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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                             3       COPY  LOG7A51                ** 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 INCORPOFATED      ***               *
                            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  I7A51    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  2AD0               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
                           308 ********************************************************************************
                           309 ********************************************************************************
                           310 **                                                                            **
                           311 **                      STEP AND RULE ADDRESS TABLE                           **
                           312 **                                                                            **
                           313 ********************************************************************************
                           314 ********************************************************************************
002502  2690               315          DC    AL2(N00001)
002504  0001               316          DC    XL2'0001'
000001                     317 EQN00001 EQU       0001
002506  26AA               318          DC    AL2(N00002)
002508  0002               319          DC    XL2'0002'
000002                     320 EQN00002 EQU       0002
00250A  26C2               321          DC    AL2(N00003)
00250C  0003               322          DC    XL2'0003'
000003                     323 EQN00003 EQU       0003
00250E  26DA               324          DC    AL2(N00004)
002510  0004               325          DC    XL2'0004'
000004                     326 EQN00004 EQU       0004
002512  26F2               327          DC    AL2(N00005)
002514  0005               328          DC    XL2'0005'
000005                     329 EQN00005 EQU       0005
002516  26F6               330          DC    AL2(N00006)
002518  0006               331          DC    XL2'0006'
000006                     332 EQN00006 EQU       0006
00251A  270E               333          DC    AL2(N00007)
00251C  0007               334          DC    XL2'0007'
000007                     335 EQN00007 EQU       0007
00251E  2712               336          DC    AL2(N00008)
002520  0008               337          DC    XL2'0008'
000008                     338 EQN00008 EQU       0008
002522  2716               339          DC    AL2(N00009)
002524  0009               340          DC    XL2'0009'
000009                     341 EQN00009 EQU       0009
002526  271A               342          DC    AL2(N00010)
002528  0010               343          DC    XL2'0010'
00000A                     344 EQN00010 EQU       0010
00252A  271E               345          DC    AL2(N00011)
00252C  0011               346          DC    XL2'0011'
00000B                     347 EQN00011 EQU       0011
00252E  2722               348          DC    AL2(N00012)
002530  0012               349          DC    XL2'0012'
00000C                     350 EQN00012 EQU       0012
002532  2726               351          DC    AL2(N00013)
002534  0013               352          DC    XL2'0013'
00000D                     353 EQN00013 EQU       0013
002536  273E               354          DC    AL2(N00014)
002538  0014               355          DC    XL2'0014'
00000E                     356 EQN00014 EQU       0014
00253A  2758               357          DC    AL2(N00015)
00253C  0015               358          DC    XL2'0015'
00000F                     359 EQN00015 EQU       0015
00253E  2772               360          DC    AL2(N00016)
002540  0016               361          DC    XL2'0016'
000010                     362 EQN00016 EQU       0016
002542  278A               363          DC    AL2(N00017)
002544  0017               364          DC    XL2'0017'
000011                     365 EQN00017 EQU       0017
002546  2796               366          DC    AL2(N00018)
002548  0018               367          DC    XL2'0018'
000012                     368 EQN00018 EQU       0018
00254A  279A               369          DC    AL2(N00019)
00254C  0019               370          DC    XL2'0019'
000013                     371 EQN00019 EQU       0019
00254E  279E               372          DC    AL2(N00020)
002550  0020               373          DC    XL2'0020'
000014                     374 EQN00020 EQU       0020
002552  27A2               375          DC    AL2(N00021)
002554  0021               376          DC    XL2'0021'
000015                     377 EQN00021 EQU       0021
002556  27A6               378          DC    AL2(N00022)
002558  0022               379          DC    XL2'0022'
000016                     380 EQN00022 EQU       0022
00255A  27AA               381          DC    AL2(N00023)
00255C  0023               382          DC    XL2'0023'
000017                     383 EQN00023 EQU       0023
00255E  27AE               384          DC    AL2(N00024)
002560  0024               385          DC    XL2'0024'
000018                     386 EQN00024 EQU       0024
002562  27C6               387          DC    AL2(N00025)
002564  0025               388          DC    XL2'0025'
000019                     389 EQN00025 EQU       0025
002566  27DE               390          DC    AL2(N00026)
002568  0026               391          DC    XL2'0026'
00001A                     392 EQN00026 EQU       0026
00256A  27E2               393          DC    AL2(N00027)
00256C  0027               394          DC    XL2'0027'
00001B                     395 EQN00027 EQU       0027
00256E  27E6               396          DC    AL2(N00028)
002570  0028               397          DC    XL2'0028'
00001C                     398 EQN00028 EQU       0028
002572  27EA               399          DC    AL2(N00029)
002574  0029               400          DC    XL2'0029'
00001D                     401 EQN00029 EQU       0029
002576  27EE               402          DC    AL2(N00030)
002578  0030               403          DC    XL2'0030'
00001E                     404 EQN00030 EQU       0030
00257A  27F2               405          DC    AL2(N00031)
00257C  0031               406          DC    XL2'0031'
00001F                     407 EQN00031 EQU       0031
00257E  27F6               408          DC    AL2(N00032)
002580  0032               409          DC    XL2'0032'
000020                     410 EQN00032 EQU       0032
002582  280E               411          DC    AL2(N00033)
002584  0033               412          DC    XL2'0033'
000021                     413 EQN00033 EQU       0033
002586  2812               414          DC    AL2(N00034)
002588  0034               415          DC    XL2'0034'
000022                     416 EQN00034 EQU       0034
00258A  2816               417          DC    AL2(N00035)
00258C  0035               418          DC    XL2'0035'
000023                     419 EQN00035 EQU       0035
00258E  281A               420          DC    AL2(N00036)
002590  0036               421          DC    XL2'0036'
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT
000024                     422 EQN00036 EQU       0036
