL   4,R5                POSITION INTR LEVEL AND PUT         IL
003190  0501               2994+      ABI   1,R5                * IN 'I' BIT                        IL
003192  CD24  2EB4         2995+      CW    $INTL,R5            IS THIS THE CORRECT INTR LEVEL      IL
003196  1002               2996+      JE    INTR3               * YES, GO EXIT THIS LEVEL           IL
003198  4C66               2997+      TBTS  (R4,$LE)            SET INTR LEVEL ERROR CONTROL BIT    IL
00319A  4C61               2998+      TBTS  (R4,ER)             SET ERROR ON  I/O COMMAND CNTL BIT  IL
00319C  4CA2               2999+INTR3 TBTS  (R4,XI)             WAS INTERRUPT EXPECTED              IL
00319E  1204               3000+      JON   INTRX               * YES, EXIT OFF THIS INTR LEVEL     IL
0031A0  4C60               3001+      TBTS  (R4,MI)             * NO, SET MYSTERY INTR CONTROL BIT  IL
0031A2  F304               3002+      CBI   4,R3                ATTENTION INTERRUPT?                IL
0031A4  1001               3003+      JE    INTRX               YES                                 IL
0031A6  4C6C               3004+      TBTS  (R4,NG)             ERROR,UNEXPECTED INTERRUPT          IL
0031A8  6006               3005+INTRX SVC   EXIT                EXIT THIS LEVEL VIA SUPVR TO PGM    IL
                           3007+*************************************************************03FEB76**
                           3008+*
                           3009+*     THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
                           3010+*     HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
                           3011+*     RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
                           3012+*
                           3013+*
0031AA  4CA4               3014+XIOCK TBTR  (R4,XE)             WAS AN ERROR EXPECTED
0031AC  6AC0  0002         3015+      BN    (R6,2)             * YES, EXIT THIS ROUTINE
0031B0  4CA8               3016+      TBTR  (R4,CS)            WAS AUTO CS IN PROGRESS
0031B2  1006               3017+      JOFF  XIOCV              * NO, CONTINUE CHECKING
0031B4  4C2A               3018+      TBT   (R4,CE)            IS CS IN AN ERR CONDITION
0031B6  1002               3019+      JOFF  XIOCO              * NO, BCH
0031B8  68D2  0000         3020+      B     (R6)*              CS ERROR
0031BC  6C69               3021+XIOCO TBTS  (R4,CSA)            TURN ON CS STATS AVAIL FLAG
0031BE  5601               3022+      BXS   (R6,2)             GO TO USER
0031C0  4C21               3023+XIOCV TBT   (R4,ER)            WAS ERROR INTR CONTROL BIT ON
0031C2  100D               3024+      JOFF  XIOCX              * NO, EXIT THIS ROUTINE
                           3025+*
0031C4  C520  2E77         3026+      MVB   $IOIN+1,R5         GET LAST INTR CC CODE
0031C8  F502               3027+      CBI   2,R5               IS THIS CC=2
0031CA  1003               3028+      JE    XIOCQ              YES
0031CC  F506               3029+      CBI   6,3                IS THIS CC=6
0031CE  68D1  0000         3030+      BNE   (R6)*              * NO, BCH TO ERROR HANDLER
0031D2  C520  2E78         3031+XIOCQ MVB   $ISB,R5            GET LAST ISB DATA BYTE AND IF CS
0031D6  6A00  30E4         3032+      BN    XIOCS-4            * AVAILABLE, GO AND GET IT
0031DA  68D2  0000         3033+      B     (R6)*              ERROR
0031DE  CB25  2E72         3034+XIOCX MVWZ  OPTN3,R3           CLEAR OUT OPTION 3 CNTL BITS
0031E2  5601               3035+      BXS   (R6,2)             RETURN TO USER VIA REG 6
                           3036+*
                           3037+*          I/O   PARAMETER LIST
                           3038+*
0031E4  19D0               3039+IOBLK DC    A(DEVADD)          ADRS OF DEVICE ADRS
0031E6  3148               3040+      DC    A(XIOER)           ERROR ROUTINE ADRS
0031E8  0000               3041+IODCB DC    A(*-*)             DCB ADRS OR LEVEL & INTR
0031EA  0000               3042+IOMOD DC    A(*-*)             MODIFIER
0031EC  0000               3043+      DC    A(*-*)             ADRS OF LAST SVC CALL
0031EE  0000               3044+IORSP DC    A(*-*)             SECOND WORD OF LAST IDCB
                           3045+*
                           3046+*          INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
                           3047+*
0031F0  19D0               3048+INTBL DC    A(DEVADD)          ADRS OF DEVICE ADRS
0031F2  3178               3049+      DC    A(INTOK)           INTERRUPT OK RETURN ADRS
0031F4  3154               3050+      DC    A(INTER)           INTERRUPT ERROR ADRS
0031F6  0003               3051+INTCC DC    X'0003'            INTERRUPT CODE EXPECTED
                           3053+*************************************************************11MAY76**
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                COPYRIGHT IBM CORP 1976

                           3054+*
                           3055+* SUBROUTINE
                           3056+*
                           3057+*     CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
                           3058+*
                           3059+* PURPOSE
                           3060+*
                           3061+*     TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                           3062+*     PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
                           3063+*     TO INTERRUPT.