002592  281E               423          DC    AL2(N00037)
002594  0037               424          DC    XL2'0037'
000025                     425 EQN00037 EQU       0037
002596  2822               426          DC    AL2(N00038)
002598  0038               427          DC    XL2'0038'
000026                     428 EQN00038 EQU       0038
00259A  283A               429          DC    AL2(N00039)
00259C  0039               430          DC    XL2'0039'
000027                     431 EQN00039 EQU       0039
00259E  283E               432          DC    AL2(N00040)
0025A0  0040               433          DC    XL2'0040'
000028                     434 EQN00040 EQU       0040
0025A2  2858               435          DC    AL2(N00041)
0025A4  0041               436          DC    XL2'0041'
000029                     437 EQN00041 EQU       0041
0025A6  2872               438          DC    AL2(N00042)
0025A8  0042               439          DC    XL2'0042'
00002A                     440 EQN00042 EQU       0042
0025AA  2876               441          DC    AL2(N00043)
0025AC  0043               442          DC    XL2'0043'
00002B                     443 EQN00043 EQU       0043
0025AE  288E               444          DC    AL2(N00044)
0025B0  0044               445          DC    XL2'0044'
00002C                     446 EQN00044 EQU       0044
0025B2  28A6               447          DC    AL2(N00045)
0025B4  0045               448          DC    XL2'0045'
00002D                     449 EQN00045 EQU       0045
0025B6  28C0               450          DC    AL2(N00046)
0025B8  0046               451          DC    XL2'0046'
00002E                     452 EQN00046 EQU       0046
0025BA  28D8               453          DC    AL2(N00047)
0025BC  0047               454          DC    XL2'0047'
00002F                     455 EQN00047 EQU       0047
0025BE  28F0               456          DC    AL2(N00048)
0025C0  0048               457          DC    XL2'0048'
000030                     458 EQN00048 EQU       0048
0025C2  28F4               459          DC    AL2(N00049)
0025C4  0049               460          DC    XL2'0049'
000031                     461 EQN00049 EQU       0049
0025C6  28F8               462          DC    AL2(N00050)
0025C8  0050               463          DC    XL2'0050'
000032                     464 EQN00050 EQU       0050
0025CA  28FC               465          DC    AL2(N00051)
0025CC  0051               466          DC    XL2'0051'
000033                     467 EQN00051 EQU       0051
0025CE  2900               468          DC    AL2(N00052)
0025D0  0052               469          DC    XL2'0052'
000034                     470 EQN00052 EQU       0052
0025D2  2904               471          DC    AL2(N00053)
0025D4  0053               472          DC    XL2'0053'
000035                     473 EQN00053 EQU       0053
0025D6  291C               474          DC    AL2(N00054)
0025D8  0054               475          DC    XL2'0054'
000036                     476 EQN00054 EQU       0054
0025DA  2920               477          DC    AL2(N00055)
0025DC  0055               478          DC    XL2'0055'
000037                     479 EQN00055 EQU       0055
0025DE  2924               480          DC    AL2(N00056)
0025E0  0056               481          DC    XL2'0056'
000038                     482 EQN00056 EQU       0056
0025E2  2928               483          DC    AL2(N00057)
0025E4  0057               484          DC    XL2'0057'
000039                     485 EQN00057 EQU       0057
0025E6  292C               486          DC    AL2(N00058)
0025E8  0058               487          DC    XL2'0058'
00003A                     488 EQN00058 EQU       0058
0025EA  2930               489          DC    AL2(N00059)
0025EC  0059               490          DC    XL2'0059'
00003B                     491 EQN00059 EQU       0059
0025EE  294A               492          DC    AL2(N00060)
0025F0  0060               493          DC    XL2'0060'
00003C                     494 EQN00060 EQU       0060
0025F2  294E               495          DC    AL2(N00061)
0025F4  0061               496          DC    XL2'0061'
00003D                     497 EQN00061 EQU       0061
0025F6  2952               498          DC    AL2(N00062)
0025F8  0062               499          DC    XL2'0062'
00003E                     500 EQN00062 EQU       0062
0025FA  2956               501          DC    AL2(N00063)
0025FC  0063               502          DC    XL2'0063'
00003F                     503 EQN00063 EQU       0063
0025FE  295A               504          DC    AL2(N00064)
002600  0064               505          DC    XL2'0064'
000040                     506 EQN00064 EQU       0064
002602  295E               507          DC    AL2(N00065)
002604  0065               508          DC    XL2'0065'
000041                     509 EQN00065 EQU       0065
002606  2976               510          DC    AL2(N00066)
002608  0066               511          DC    XL2'0066'
000042                     512 EQN00066 EQU       0066
00260A  298E               513          DC    AL2(N00067)
00260C  0067               514          DC    XL2'0067'
000043                     515 EQN00067 EQU       0067
00260E  2992               516          DC    AL2(N00068)
002610  0068               517          DC    XL2'0068'
000044                     518 EQN00068 EQU       0068
002612  29AA               519          DC    AL2(N00069)
002614  0069               520          DC    XL2'0069'
000045                     521 EQN00069 EQU       0069
002616  29AE               522          DC    AL2(N00070)
002618  0070               523          DC    XL2'0070'
000046                     524 EQN00070 EQU       0070
00261A  29C6               525          DC    AL2(N00071)
00261C  0071               526          DC    XL2'0071'
000047                     527 EQN00071 EQU       0071
00261E  29E0               528          DC    AL2(N00072)
002620  0072               529          DC    XL2'0072'
000048                     530 EQN00072 EQU       0072
002622  29FA               531          DC    AL2(N00073)
002624  0073               532          DC    XL2'0073'
000049                     533 EQN00073 EQU       0073
002626  2A12               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  2A2A                537          DC     AL2(N00075)
00262C  0075                538          DC     XL2'0075'
00004B                      539 EQN00075 EQU      0075
00262E  2A46                540          DC     AL2(N00076)
002630  0076                541          DC     XL2'0076'
00004C                      542 EQN00076 EQU      0076
002632  2A4A                543          DC     AL2(N00077)
002634  0077                544          DC     XL2'0077'
00004D                      545 EQN00077 EQU      0077
002636  2A4E                546          DC     AL2(N00078)
002638  0078                547          DC     XL2'0078'
00004E                      548 EQN00078 EQU      0078
00263A  2A52                549          DC     AL2(N00079)
00263C  0079                550          DC     XL2'0079'
00004F                      551 EQN00079 EQU      0079
00263E  2A56                552          DC     AL2(N00080)
002640  0080                553          DC     XL2'0080'
000050                      554 EQN00080 EQU      0080
002642  2A5A                555          DC     AL2(N00081)