                           3064+*
                           3065+* CALLING SEQUENCE
                           3066+*
                           3067+*     THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                           3068+*
                           3069+* --> BAL   $CONC,R6               CLEAR DEV DEP STG AND CONNECT I/O BLK
                           3070+* --> BAL   $CONP,R6               PREPARE DEVICE ONLY, ALREADY CONNECT
                           3071+*
                           3072+* RETURN CONTROL
                           3073+*
                           3074+*     BXS   (R6,2)                RETURN TO USER VIA REG 6 IF OKAY
                           3075+* OR  B     (R6)*                 IF THE DEVICE COULD NOT BE CONNECTED
                           3076+*
                           3077+*************************************************************************
0031F8  0F06               3078+$CONC MVBI  6,R7                 NUMBER OF BYTE TO CLEAR
0031FA  0B00               3079+      MVBI  0,R3                 * AND THE DATA TO USE
0031FC  4524  2E7C         3080+      MVA   DEV1,R5              * ALONG WITH THE ADRS TO USE
003200  2BAC               3081+      FFN   R3,(R5)              *
003202  CB25  2E72         3082+      MVWZ  OPTN3,R3             CLEAR OLD CONTROLS FOR NEW ROUTINE
003206  4724  31F0         3083+      MVA   INTBL,R7             SET R7 TO CONTROL BLOCK AND
00320A  6014               3084+      SVC   CICB                 * CONNECT IT TO THIS DEVICE
00320C  6AD0  0000         3085+      BN    (R6)*                EPROR RETURN TO USER
                           3086+*
003210  8828  2EB4  31E8   3087+$CONP MVW   $INTL,IODCB           PUT IN LEVEL & INTR PARAMETER
003216  4724  31E4         3088+      MVA   IOBLK,R7             SET R7 TO CONTROL BLOCK TO PREPARE
00321A  4020  2E76  0708   3089+      MVWI  X'0708',$IOIN        INITIALIZE CONDITION CODE STORAGE
003220  CB25  2E78         3090+      MVWZ  $ISB,R3              * AND CLEAR OLD ISB VALUE
003224  6F0D  2E7A         3091+      MVW   R6,LSTIO             SET UP ADDRESS THAT STARTED LAST I/O
003228  600C               3092+      SVC   PREP                 * AND CALL ON SUPVR
00322A  5601               3093+      BXS   (R6,2)               RETURN TO USER
                           3095+*************************************************************06APR76**
                           3096+*
                           3097+* SUBROUTINE
                           3098+*
                           3099+*     DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
                           3100+*
                           3101+* PURPOSE
                           3102+*
                           3103+*     DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                           3104+*     SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
                           3105+*     BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
                           3106+*
                           3107+* CALLING SEQUENCE
                           3108+*
                           3109+*     THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                           3110+*
                           3111+* --> B     $ERR$                 SET 'NG' BIT AND CONVERT DATA TO LOG
                           3112+* --> B     $CONX                 RETURN TO MDI SUPERVISOR TO TEST STS
                           3113+*
                           3114+* RETURN CONTROL
                           3115+*
                           3116+*     B     TURTN*                RETURN TO MDI
                           3117+* OR  B     (R6)*                 IF THE DEVICE COULD NOT BE CONNECTED
                           3118+*
                           3119+*************************************************************************
322C  4020  1818  8000     3120+$ERR$  MVWI  X'8000',TUSTATUS     SET ON 'NO GOOD' STATUS BIT
3232  4724  33FC           3121+      MVA   HEBLK,R7             GET ADRS OF CONTROL BLOCK
3236  6A1A               3122+      SVC   HTOE                 CONVERT HEX TO EBC VIS DCP
3238  4020  188E  4040     3123+      MVWI  X'4040',TUWORK+116
323E  4020  1890  4040     3124+      MVWI  X'4040',TUWORK+118
3244  4020  1892  4040     3125+      MVWI  X'4040',TUWORK+120
324A  0D04                 3126+$PRNT  MVBI  4,R5
324C  4324  181A           3127+      MVA   TUWORK,R3            SET UP BUFFER STORAGE
3250  6B0D  33F4           3128+      MVW   R3,BUFPT
3254  4124  32D0           3129+      MVA   LINE1,R1
3258  0F04               3130+      MVBI  4,R7
325A  0E08               3131+      MVBI  8,R6
325C  2B24               3132+MVBUF  MVFN  (R3),(R1)
325E  0F04               3133+      MVBI  4,R7
3260  0A40               3134+      MVBI  X'40',R2
3262  C258               3135+      MVB   R2,(R1)+
3264  BEFB               3136+      JCT   MVBUF,R6
3266  0F08               3137+      MVBI  8,R6
3268  7921  002C         3138+      AWI   44,R1
326C  BDF7               3139+      JCT   MVBUF,R5
326E  4020  1802  F1F0     3140+      MVWI  PIDMSG10,PID+2
3274  4020  19B8  33FA     3141+      MVA   FAKETU,@DCADD1
327A  4020  19BA  33F6     3142+      MVA   DC2PT,@DCADD2
3280  402C  19C4  0080     3143+      OWI   BIT0080,SUPSTAT
3286  4324  2E74           3144+      MVA   $TUID,R3             SET UP BUFFER STORAGE
328A  6F13  18BA           3145+      BAL   TUMSGWTR*,R7         GO TO MESSAGE WRITER
                           3146+*
328E                       3147+$CONX  EQU   *
328E  C720  19D0           3148+      MVB   DEVADD,R7            GET DEVICE ADDRESS FROM MDI
3292  6013               3149+      SVC   RICB                 RELEASE INTERRUPT CONTROL BLOCK
3294  6812  2EB6           3150+      B     TURTN*               RETURN TO MDI SUPERVISOR
                           3151+*
3298  0009               3152+BEGIN  DC    A(0009)              NUMBER OF LINES TO PRINT
329A  0008               3153+      DC    A(0008)              LINE LENGTH = 8 CHAR
329C  5C5C40C1C2D6D9E3     3154+      DC    C'** ABORT'
32A4  0028               3155+      DC    A(0040)              LINE LENGTH = 40 CHAR
32A6  E3E4C9C440C9D6C9D    3156+      DC    C'TUID IOIN ISB  INST SECT  ID  DATA CSCC '
32CE  0028               3157+      DC    A(0040)              LINE LENGTH = 40 CHAR
32D0  40404040404040404    3158+LINE1  DC    C'                                        '
32F8  0028               3159+      DC    A(0040)              LINE LENGTH = 40 CHAR
32FA  C3D5E3D340C4C3C2F    3160+      DC    C'CNTL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS '
3322  0028               3161+      DC    A(0040)              LINE LENGTH = 40 CHAR
3324  40404040404040404    3162+LINE2  DC    C'                                        '
334C  0028               3163+      DC    A(0040)              LINE LENGTH = 40 CHAR
334E  C3E260F040C3E260F    3164+      DC    C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 '
3376  0028               3165+      DC    A(0040)              LINE LENGTH = 40 CHAR
3378  40404040404040404    3166+LINE3  DC    C'                                        '
33A0  0028               3167+      DC    A(0040)              LINE LENGTH = 40 CHAR
33A2  C3E260F840C3E260F    3168+      DC    C'CS-8 CS-9 CS-A CS-B CS-C                '
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 LOCTR   OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976

0033CA  0028                3169+          DC    A(0040)                LINE LENGTH = 40 CHAR
0033CC  40404040404040404   3170+LINE4     DC    C'
                            3171+*
0033F4  0000                3172+BUFPT     DC    A(*-*)
0033F6  3298                3173+DC2PT     DC    A(BEGIN)
0033F8  0101                3174+FIXTU     DC    X'0101'
0033FA  0101                3175+FAKETU    DC    X'0101'
00F1F0                      3176+PIDMSG10  EQU   X'F1F0'
000080                      3177+BIT0080   EQU   X'0080'
                            3178+*
                            3179+*       DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
                            3180+*
0033FC  003A                3181+HEBLK     DC    A(58)                  NUMBER OF BYTES TO CONVERT
0033FE  2E74                3182+          DC    A($TUID)               FROM ADRS
003400  181A                3183+          DC    A(TUWORK)              AND THE TO ADRS
                            3184           COPY  T7A10                  23JAN78
                            3185 T7A10 TUIT
                            3186+*************************************************************************06FEB76**
                            3187+*
                            3188+* TEST UNIT
                            3189+*
                            3190+*       ERROR HALT CODE/DIAG SENSE BYTE CHECK
                            3191+*
                            3192+* PURPOSE
                            3193+*
                            3194+*       TO MOVE THE ERROR HALT CODE, STATUS BYTE, AND DIAG BYTES 1,2 3
                            3195+*       TO THE TU RESULTS BUFFER (TURESUL).
                            3196+*       .
                            3197+*       MDI=$TUXX,T7A10,01,0708,EQ
                            3198+*       .