002644  0081                556          DC     XL2'0081'
000051                      557 EQN00081 EQU      0081
002646  2A5E                558          DC     AL2(N00082)
002648  0082                559          DC     XL2'0082'
000052                      560 EQN00082 EQU      0082
00264A  2A62                561          DC     AL2(N00083)
00264C  0083                562          DC     XL2'0083'
000053                      563 EQN00083 EQU      0083
00264E  2A66                564          DC     AL2(N00084)
002650  0084                565          DC     XL2'0084'
000054                      566 EQN00084 EQU      0084
002652  2A6A                567          DC     AL2(N00085)
002654  0085                568          DC     XL2'0085'
000055                      569 EQN00085 EQU      0085
002656  2A6E                570          DC     AL2(N00086)
002658  0086                571          DC     XL2'0086'
000056                      572 EQN00086 EQU      0086
00265A  2A72                573          DC     AL2(N00087)
00265C  0087                574          DC     XL2'0087'
000057                      575 EQN00087 EQU      0087
00265E  2A76                576          DC     AL2(N00088)
002660  0088                577          DC     XL2'0088'
000058                      578 EQN00088 EQU      0088
002662  2A7A                579          DC     AL2(N00089)
002664  0089                580          DC     XL2'0089'
000059                      581 EQN00089 EQU      0089
002666  2A7E                582          DC     AL2(N00090)
002668  0090                583          DC     XL2'0090'
00005A                      584 EQN00090 EQU      0090
00266A  2A82                585          DC     AL2(N00091)
00266C  0091                586          DC     XL2'0091'
00005B                      587 EQN00091 EQU      0091
00266E  2A86                588          DC     AL2(N00092)
002670  0092                589          DC     XL2'0092'
00005C                      590 EQN00092 EQU      0092
002672  2A9E                591          DC     AL2(N00093)
002674  0093                592          DC     XL2'0093'
00005D                      593 EQN00093 EQU      0093
002676  2AB6                594          DC     AL2(N00094)
002678  0094                595          DC     XL2'0094'
00005E                      596 EQN00094 EQU      0094
00267A  2ABA                597          DC     AL2(N00095)
00267C  0095                598          DC     XL2'0095'
00005F                      599 EQN00095 EQU      0095
00267E  2ABE                600          DC     AL2(N00096)
002680  0096                601          DC     XL2'0096'
000060                      602 EQN00096 EQU      0096
002682  2AC2                603          DC     AL2(N00097)
002684  0097                604          DC     XL2'0097'
000061                      605 EQN00097 EQU      0097
002686  2AC6                606          DC     AL2(N00098)
002688  0098                607          DC     XL2'0098'
000062                      608 EQN00098 EQU      0098
00268A  2ACA                609          DC     AL2(N00099)
00268C  0099                610          DC     XL2'0099'
000063                      611 EQN00099 EQU      0099
00268E  0000                612          DC     AL2(DUMMY)
                            613 ********************************************************************************
                            614 ********************************************************************************
                            615 **                                                                            **
                            616 **                          RULE INFORMATION TABLE                            **
                            617 **                                                                            **
                            618 ********************************************************************************
                            619 ********************************************************************************
                            620 N00001  $TUXX T7A10,09,0000000000000020,ON,QT=(Q00008),YES=N00099,  X
002690  0500                621+N00001  DC     A(@TUXX)
002692  2ACA                622+        DC     AL2(N00099)
002694  3264                623+        DC     A(T7A10)
002696  0200                624+        DC     AL2(ON)
002698  0009                625+        DC     AL2(09)
00269A  0000000000000020    626+        DC     X'0000000000000020'
0026A3  00                  627+        ALIGN  WORD
0026A4  0000                628+        DC     AL2(0)
0026A6  C1C1                629+        DC     C'AA'
                            630+        ALIGN  WORD
0026A8  196E                631+        DC      AL2(PARMARA)
                            632 N00002  $TUXX T7A02,08,0000000200000002,OF,QT=(Q00007),YES=N00092,    X
0026AA  0500                633+N00002  DC     A(@TUXX)
0026AC  2A86                634+        DC     AL2(N00092)
0026AE  2D20                635+        DC     A(T7A02)
0026B0  0202                636+        DC     AL2(OF)
0026B2  0008                637+        DC     AL2(08)
0026B4  0000000200000002    638+        DC     X'0000000200000002'
                            639+        ALIGN  WORD
0026BC  0000                640+        DC     AL2(0)
0026BE  C1C1                641+        DC     C'AA'
                            642+        ALIGN  WORD
0026C0  196E                643+        DC      AL2(PARMARA)
                            644 N00003  $TUXX T7A02,08,0000000800000008,OF,QT=(Q00007),YES=N00013,    X
0026C2  0500                645+N00003  DC     A(@TUXX)
0026C4  2726                646+        DC     AL2(N00013)
0026C6  2D20                647+        DC     A(T7A02)
0026C8  0202                648+        DC     AL2(OF)
0026CA  0008                649+        DC     AL2(08)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
0026CC  0000000800000008    650+        DC     X'0000000800000008'
                            651+        ALIGN  WORD
0026D4  0000                652+        DC     AL2(0)
0026D6  C1C1                653+        DC     C'AA'
                            654+        ALIGN  WORD
0026D8  196E                655+        DC      AL2(PARMARA)
                            656 N00004  $TUXX T7A02,08,0000000000000010,ON,QT=(Q00008),YES=N00006,    X
0026DA  0500                657+N00004  DC     A(@TUXX)
0026DC  26F6                658+        DC     AL2(N00006)
0026DE  2D20                659+        DC     A(T7A02)
0026E0  0200                660+        DC     AL2(ON)
0026E2  0008                661+        DC     AL2(08)
0026E4  0000000000000010    662+        DC     X'0000000000000010'
                            663+        ALIGN  WORD
0026EC  0000                664+        DC     AL2(0)
0026EE  C1C1                665+        DC     C'AA'
                            666+        ALIGN  WORD
0026F0  196E                667+        DC      AL2(PARMARA)
                            668 N00005  $FIXT FT=(F00016)
0026F2  0101                669+N00005  DC     A(@FIXT)
0026F4  2AD6                670+        DC     A(F00016)
                            671 N00006  $TUXX T7A02,08,0000000400000004,OF,QT=(Q00007),YES=N00008,    X
0026F6  0500                672+N00006  DC     A(@TUXX)
0026F8  2712                673+        DC     AL2(N00008)
0026FA  2D20                674+        DC     A(T7A02)