                            3199+*       TURESUL BIT(S) 0-7 ........ ERROR HALT CODE
                            3200+*                      8-15 ........ STATUS (SENSE) BYTE
                            3201+*                     16-23 ........ SINGLE SHOT BYTE 1 (5-HURSLEY)
                            3202+*                     24-31 ........ SINGLE SHOT BYTE 2 (6-HURSLEY)
                            3203+*                     32-39 ........ SINGLE SHOT BYTE 3 (7-HURSLEY)
                            3204+*                     48-55 ........ NOT USED
                            3205+*                     56-63 ........ MULTISAMPLE BYTE 1 (5-HURSLEY)
                            3206+*                     64-71 ........ MULTISAMPLE BYTE 2 (6-HURSLEY)
                            3207+*                     72-79 ........ MULTISAMPLE BYTE 3 (7-HURSLEY)
                            3208+*                     80-87 ........ WRAP BYTE
                            3209+*
                            3210+* CALLING SEQUENCE
                            3211+*
                            3212+          MVW   TUWORK,TURESUL         MOVE ERROR HALT CODE & STATUS BYTES
                            3213+          MVD   TUWORK+6,TURESUL+2     SINGLE SHOT BYTES 1, 2, AND 3
                            3214+          MVD   TUWORK+10,TURESUL+6    MULTISAMPLE BYTES 1, 2, AND 3
                            3215+*                                      AND WRAP BYTE
                            3216+* RETURN CONTROL
                            3217+*
                            3218+*         B     TURTN*                 RETURN TO MDI SUPERVISOR
                            3219+*
                            3220+*************************************************************************
003402  6F0D 2EB6           3221+T7A10     MVW   R7,TURTN               SAVE RETURN ADDRESS
003406  4020 2E74 7A10      3222+          MVWI  X'7A10',$TUID          SAVE TU ID FOR DISPLAY
00340C  4424 2E6E           3223+          MVA   OPTN1,R4               SET UP POINTER ADRS IN R4
003410  6E03 31F8           3224+          BAL   $CONC,R6               CLEAR DEV DEP STG AND CONNECT I/O BL
003414  322C                3225+          DC    A($ERR$)               ERROR ADRS FOR INVALID PREP
                            3226+*
003416  9028 181C 18D2      3227           MVD   TUWORK+2,TURESUL+10    MOVE ERROR WORDS 4,5
00341C  8028 1827 18CD      3228           MVB   TUWORK+13,TURESUL+5    MOVE WRAP CHECK RESULTS
                            3229           TXIT
003422  6802 328E           3230+          B     $CONX                  RETURN TO MDI CONTROLLER
                            3231+*************************************************************************
000000                      3233           END
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DECLARED  NAME      ATTRIBUTES AND REFERENCES
  3078    $CONC      ADDRESS. HEX LOCATION(000031F8) IN CSECT(I7A24   ) LENGTH(2)
                     3224
  3147    $CONX      ADDRESS. HEX LOCATION(0000328E) IN CSECT(I7A24   ) LENGTH(1)
                     3230
  3120    $ERR$      ADDRESS. HEX LOCATION(0000322C) IN CSECT(I7A24   ) LENGTH(6)
                     3225
  1784    $INTL      ADDRESS. HEX LOCATION(00002EB4) IN CSECT(I7A24   ) LENGTH(2)
                     2995  3087
  1749    $IOIN      ADDRESS. HEX LOCATION(00002E76) IN CSECT(I7A24   ) LENGTH(2)
                     2184  2849  2909  2989  3026  3089
  1750    $ISB       ADDRESS. HEX LOCATION(00002E78) IN CSECT(I7A24   ) LENGTH(2)
                     2185  2850  2990  3031  3090
  1734    $LE        ABSOLUTE. HEX VALUE(00000026)
                     2855  2997
  1748    $TUID      ADDRESS. HEX LOCATION(00002E74) IN CSECT(I7A24   ) LENGTH(2)
                     1794  3144  3182  3222
  2197    $WRT1      ADDRESS. HEX LOCATION(000030B0) IN CSECT(I7A24   ) LENGTH(2)
                     2194
   102    @DCADD1    ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7A24   ) LENGTH(1)
                     3141
   103    @DCADD2    ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7A24   ) LENGTH(1)
                     3142
    39    @FIXT      ABSOLUTE. HEX VALUE(00000101)
                      756   759   774   777   804   807   810   825   828
                      831   894   921   924   927   942   957   960  1023
                     1026  1041  1044  1047  1098  1101  1116  1131  1134
                     1173  1176  1179  1206  1233  1236  1239  1254  1257
                     1272  1275  1314  1317  1332  1347  1362  1377  1380
                     1395  1398  1425  1440  1443  1458  1461  1488  1503
                     1518  1521  1548  1551  1590  1605  1608  1611  1614
    45    @TUXX      ABSOLUTE. HEX VALUE(00000500)
                      696   708   720   732   744   762   780   792   813
                      834   846   858   870   882   897   909   930   945
                      963   975   987   999  1011  1029  1050  1062  1074
                     1086  1104  1119  1137  1149  1161  1182  1194  1209
                     1221  1242  1260  1278  1290  1302  1320  1335  1350
                     1365  1383  1401  1413  1428  1446  1464  1476  1491
                     1506  1524  1536  1554  1566  1578  1593
  3152    BEGIN      ADDRESS. HEX LOCATION(00003298) IN CSECT(I7A24   ) LENGTH(2)
                     3173
  3177    BIT0080    ABSOLUTE. HEX VALUE(00000080)
                     3143
  3172    BUFPT      ADDRESS. HEX LOCATION(000033F4) IN CSECT(I7A24   ) LENGTH(2)
                     3128
  1738    CE         ABSOLUTE. HEX VALUE(0000002A)
                     2834  2948  3018
  1823    CICB       ABSOLUTE. HEX VALUE(00000014)
                     3084
  1920    CLDCB      ADDRESS. HEX LOCATION(00002ED6) IN CSECT(I7A24   ) LENGTH(2)
                     2126
  1736    CS         ABSOLUTE. HEX VALUE(00000028)
                     2835  2838  2946  2987  3016
  1737    CSA        ABSOLUTE. HEX VALUE(00000029)
                     3021
  1767    CSBUF      ADDRESS. HEX LOCATION(00002E94) IN CSECT(I7A24   ) LENGTH(1)
                     1965  2178  2846
  1958    CSDCB      ADDRESS. HEX LOCATION(00002F16) IN CSECT(I7A24   ) LENGTH(2)
                     2836
  1757    DCBUF      ADDRESS. HEX LOCATION(00002E84) IN CSECT(I7A24   ) LENGTH(1)
                     2181  2841
  3173    DC2PT      ADDRESS. HEX LOCATION(000033F6) IN CSECT(I7A24   ) LENGTH(2)
                     3142
   105    DEVADD     ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7A24   ) LENGTH(1)
                     1787  3039  3048  3148
  1752    DEV1       ADDRESS. HEX LOCATION(00002E7C) IN CSECT(I7A24   ) LENGTH(2)
                     1756  3080
  1755    DEV4       ADDRESS. HEX LOCATION(00002E82) IN CSECT(I7A24   ) LENGTH(2)
                     2949  2950
  1909    DGDCB      ADDRESS. HEX LOCATION(00002EC6) IN CSECT(I7A24   ) LENGTH(2)
                     2173
    67    DUMMY      ABSOLUTE. HEX VALUE(00000000)
                      687  1616  1631
  1617    ENTPT      ADDRESS. HEX LOCATION(00002DC2) IN CSECT(I7A24   ) LENGTH(1)
                      198
    47    EQ         ABSOLUTE. HEX VALUE(00000000)
                     1426  1441
  1729    ER         ABSOLUTE. HEX VALUE(00000021)
                     2187  2852  2873  2956  2998  3023
  1809    EXIT       ABSOLUTE. HEX VALUE(00000006)
                     3005
  3175    FAKETU     ADDRESS. HEX LOCATION(000033FA) IN CSECT(I7A24   ) LENGTH(2)
                     3141
  1655    F00033     ADDRESS. HEX LOCATION(00002DFE) IN CSECT(I7A24   ) LENGTH(1)
                      826   925   928   958  1318  1459  1552  1591  1606
  1671    F00047     ADDRESS. HEX LOCATION(00002E30) IN CSECT(I7A24   ) LENGTH(1)
                     1024  1132  1174  1207  1240  1258  1396
  1643    F00052     ADDRESS. HEX LOCATION(00002DD8) IN CSECT(I7A24   ) LENGTH(1)
                      760   943  1444
  1647    F00074     ADDRESS. HEX LOCATION(00002DE6) IN CSECT(I7A24   ) LENGTH(1)
                      775   961  1027  1102  1117  1237  1255  1363  1381
                     1504  1519  1549
  1639    F00075     ADDRESS. HEX LOCATION(00002DCC) IN CSECT(I7A24   ) LENGTH(1)
                      757   805   811
  1675    F00076     ADDRESS. HEX LOCATION(00002E3E) IN CSECT(I7A24   ) LENGTH(1)
                     1042  1048  1276
  1651    F00077     ADDRESS. HEX LOCATION(00002DF2) IN CSECT(I7A24   ) LENGTH(1)
                      778   808
  1659    F00078     ADDRESS. HEX LOCATION(00002E0C) IN CSECT(I7A24   ) LENGTH(1)
                      829
  1663    F00079     ADDRESS. HEX LOCATION(00002E18) IN CSECT(I7A24   ) LENGTH(1)
                      832
  1687    F00080     ADDRESS. HEX LOCATION(00002E62) IN CSECT(I7A24   ) LENGTH(1)
                     1522
  1683    F00081     ADDRESS. HEX LOCATION(00002E56) IN CSECT(I7A24   ) LENGTH(1)
                     1099  1135  1180  1234  1348  1378  1399
  1667    F00082     ADDRESS. HEX LOCATION(00002E24) IN CSECT(I7A24   ) LENGTH(1)
                      895   922  1462  1489  1609  1612  1615
  1679    F00083     ADDRESS. HEX LOCATION(00002E4A) IN CSECT(I7A24   ) LENGTH(1)