0026FC  0202                675+        DC     AL2(OF)
0026FE  0008                676+        DC     AL2(08)
002700  0000000400000004    677+        DC     X'0000000400000004'
                            678+        ALIGN  WORD
002708  0000                679+        DC     AL2(0)
00270A  C1C1                680+        DC     C'AA'
                            681+        ALIGN  WORD
00270C  196E                682+        DC      AL2(PARMARA)
                            683 N00007  $FIXT FT=(F00013)
00270E  0101                684+N00007  DC     A(@FIXT)
002710  2ABE                685+        DC     A(F00013)
                            686 N00008  $QUES QT=(Q00007),YES=N00012,CT=(C00043)
002712  0100                687+N00008  DC     A(@QUES)
002714  2722                688+        DC     AL2(N00012)
                            689 N00009  $QUES QT=(Q00007),YES=N00011,CT=(C00046)
002716  0100                690+N00009  DC     A(@QUES)
002718  271E                691+        DC     AL2(N00011)
                            692 N00010  $FIXT FT=(F00049)
00271A  0101                693+N00010  DC     A(@FIXT)
00271C  2B06                694+        DC     A(F00049)
                            695 N00011  $FIXT FT=(F00016)
00271E  0101                696+N00011  DC     A(@FIXT)
002720  2AD6                697+        DC     A(F00016)
                            698 N00012  $FIXT FT=(F00013)
002722  0101                699+N00012  DC     A(@FIXT)
002724  2ABE                700+        DC     A(F00013)
                            701 N00013  $TUXX T7A02,08,0000000000000002,ON,QT=(Q00008),YES=N00091,    X
002726  0500                702+N00013  DC     A(@TUXX)
002728  2A82                703+        DC     AL2(N00091)
00272A  2D20                704+        DC     A(T7A02)
00272C  0200                705+        DC     AL2(ON)
00272E  0008                706+        DC     AL2(08)
002730  0000000000000002    707+        DC     X'0000000000000002'
                            708+        ALIGN  WORD
002738  0000                709+        DC     AL2(0)
00273A  C1C1                710+        DC     C'AA'
                            711+        ALIGN  WORD
00273C  196E                712+        DC      AL2(PARMARA)
                            713 N00014  $TUXX T7A02,09,0000000000000008,ON,QT=(Q00008),YES=N00024,    X
00273E  0500                714+N00014  DC     A(@TUXX)
002740  27AE                715+        DC     AL2(N00024)
002742  2D20                716+        DC     A(T7A02)
002744  0200                717+        DC     AL2(ON)
002746  0009                718+        DC     AL2(09)
002748  0000000000000008    719+        DC     X'0000000000000008'
002751  00                  720+        ALIGN  WORD
002752  0000                721+        DC     AL2(0)
002754  C1C1                722+        DC     C'AA'
                            723+        ALIGN  WORD
002756  196E                724+        DC      AL2(PARMARA)
                            725 N00015  $TUXX T7A02,09,0000000040000004,OF,QT=(Q00007),YES=N00023,    X
002758  0500                726+N00015  DC     A(@TUXX)
00275A  27AA                727+        DC     AL2(N00023)
00275C  2D20                728+        DC     A(T7A02)
00275E  0202                729+        DC     AL2(OF)
002760  0009                730+        DC     AL2(09)
002762  0000000040000004    731+        DC     X'0000000040000004'
00276B  00                  732+        ALIGN  WORD
00276C  0000                733+        DC     AL2(0)
00276E  C1C1                734+        DC     C'AA'
                            735+        ALIGN  WORD
002770  196E                736+        DC      AL2(PARMARA)
                            737 N00016  $TUXX T7A02,08,0000000000000020,ON,QT=(Q00008),YES=N00018,    X
002772  0500                738+N00016  DC     A(@TUXX)
002774  2796                739+        DC     AL2(N00018)
002776  2D20                740+        DC     A(T7A02)
002778  0200                741+        DC     AL2(ON)
00277A  0008                742+        DC     AL2(08)
00277C  0000000000000020    743+        DC     X'0000000000000020'
                            744+        ALIGN  WORD
002784  0000                745+        DC     AL2(0)
002786  C1C1                746+        DC     C'AA'
                            747+        ALIGN  WORD
002788  196E                748+        DC      AL2(PARMARA)
                            749 N00017  $CALL TYPE=XTRNL,MAP=7A20,EP=A,FT=(F00075)
00278A  0201                750+N00017  DC     A(@CALL)
00278C  2BB4                751+        DC     A(F00075)
00278E  F7C1F2F0            752+        DC     CL4'7A20'
002792  C140                753+        DC     CL2'A'
002794  0001                754+        DC     AL2(XTRNL)
                            755 N00018  $QUES QT=(Q00008),YES=N00022,CT=(C00078)
002796  0100                756+N00018  DC     A(@QUES)
002798  27A6                757+        DC     AL2(N00022)
                            758 N00019  $QUES QT=(Q00008),YES=N00021,CT=(C00081)
00279A  0100                759+N00019  DC     A(@QUES)
00279C  27A2                760+        DC     AL2(N00021)
                            761 N00020  $FIXT FT=(F00014)
00279E  0101                762+N00020  DC     A(@FIXT)
0027A0  2BFC                763+        DC     A(F00014)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

                            764 N00021   $FIXT FT=(F00017)
0027A2  0101                765+N00021   DC    A(@FIXT)
0027A4  2C14                766+         DC    A(F00017)
                            767 N00022   $FIXT FT=(F00013)
0027A6  0101                768+N00022   DC    A(@FIXT)
0027A8  2AEE                769+         DC    A(F00013)
                            770 N00023   $FIXT FT=(F00013)
0027AA  0101                771+N00023   DC    A(@FIXT)
0027AC  2AEE                772+         DC    A(F00013)
                            773 N00024   $TUXX T7A02,07,00000000000020,ON,QT=(Q00008),YES=N00032,      X
0027AE  0500                774+N00024   DC    A(@TUXX)
0027B0  27F6                775+         DC    AL2(N00032)
0027B2  2D20                776+         DC    A(T7A02)
0027B4  0200                777+         DC    AL2(ON)
0027B6  0007                778+         DC    AL2(07)
0027B8  00000000000020      779+         DC    X'00000000000020'
0027BF  00                  780+         ALIGN WORD
0027C0  0000                781+         DC    AL2(0)
0027C2  C1C1                782+         DC    C'AA'
                            783+         ALIGN WORD
0027C4  196E                784+         DC     AL2(PARMARA)
                            785 N00025   $TUXX T7A02,07,00000000000010,ON,QT=(Q00008),YES=N00031,      X
0027C6  0500                786+N00025   DC    A(@TUXX)
0027C8  27F2                787+         DC    AL2(N00031)
0027CA  2D20                788+         DC    A(T7A02)
0027CC  0200                789+         DC    AL2(ON)
0027CE  0007                790+         DC    AL2(07)
0027D0  00000000000010      791+         DC    X'00000000000010'
0027D7  00                  792+         ALIGN WORD
0027D8  0000                793+         DC    AL2(0)
0027DA  C1C1                794+         DC    C'AA'
                            795+         ALIGN WORD
0027DC  196E                796+         DC     AL2(PARMARA)
                            797 N00026   $QUES QT=(Q00008),YES=N00030,CT=(C00100)