                     1045  1177  1273  1315  1333
  3181    HEBLK      ADDRESS. HEX LOCATION(000033FC) IN CSECT(I7A24   ) LENGTH(2)
                     3121
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CROSS-REFERENCE LISTING

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DECLARED  NAME      ATTRIBUTES AND REFERENCES
   1829   HTOE       ABSOLUTE. HEX VALUE(0000001A)
                    3122
   1805   IDLE       ABSOLUTE. HEX VALUE(00000002)
                    2867  2869
   2050   ID00       ADDRESS. HEX LOCATION(00002FB0) IN CSECT(I7A24   ) LENGTH(2)
                    2031  2139
   1731   IN         ABSOLUTE. HEX VALUE(00000023)
                    2186  2853  2865  2986
   3048   INTBL      ADDRESS. HEX LOCATION(000031F0) IN CSECT(I7A24   ) LENGTH(2)
                    3083
   2943   INTER      ADDRESS. HEX LOCATION(00003154) IN CSECT(I7A24   ) LENGTH(2)
                    3050
   2952   INTES      ADDRESS. HEX LOCATION(0000316C) IN CSECT(I7A24   ) LENGTH(2)
                    2947
   2956   INTET      ADDRESS. HEX LOCATION(00003174) IN CSECT(I7A24   ) LENGTH(2)
                    2953
   2983   INTOK      ADDRESS. HEX LOCATION(00003178) IN CSECT(I7A24   ) LENGTH(2)
                    3049
   3005   INTRX      ADDRESS. HEX LOCATION(000031A8) IN CSECT(I7A24   ) LENGTH(2)
                    3000  3003
   2986   INTR1      ADDRESS. HEX LOCATION(00003180) IN CSECT(I7A24   ) LENGTH(2)
                    2951  2955  2957
   2991   INTR2      ADDRESS. HEX LOCATION(0000318E) IN CSECT(I7A24   ) LENGTH(1)
                    2988
   2999   INTR3      ADDRESS. HEX LOCATION(0000319C) IN CSECT(I7A24   ) LENGTH(2)
                    2996
   3039   IOBLK      ADDRESS. HEX LOCATION(000031E4) IN CSECT(I7A24   ) LENGTH(2)
                    2189  2854  3088
   3041   IODCB      ADDRESS. HEX LOCATION(000031E8) IN CSECT(I7A24   ) LENGTH(2)
                    2123  2126  2129  2137  2148  2151  2154  2157  2165
                    2169  2173  2200  2203  2836  2842  3087
   3042   IOMOD      ADDRESS. HEX LOCATION(000031EA) IN CSECT(I7A24   ) LENGTH(2)
                    2190  2191  2828  2831  2837
     37   I7A24      CSECT. START(00002500) LENGTH(3878) ESDID(1)
                      37
   3158   LINE1      ADDRESS. HEX LOCATION(000032D0) IN CSECT(I7A24   ) LENGTH(40)
                    3129
   1751   LSTIO      ADDRESS. HEX LOCATION(00002E7A) IN CSECT(I7A24   ) LENGTH(2)
                    2176  2840  3091
   1728   MI         ABSOLUTE. HEX VALUE(00000020)
                    3001
   3132   MVBUF      ADDRESS. HEX LOCATION(0000325C) IN CSECT(I7A24   ) LENGTH(2)
                    3136  3139
   1740   NG         ABSOLUTE. HEX VALUE(0000002C)
                    3004
   1735   NI         ABSOLUTE. HEX VALUE(00000027)
                    2859
    696   N00001     ADDRESS. HEX LOCATION(000026F4) IN CSECT(I7A24   ) LENGTH(2)
                     315  1627
    708   N00002     ADDRESS. HEX LOCATION(0000270C) IN CSECT(I7A24   ) LENGTH(2)
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    720   N00003     ADDRESS. HEX LOCATION(00002724) IN CSECT(I7A24   ) LENGTH(2)
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    732   N00004     ADDRESS. HEX LOCATION(0000273E) IN CSECT(I7A24   ) LENGTH(2)
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    744   N00005     ADDRESS. HEX LOCATION(00002758) IN CSECT(I7A24   ) LENGTH(2)
                    327
    756   N00006     ADDRESS. HEX LOCATION(00002770) IN CSECT(I7A24   ) LENGTH(2)
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    759   N00007     ADDRESS. HEX LOCATION(00002774) IN CSECT(I7A24   ) LENGTH(2)
                    333  745
    762   N00008     ADDRESS. HEX LOCATION(00002778) IN CSECT(I7A24   ) LENGTH(2)
                    336  733
    774   N00009     ADDRESS. HEX LOCATION(00002792) IN CSECT(I7A24   ) LENGTH(2)
                    339
    777   N00010     ADDRESS. HEX LOCATION(00002796) IN CSECT(I7A24   ) LENGTH(2)
                    342  763
    780   N00011     ADDRESS. HEX LOCATION(0000279A) IN CSECT(I7A24   ) LENGTH(2)
                    345  721
    792   N00012     ADDRESS. HEX LOCATION(000027B4) IN CSECT(I7A24   ) LENGTH(2)
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    804   N00013     ADDRESS. HEX LOCATION(000027CC) IN CSECT(I7A24   ) LENGTH(2)
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    807   N00014     ADDRESS. HEX LOCATION(000027D0) IN CSECT(I7A24   ) LENGTH(2)
                    354  793
    810   N00015     ADDRESS. HEX LOCATION(000027D4) IN CSECT(I7A24   ) LENGTH(2)
                    357  781
    813   N00016     ADDRESS. HEX LOCATION(000027D8) IN CSECT(I7A24   ) LENGTH(2)
                    360  709
    825   N00017     ADDRESS. HEX LOCATION(000027EA) IN CSECT(I7A24   ) LENGTH(2)
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    828   N00018     ADDRESS. HEX LOCATION(000027EE) IN CSECT(I7A24   ) LENGTH(2)
                    366  814
    831   N00019     ADDRESS. HEX LOCATION(000027F2) IN CSECT(I7A24   ) LENGTH(2)
                    369  697
    834   N00020     ADDRESS. HEX LOCATION(000027F6) IN CSECT(I7A24   ) LENGTH(2)
                    372  1630
    846   N00021     ADDRESS. HEX LOCATION(0000280E) IN CSECT(I7A24   ) LENGTH(2)
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    858   N00022     ADDRESS. HEX LOCATION(00002828) IN CSECT(I7A24   ) LENGTH(2)
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    870   N00023     ADDRESS. HEX LOCATION(00002840) IN CSECT(I7A24   ) LENGTH(2)
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    882   N00024     ADDRESS. HEX LOCATION(00002858) IN CSECT(I7A24   ) LENGTH(2)
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    894   N00025     ADDRESS. HEX LOCATION(00002870) IN CSECT(I7A24   ) LENGTH(2)
                    387
    897   N00026     ADDRESS. HEX LOCATION(00002874) IN CSECT(I7A24   ) LENGTH(2)
                    390  883
    909   N00027     ADDRESS. HEX LOCATION(0000288C) IN CSECT(I7A24   ) LENGTH(2)
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    921   N00028     ADDRESS. HEX LOCATION(000028A6) IN CSECT(I7A24   ) LENGTH(2)
                    396
    924   N00029     ADDRESS. HEX LOCATION(000028AA) IN CSECT(I7A24   ) LENGTH(2)
                    399  910
    927   N00030     ADDRESS. HEX LOCATION(000028AE) IN CSECT(I7A24   ) LENGTH(2)
                    402  898
    930   N00031     ADDRESS. HEX LOCATION(000028B2) IN CSECT(I7A24   ) LENGTH(2)
                    405  871
    942   N00032     ADDRESS. HEX LOCATION(000028CA) IN CSECT(I7A24   ) LENGTH(2)
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CROSS-REFERENCE LISTING

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DECLARED  NAME      ATTRIBUTES AND REFERENCES
    945   N00033     ADDRESS. HEX LOCATION(000028CE) IN CSECT(I7A24   ) LENGTH(2)
                    411  931
    957   N00034     ADDRESS. HEX LOCATION(000028E8) IN CSECT(I7A24   ) LENGTH(2)
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    960   N00035     ADDRESS. HEX LOCATION(000028EC) IN CSECT(I7A24   ) LENGTH(2)
                    417  946
    963   N00036     ADDRESS. HEX LOCATION(000028F0) IN CSECT(I7A24   ) LENGTH(2)
                    420  859
    975   N00037     ADDRESS. HEX LOCATION(00002908) IN CSECT(I7A24   ) LENGTH(2)
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    987   N00038     ADDRESS. HEX LOCATION(00002920) IN CSECT(I7A24   ) LENGTH(2)
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    999   N00039     ADDRESS. HEX LOCATION(0000293A) IN CSECT(I7A24   ) LENGTH(2)
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   1011   N00040     ADDRESS. HEX LOCATION(00002952) IN CSECT(I7A24   ) LENGTH(2)
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   1023   N00041     ADDRESS. HEX LOCATION(00002964) IN CSECT(I7A24   ) LENGTH(2)
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   1026   N00042     ADDRESS. HEX LOCATION(00002968) IN CSECT(I7A24   ) LENGTH(2)
                    438  1012
   1029   N00043     ADDRESS. HEX LOCATION(0000296C) IN CSECT(I7A24   ) LENGTH(2)
                    441  1000
   1041   N00044     ADDRESS. HEX LOCATION(00002984) IN CSECT(I7A24   ) LENGTH(2)
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   1044   N00045     ADDRESS. HEX LOCATION(00002988) IN CSECT(I7A24   ) LENGTH(2)
                    447  1030
   1047   N00046     ADDRESS. HEX LOCATION(0000298C) IN CSECT(I7A24   ) LENGTH(2)
                    450  988
   1050   N00047     ADDRESS. HEX LOCATION(00002990) IN CSECT(I7A24   ) LENGTH(2)
                    453  976
   1062   N00048     ADDRESS. HEX LOCATION(000029A8) IN CSECT(I7A24   ) LENGTH(2)
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   1074   N00049     ADDRESS. HEX LOCATION(000029C0) IN CSECT(I7A24   ) LENGTH(2)
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   1086   N00050     ADDRESS. HEX LOCATION(000029DA) IN CSECT(I7A24   ) LENGTH(2)
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   1098   N00051     ADDRESS. HEX LOCATION(000029F2) IN CSECT(I7A24   ) LENGTH(2)