0027DE  0100                798+N00026   DC    A(@QUES)
0027E0  27EE                799+         DC    AL2(N00030)
                            800 N00027   $QUES QT=(Q00008),YES=N00029,CT=(C00103)
0027E2  0100                801+N00027   DC    A(@QUES)
0027E4  27BA                802+         DC    AL2(N00029)
                            803 N00028   $FIXT FT=(F00014)
0027E6  0101                804+N00028   DC    A(@FIXT)
0027E8  2BFC                805+         DC    A(F00014)
                            806 N00029   $FIXT FT=(F00017)
0027EA  0101                807+N00029   DC    A(@FIXT)
0027EC  2C14                808+         DC    A(F00017)
                            809 N00030   $FIXT FT=(F00108)
0027EE  0101                810+N00030   DC    A(@FIXT)
0027F0  2C2A                811+         DC    A(F00108)
                            812 N00031   $FIXT FT=(F00013)
0027F2  0101                813+N00031   DC    A(@FIXT)
0027F4  2AEE                814+         DC    A(F00013)
                            815 N00032   $TUXX T7A02,08,0000000000000040,ON,QT=(Q00008),YES=N00038,      X
0027F6  0500                816+N00032   DC    A(@TUXX)
0027F8  2822                817+         DC    AL2(N00038)
0027FA  2D20                818+         DC    A(T7A02)
0027FC  0200                819+         DC    AL2(ON)
0027FE  0008                820+         DC    AL2(08)
002800  0000000000000040    821+         DC    X'0000000000000040'
                            822+         ALIGN WORD
002808  0000                823+         DC    AL2(0)
00280A  C1C1                824+         DC    C'AA'
                            825+         ALIGN WORD
00280C  196E                826+         DC     AL2(PARMARA)
                            827 N00033   $QUES QT=(Q00008),YES=N00037,CT=(C00118)
00280E  0100                828+N00033   DC    A(@QUES)
002810  281E                829+         DC    AL2(N00037)
                            830 N00034   $QUES QT=(Q00008),YES=N00036,CT=(C00121)
002812  0100                831+N00034   DC    A(@QUES)
002814  281A                832+         DC    AL2(N00036)
                            833 N00035   $FIXT FT=(F00014)
002816  0101                834+N00035   DC    A(@FIXT)
002818  2BFC                835+         DC    A(F00014)
                            836 N00036   $FIXT FT=(F00017)
00281A  0101                837+N00036   DC    A(@FIXT)
00281C  2C14                838+         DC    A(F00017)
                            839 N00037   $FIXT FT=(F00013)
00281E  0101                840+N00037   DC    A(@FIXT)
002820  2AEE                841+         DC    A(F00013)
                            842 N00038   $TUXX T7A02,07,00000200000002,OF,QT=(Q00007),YES=N00040,      X
002822  0500                843+N00038   DC    A(@TUXX)
002824  283E                844+         DC    AL2(N00040)
002826  2D20                845+         DC    A(T7A02)
002828  0202                846+         DC    AL2(OF)
00282A  0007                847+         DC    AL2(07)
00282C  00000200000002      848+         DC    X'00000200000002'
002833  00                  849+         ALIGN WORD
002834  0000                850+         DC    AL2(0)
002836  C1C1                851+         DC    C'AA'
                            852+         ALIGN WORD
002838  196E                853+         DC     AL2(PARMARA)
                            854 N00039   $FIXT FT=(F00013)
00283A  0101                855+N00039   DC    A(@FIXT)
00283C  2AEE                856+         DC    A(F00013)
                            857 N00040   $TUXX T7A02,09,0000000080000000080,OF,QT=(Q00007),YES=N00090,  X
00283E  0500                858+N00040   DC    A(@TUXX)
002840  2A7E                859+         DC    AL2(N00090)
002842  2D20                860+         DC    A(T7A02)
002844  0202                861+         DC    AL2(OF)
002846  0009                862+         DC    AL2(09)
002848  00000000800000008   863+         DC    X'0000000080000000080'
002851  00                  864+         ALIGN WORD
002852  0000                865+         DC    AL2(0)
002854  C1C1                866+         DC    C'AA'
                            867+         ALIGN WORD
002856  196E                868+         DC     AL2(PARMARA)
                            869 N00041   $TUXX T7A02,09,0000000000000000010,ON,QT=(Q00008),YES=N00043,  X
002858  0500                870+N00041   DC    A(@TUXX)
00285A  2876                871+         DC    AL2(N00043)
00285C  2D20                872+         DC    A(T7A02)
00285E  0200                873+         DC    AL2(ON)
002860  0009                874+         DC    AL2(09)
002862  00000000000000001   875+         DC    X'0000000000000000010'
00286B  00                  876+         ALIGN WORD
00286C  0000                877+         DC    AL2(0)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

00286E  C1C1                878+         DC    C'AA'
                            879+         ALIGN WORD
002870  196E                880+         DC     AL2(PARMARA)
                            881 N00042   $FIXT FT=(F00013)
002872  0101                882+N00042   DC    A(@FIXT)
002874  2AEE                883+         DC    A(F00013)
                            884 N00043   $TUXX T7A02,07,00008000000080,OF,QT=(Q00007),YES=N00089,      X
002876  0500                885+N00043   DC    A(@TUXX)
002878  2A7A                886+         DC    AL2(N00089)
00287A  2D20                887+         DC    A(T7A02)
00287C  0202                888+         DC    AL2(OF)
00287E  0007                889+         DC    AL2(07)
002880  00008000000080      890+         DC    X'00008000000080'
002887  00                  891+         ALIGN WORD
002888  0000                892+         DC    AL2(0)
00288A  C1C1                893+         DC    C'AA'
                            894+         ALIGN WORD
00288C  196E                895+         DC     AL2(PARMARA)
                            896 N00044   $TUXX T7A02,07,00000800000008,OF,QT=(Q00007),YES=N00088,      X
00288E  0500                897+N00044   DC    A(@TUXX)
002890  2A76                898+         DC    AL2(N00088)
002892  2D20                899+         DC    A(T7A02)
002894  0202                900+         DC    AL2(OF)
002896  0007                901+         DC    AL2(07)
002898  00000800000008      902+         DC    X'00000800000008'
00289F  00                  903+         ALIGN WORD
0028A0  0000                904+         DC    AL2(0)
0028A2  C1C1                905+         DC    C'AA'
                            906+         ALIGN WORD
0028A4  196E                907+         DC     AL2(PARMARA)
                            908 N00045   $TUXX T7A02,09,0000000020000000002,OF,QT=(Q00007),YES=N00087,  X
0028A6  0500                909+N00045   DC    A(@TUXX)
0028A8  2A72                910+         DC    AL2(N00087)
0028AA  2D20                911+         DC    A(T7A02)
0028AC  0202                912+         DC    AL2(OF)
0028AE  0009                913+         DC    AL2(09)
0028B0  00000000020000000   914+         DC    X'0000000020000000002'
0028B9  00                  915+         ALIGN WORD
0028BA  0000                916+         DC    AL2(0)
0028BC  C1C1                917+         DC    C'AA'
                            918+         ALIGN WORD
0028BE  196E                919+         DC     AL2(PARMARA)
                            920 N00046   $TUXX T7A02,07,00004000000040,OF,QT=(Q00007),YES=N00086,      X
0028C0  0500                921+N00046   DC    A(@TUXX)
0028C2  2A6E                922+         DC    AL2(N00086)
0028C4  2D20                923+         DC    A(T7A02)
0028C6  0202                924+         DC    AL2(OF)
0028C8  0007                925+         DC    AL2(07)
0028CA  00004000000040      926+         DC    X'00004000000040'
0028D1  00                  927+         ALIGN WORD
0028D2  0000                928+         DC    AL2(0)
0028D4  C1C1                929+         DC    C'AA'
                            930+         ALIGN WORD
0028D6  196E                931+         DC     AL2(PARMARA)
                            932 N00047   $TUXX T7A02,07,00000100000001,OF,QT=(Q00007),YES=N00053,      X
0028D8  0500                933+N00047   DC    A(@TUXX)
0028DA  2904                934+         DC    AL2(N00053)
0028DC  2D20                935+         DC    A(T7A02)
0028DE  0202                936+         DC    AL2(OF)
0028E0  0007                937+         DC    AL2(07)
0028E2  00000100000001      938+         DC    X'00000100000001'
0028E9  00                  939+         ALIGN WORD
0028EA  0000                940+         DC    AL2(0)
0028EC  C1C1                941+         DC    C'AA'
                            942+         ALIGN WORD
0028EE  196E                943+         DC     AL2(PARMARA)
                            944 N00048   $QUES QT=(Q00007),YES=N00052,CT=(C00166)
0028F0  0100                945+N00048   DC    A(@QUES)
0028F2  2900                946+         DC    AL2(N00052)
                            947 N00049   $QUES QT=(Q00007),YES=N00051,CT=(C00169)
0028F4  0100                948+N00049   DC    A(@QUES)
0028F6  28FC                949+         DC    AL2(N00051)
                            950 N00050   $FIXT FT=(F00172)
0028F8  0101                951+N00050   DC    A(@FIXT)
0028FA  2C58                952+         DC    A(F00172)
                            953 N00051   $FIXT FT=(F00017)
0028FC  0101                954+N00051   DC    A(@FIXT)
0028FE  2C14                955+         DC    A(F00017)
                            956 N00052   $FIXT FT=(F00013)
002900  0101                957+N00052   DC    A(@FIXT)
002902  2AEE                958+         DC    A(F00013)
                            959 N00053   $TUXX T7A02,08,0000008000000080,OF,QT=(Q00007),YES=N00059,      X
002904  0500                960+N00053   DC    A(@TUXX)
002906  2930                961+         DC    AL2(N00059)
002908  2D20                962+         DC    A(T7A02)
00290A  0202                963+         DC    AL2(OF)
00290C  0008                964+         DC    AL2(08)
00290E  0000008000000080    965+         DC    X'0000008000000080'
002916  0000                966+         ALIGN WORD
002918  C1C1                967+         DC    AL2(0)
                            968+         DC    C'AA'
00291A  196E                969+         ALIGN WORD
                            970+         DC     AL2(PARMARA)
                            971 N00054   $QUES QT=(Q00007),YES=N00058,CT=(C00183)
00291C  0100                972+N00054   DC    A(@QUES)
00291E  292C                973+         DC    AL2(N00058)
                            974 N00055   $QUES QT=(Q00007),YES=N00057,CT=(C00186)
002920  0100                975+N00055   DC    A(@QUES)
002922  2928                976+         DC    AL2(N00057)
                            977 N00056   $FIXT FT=(F00014)
002924  0101                978+N00056   DC    A(@FIXT)
002926  2BFC                979+         DC    A(F00014)
                            980 N00057   $FIXT FT=(F00017)
002928  0101                981+N00057   DC    A(@FIXT)
00292A  2C14                982+         DC    A(F00017)
                            983 N00058   $FIXT FT=(F00013)
00292C  0101                984+N00058   DC    A(@FIXT)
00292E  2AEE                985+         DC    A(F00013)
                            986 N00059   $TUXX T7A02,09,0000000010000000001,OF,QT=(Q00007),YES=N00065,  X
002930  0500                987+N00059   DC    A(@TUXX)
002932  295E                988+         DC    AL2(N00065)
002934  2D20                989+         DC    A(T7A02)
002936  0202                990+         DC    AL2(OF)
002938  0009                991+         DC    AL2(09)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

002939A 0000000001000000    992+          DC    X'0000000001000000001'
002943  00                  993+          ALIGN WORD
002944  0000                994+          DC    AL2(0)
002946  C1C1                995+          DC    C'AA'
                            996+          ALIGN WORD
002948  196E                997+          DC     AL2(PARMARA)
                            998 N00060    $QUES QT=(Q00007),YES=N00064,CT=(C00199)
00294A  0100                999+N00060    DC    A(@QUES)
00294C  295A               1000+          DC    AL2(N00064)
                           1001 N00061    $QUES QT=(Q00007),YES=N00063,CT=(C00202)
00294E  0100               1002+N00061    DC    A(@QUES)
002950  2956              1003+          DC    AL2(N00063)
                           1004 N00062    $FIXT FT=(F00014)
002952  0101               1005+N00062    DC    A(@FIXT)
002954  2BFC               1006+          DC    A(F00014)
                           1007 N00063    $FIXT FT=(F00017)
002956  0101               1008+N00063    DC    A(@FIXT)
002958  2C14               1009+          DC    A(F00017)
                           1010 N00064    $FIXT FT=(F00013)
00295A  0101               1011+N00064    DC    A(@FIXT)
00295C  2AEE               1012+          DC    A(F00013)
                           1013 N00065    $TUXX T7A02,07,00000400000004,OF,QT=(Q00007),YES=N00085,      X
00295E  0500               1014+N00065    DC    A(@TUXX)
002960  2A6A               1015+          DC    AL2(N00085)
002962  2D20               1016+          DC    A(T7A02)
002964  0202               1017+          DC    AL2(OF)
002966  0007               1018+          DC    AL2(07)
002968  00000400000004     1019+          DC    X'000000400000004'
00296F  00                 1020+          ALIGN WORD
002970  0000               1021+          DC    AL2(0)
002972  C1C1               1022+          DC    C'AA'
                           1023+          ALIGN WORD
002974  196E               1024+          DC     AL2(PARMARA)
                           1025 N00066    $TUXX T7A02,08,0000002000000020,OF,QT=(Q00007),YES=N00068,     X
002976  0500               1026+N00066    DC    A(@TUXX)
002978  2992               1027+          DC    AL2(N00068)
00297A  2D20               1028+          DC    A(T7A02)
00297C  0202               1029+          DC    AL2(OF)
00297E  0008               1030+          DC    AL2(08)
002980  0000002000000020   1031+          DC    X'0000002000000020'
                           1032+          ALIGN WORD
002988  0000               1033+          DC    AL2(0)
00298A  C1C1               1034+          DC    C'AA'
                           1035+          ALIGN WORD
00298C  196E               1036+          DC     AL2(PARMARA)
                           1037 N00067    $FIXT FT=(F00013)
00298E  0101               1038+N00067    DC    A(@FIXT)
002990  2AEE               1039+          DC    A(F00013)
                           1040 N00068    $TUXX T7A02,08,0000000400000004,OF,QT=(Q00007),YES=N00070,     X