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   1101   N00052     ADDRESS. HEX LOCATION(000029F6) IN CSECT(I7A24   ) LENGTH(2)
                    468  1087
   1104   N00053     ADDRESS. HEX LOCATION(000029FA) IN CSECT(I7A24   ) LENGTH(2)
                    471  1075
   1116   N00054     ADDRESS. HEX LOCATION(00002A14) IN CSECT(I7A24   ) LENGTH(2)
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   1119   N00055     ADDRESS. HEX LOCATION(00002A18) IN CSECT(I7A24   ) LENGTH(2)
                    477  1105
   1131   N00056     ADDRESS. HEX LOCATION(00002A30) IN CSECT(I7A24   ) LENGTH(2)
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   1134   N00057     ADDRESS. HEX LOCATION(00002A34) IN CSECT(I7A24   ) LENGTH(2)
                    483  1120
   1137   N00058     ADDRESS. HEX LOCATION(00002A38) IN CSECT(I7A24   ) LENGTH(2)
                    486  1063
   1149   N00059     ADDRESS. HEX LOCATION(00002A52) IN CSECT(I7A24   ) LENGTH(2)
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   1161   N00060     ADDRESS. HEX LOCATION(00002A6A) IN CSECT(I7A24   ) LENGTH(2)
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   1173   N00061     ADDRESS. HEX LOCATION(00002A82) IN CSECT(I7A24   ) LENGTH(2)
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   1176   N00062     ADDRESS. HEX LOCATION(00002A86) IN CSECT(I7A24   ) LENGTH(2)
                    498  1162
   1179   N00063     ADDRESS. HEX LOCATION(00002A8A) IN CSECT(I7A24   ) LENGTH(2)
                    501  1150
   1182   N00064     ADDRESS. HEX LOCATION(00002A8E) IN CSECT(I7A24   ) LENGTH(2)
                    504  1138
   1194   N00065     ADDRESS. HEX LOCATION(00002AA6) IN CSECT(I7A24   ) LENGTH(2)
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   1206   N00066     ADDRESS. HEX LOCATION(00002ABE) IN CSECT(I7A24   ) LENGTH(2)
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   1209   N00067     ADDRESS. HEX LOCATION(00002AC2) IN CSECT(I7A24   ) LENGTH(2)
                    513  1195
   1221   N00068     ADDRESS. HEX LOCATION(00002ADC) IN CSECT(I7A24   ) LENGTH(2)
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   1233   N00069     ADDRESS. HEX LOCATION(00002AF2) IN CSECT(I7A24   ) LENGTH(2)
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   1236   N00070     ADDRESS. HEX LOCATION(00002AF6) IN CSECT(I7A24   ) LENGTH(2)
                    522  1222
   1239   N00071     ADDRESS. HEX LOCATION(00002AFA) IN CSECT(I7A24   ) LENGTH(2)
                    525  1210
   1242   N00072     ADDRESS. HEX LOCATION(00002AFE) IN CSECT(I7A24   ) LENGTH(2)
                    528  1183
   1254   N00073     ADDRESS. HEX LOCATION(00002B18) IN CSECT(I7A24   ) LENGTH(2)
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   1257   N00074     ADDRESS. HEX LOCATION(00002B1C) IN CSECT(I7A24   ) LENGTH(2)
                    534  1243
   1260   N00075     ADDRESS. HEX LOCATION(00002B20) IN CSECT(I7A24   ) LENGTH(2)
                    537  1051
   1272   N00076     ADDRESS. HEX LOCATION(00002B3A) IN CSECT(I7A24   ) LENGTH(2)
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   1275   N00077     ADDRESS. HEX LOCATION(00002B3E) IN CSECT(I7A24   ) LENGTH(2)
                    543  1261
   1278   N00078     ADDRESS. HEX LOCATION(00002B42) IN CSECT(I7A24   ) LENGTH(2)
                    546  964
   1290   N00079     ADDRESS. HEX LOCATION(00002B5C) IN CSECT(I7A24   ) LENGTH(2)
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   1302   N00080     ADDRESS. HEX LOCATION(00002B74) IN CSECT(I7A24   ) LENGTH(2)
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   1314   N00081     ADDRESS. HEX LOCATION(00002B8C) IN CSECT(I7A24   ) LENGTH(2)
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   1317   N00082     ADDRESS. HEX LOCATION(00002B90) IN CSECT(I7A24   ) LENGTH(2)
                    558  1303
   1320   N00083     ADDRESS. HEX LOCATION(00002B94) IN CSECT(I7A24   ) LENGTH(2)
                    561  1291
   1332   N00084     ADDRESS. HEX LOCATION(00002BAE) IN CSECT(I7A24   ) LENGTH(2)
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   1335   N00085     ADDRESS. HEX LOCATION(00002BB2) IN CSECT(I7A24   ) LENGTH(2)
                    567  1321
   1347   N00086     ADDRESS. HEX LOCATION(00002BCA) IN CSECT(I7A24   ) LENGTH(2)
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   1350   N00087     ADDRESS. HEX LOCATION(00002BCE) IN CSECT(I7A24   ) LENGTH(2)
                    573  1336
   1362   N00088     ADDRESS. HEX LOCATION(00002BE6) IN CSECT(I7A24   ) LENGTH(2)
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