002992  0500               1041+N00068    DC    A(@TUXX)
002994  29AE               1042+          DC    AL2(N00070)
002996  2D20               1043+          DC    A(T7A02)
002998  0202               1044+          DC    AL2(OF)
00299A  0008               1045+          DC    AL2(08)
00299C  0000000400000004   1046+          DC    X'0000000400000004'
                           1047+          ALIGN WORD
0029A4  0000               1048+          DC    AL2(0)
0029A6  C1C1               1049+          DC    C'AA'
                           1050+          ALIGN WORD
0029A8  196E               1051+          DC     AL2(PARMARA)
                           1052 N00069    $FIXT FT=(F00013)
0029AA  0101               1053+N00069    DC    A(@FIXT)
0029AC  2AEE               1054+          DC    A(F00013)
                           1055 N00070    $TUXX T7A02,08,0000000100000001,OF,QT=(Q00007),YES=N00084,     X
0029AE  0500               1056+N00070    DC    A(@TUXX)
0029B0  2A66               1057+          DC    AL2(N00084)
0029B2  2D20               1058+          DC    A(T7A02)
0029B4  0202               1059+          DC    AL2(OF)
0029B6  0008               1060+          DC    AL2(08)
0029B8  0000000100000001   1061+          DC    X'0000000100000001'
                           1062+          ALIGN WORD
0029C0  0000               1063+          DC    AL2(0)
0029C2  C1C1               1064+          DC    C'AA'
                           1065+          ALIGN WORD
0029C4  196E               1066+          DC     AL2(PARMARA)
                           1067 N00071    $TUXX T7A02,09,0000000040000000040,OF,QT=(Q00007),YES=N00083,  X
0029C6  0500               1068+N00071    DC    A(@TUXX)
0029C8  2A62               1069+          DC    AL2(N00083)
0029CA  2D20               1070+          DC    A(T7A02)
0029CC  0202               1071+          DC    AL2(OF)
0029CE  0009               1072+          DC    AL2(09)
0029D0  00000000400000004  1073+          DC    X'000000004000000040'
0029D9  00                 1074+          ALIGN WORD
0029DA  0000               1075+          DC    AL2(0)
0029DC  C1C1               1076+          DC    C'AA'
                           1077+          ALIGN WORD
0029DE  196E               1078+          DC     AL2(PARMARA)
                           1079 N00072    $TUXX T7A02,09,0000000020000000020,OF,QT=(Q00007),YES=N00082,  X
0029E0  0500               1080+N00072    DC    A(@TUXX)
0029E2  2A5E               1081+          DC    AL2(N00082)
0029E4  2D20               1082+          DC    A(T7A02)
0029E6  0202               1083+          DC    AL2(OF)
0029E8  0009               1084+          DC    AL2(09)
0029EA  0000000020000002   1085+          DC    X'0000000020000020'
0029F3  00                 1086+          ALIGN WORD
0029F4  0000               1087+          DC    AL2(0)
0029F6  C1C1               1088+          DC    C'AA'
                           1089+          ALIGN WORD
0029F8  196E               1090+          DC     AL2(PARMARA)
                           1091 N00073    $TUXX T7A02,07,0000001000000010,OF,QT=(Q00007),YES=N00081,      X
0029FA  0500               1092+N00073    DC    A(@TUXX)
0029FC  2A5A               1093+          DC    AL2(N00081)
0029FE  2D20               1094+          DC    A(T7A02)
002A00  0202               1095+          DC    AL2(OF)
002A02  0007               1096+          DC    AL2(07)
002A04  00001000000010     1097+          DC    X'00001000000010'
002A0B  00                 1098+          ALIGN WORD
002A0C  0000               1099+          DC    AL2(0)
002A0E  C1C1               1100+          DC    C'AA'
                           1101+          ALIGN WORD
002A10  196E               1102+          DC     AL2(PARMARA)
                           1103 N00074    $TUXX T7A02,08,0000001000000010,OF,QT=(Q00007),YES=N00078,     X
002A12  0500               1104+N00074    DC    A(@TUXX)
002A14  2A4E               1105+          DC    AL2(N00078)
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                    COPYRIGHT IBM CORP 1976

002A16  2D20               1106+          DC    A(T7A02)
002A18  0202               1107+          DC    AL2(OF)
002A1A  0008               1108+          DC    AL2(08)
002A1C  00000001000000010  1109+          DC    X'00000001000000010'
                           1110+          ALIGN WORD
002A24  0000               1111+          DC    AL2(0)
002A26  C1C1               1112+          DC    C'AA'
                           1113+          ALIGN WORD
002A28  196E               1114+          DC     AL2(PARMARA)
                           1115 N00075    $TUXX T7A02,11,0000000000800000000000,OF,QT=(Q00247),         X
002A2A  0500               1116+N00075    DC    A(@TUXX)
002A2C  2AAA               1117+          DC    AL2(N00077)
002A2E  2D20               1118+          DC    A(T7A02)
002A30  0202               1119+          DC    AL2(OF)
002A32  000B               1120+          DC    AL2(11)
002A34  00000000008000000  1121+          DC    X'00000000008000000000000'
002A3F  00                 1122+          ALIGN WORD
002A40  0000               1123+          DC    AL2(0)
002A42  C1C1               1124+          DC    C'AA'
                           1125+          ALIGN WORD
002A44  196E               1126+          DC     AL2(PARMARA)
                           1127 N00076    $FIXT FT=(F00013)
002A46  0101               1128+N00076    DC    A(@FIXT)
002A48  2AEE               1129+          DC    A(F00013)
                           1130 N00077    $FIXT FT=(F00252)
002A4A  0101               1131+N00077    DC    A(@FIXT)
002A4C  2C98               1132+          DC    A(F00252)
                           1133 N00078    $QUES QT=(Q00007),YES=N00080,CT=(C00254)
002A4E  0100               1134+N00078    DC    A(@QUES)
002A50  2A56               1135+          DC    AL2(N00080)
                           1136 N00079    $FIXT FT=(F00013)
002A52  0101               1137+N00079    DC    A(@FIXT)
002A54  2AEE               1138+          DC    A(F00013)
                           1139 N00080    $FIXT FT=(F00016)
002A56  0101               1140+N00080    DC    A(@FIXT)
002A58  2AD6               1141+          DC    A(F00016)
                           1142 N00081    $FIXT FT=(F00013)
002A5A  0101               1143+N00081    DC    A(@FIXT)
002A5C  2AEE               1144+          DC    A(F00013)
                           1145 N00082    $FIXT FT=(F00013)
002A5E  0101               1146+N00082    DC    A(@FIXT)
002A60  2AEE               1147+          DC    A(F00013)
                           1148 N00083    $FIXT FT=(F00013)
002A62  0101               1149+N00083    DC    A(@FIXT)
002A64  2AEE               1150+          DC    A(F00013)
                           1151 N00084    $FIXT FT=(F00013)
002A66  0101               1152+N00084    DC    A(@FIXT)
002A68  2AEE               1153+          DC    A(F00013)
                           1154 N00085    $FIXT FT=(F00013)
002A6A  0101               1155+N00085    DC    A(@FIXT)
002A6C  2AEE               1156+          DC    A(F00013)
                           1157 N00086    $FIXT FT=(F00014)
002A6E  0101               1158+N00086    DC    A(@FIXT)
002A70  2BFC               1159+          DC    A(F00014)
                           1160 N00087    $FIXT FT=(F00013)
002A72  0101               1161+N00087    DC    A(@FIXT)
002A74  2AEE               1162+          DC    A(F00013)
                           1163 N00088    $FIXT FT=(F00013)
002A76  0101               1164+N00088    DC    A(@FIXT)
002A78  2AEE               1165+          DC    A(F00013)
                           1166 N00089    $FIXT FT=(F00013)
002A7A  0101               1167+N00089    DC    A(@FIXT)
002A7C  2AEE               1168+          DC    A(F00013)
                           1169 N00090    $FIXT FT=(F00013)
002A7E  0101               1170+N00090    DC    A(@FIXT)
002A80  2AEE               1171+          DC    A(F00013)
                           1172 N00091    $FIXT FT=(F00016)
002A82  0101               1173+N00091    DC    A(@FIXT)
002A84  2AD6               1174+          DC    A(F00016)
                           1175 N00092    $TUXX T7A02,08,0000004000000040,OF,QT=(Q00007),YES=N00098,     X
002A86  0500               1176+N00092    DC    A(@TUXX)
002A88  2AC6               1177+          DC    AL2(N00098)
002A8A  2D20               1178+          DC    A(T7A02)
002A8C  0202               1179+          DC    AL2(OF)
002A8E  0008               1180+          DC    AL2(08)
002A90  0000004000000040   1181+          DC    X'0000004000000040'
                           1182+          ALIGN WORD
002A98  0000               1183+          DC    AL2(0)
002A9A  C1C1               1184+          DC    C'AA'
                           1185+          ALIGN WORD
002A9C  196E               1186+          DC     AL2(PARMARA)
                           1187 N00093    $TUXX T7A02,08,0000001000000010,ON,QT=(Q00008),YES=N00095,     X
002A9E  0500               1188+N00093    DC    A(@TUXX)
002AA0  2ABA               1189+          DC    AL2(N00095)
002AA2  2D20               1190+          DC    A(T7A02)
002AA4  0200               1191+          DC    AL2(ON)
002AA6  0008               1192+          DC    AL2(08)
002AA8  0000001000000010   1193+          DC    X'0000001000000010'
                           1194+          ALIGN WORD
002AB0  0000               1195+          DC    AL2(0)
002AB2  C1C1               1196+          DC    C'AA'
                           1197+          ALIGN WORD
002AB4  196E               1198+          DC     AL2(PARMARA)
                           1199 N00094    $FIXT FT=(F00016)
002AB6  0101               1200+N00094    DC    A(@FIXT)
002AB8  2AD6               1201+          DC    A(F00016)
                           1202 N00095    $QUES QT=(Q00007),YES=N00097,CT=(C00293)
002ABA  0100               1203+N00095    DC    A(@QUES)
002ABC  2AC2               1204+          DC    AL2(N00097)
                           1205 N00096    $FIXT FT=(F00013)
002ABE  0101               1206+N00096    DC    A(@FIXT)
002AC0  2AEE               1207+          DC    A(F00013)
                           1208 N00097    $FIXT FT=(F00016)
002AC2  0101               1209+N00097    DC    A(@FIXT)
002AC4  2AD6               1210+          DC    A(F00016)
                           1211 N00098    $FIXT FT=(F00013)
002AC6  0101               1212+N00098    DC    A(@FIXT)
002AC8  2AEE               1213+          DC    A(F00013)
                           1214 N00099    $FIXT FT=(F00015)
002ACA  0101               1215+N00099    DC    A(@FIXT)
002ACC  2CB8               1216+          DC    A(F00015)
002ACE  0000               1217           DC    AL2(DUMMY)
002AD0                     1218 ENTPT     EQU   *
                           1219 ********************************************************************************
```

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 LOCTR  OBJECT TEXT         STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
                            1220 ********************************************************************************
                            1221 **                                                                            **
                            1222 **                          ENTRY POINT TABLE                                 **
                            1223 **                                                                            **
                            1224 ********************************************************************************
                            1225 ********************************************************************************
                            1226          ENTPT EP=A,STEP=00001
002AD0  C140                1227+         DC    CL2'A'
002AD2  2690                1228+         DC    A(N00001)
002AD4  0000                1229          DC    AL2(DUMMY)
                            1230 ********************************************************************************
                            1231 ********************************************************************************
                            1232 **                                                                            **
                            1233 **                          MESSAGE TABLE                                     **
                            1234 **                                                                            **
                            1235 ********************************************************************************
                            1236 ********************************************************************************
002AD6                      1237 F00016   EQU   *
002AD6  0001                1238          DC    AL2(0001)
002AD8  0014                1239          DC    A(0020)
002ADA  C5E7C3C8C1D5C7C54   1240          DC    CL0020'EXCHANGE CARD A1-F2 '
002AEE                      1241 F00013   EQU   *
002AEE  0001                1242          DC    AL2(0001)
002AF0  0014                1243          DC    A(0020)
002AF2  C5E7C3C8C1D5C7C54   1244          DC    CL0020'EXCHANGE CARD A1-C2 '
002B06                      1245 F00049   EQU   *
002B06  0006                1246          DC    AL2(0006)
002B08  0014                1247          DC    A(0020)
002B0A  C5E7C3C8C1D5C7C54   1248          DC    CL0020'EXCHANGE CARD A1-D2 '
002B1E  001A                1249          DC    A(0026)
002B20  C9C640E3C8C9E240C   1250          DC    CL0026'IF THIS CARD FAILS TO FIX '
002B3A  0022                1251          DC    A(0034)
002B3C  E3C8C5D9C540C9E24   1252          DC    CL0034'THERE IS PROBABLY A DEFECT IN THE '
002B5E  001A                1253          DC    A(0026)
002B60  C4C540C4C5C4C9C3C   1254          DC    CL0026'DE DEDICATED SERVO TRACK. '
002B7A  0028                1255          DC    A(0040)
002B7C  C5C1D9D3E840D9C5D   1256          DC    CL0040'EARLY REPLACEMENT OF THE DISK ENCLOSURE '
002BA4  000E                1257          DC    A(0014)
002BA6  C9E240C4C5E2C9D9C   1258          DC    CL0014'IS DESIRABLE. '
002BB4                      1259 F00075   EQU   *
002BB4  0002                1260          DC    AL2(0002)
002BB6  0022                1261          DC    A(0034)
002BB8  E2E4E2D7C5C3E340C   1262          DC    CL0034'SUSPECT INCORRECT DIAGNOSTIC SENSE'
002BDA  0020                1263          DC    A(0032)
002BDC  D9C560D9E4D540C7D   1264          DC    CL0032'RE-RUN GOOD MACHINE PATH.(7A20) '
002BFC                      1265 F00014   EQU   *
002BFC  0001                1266          DC    AL2(0001)
002BFE  0014                1267          DC    A(0020)
002C00  C5E7C3C8C1D5C7C54   1268          DC    CL0020'EXCHANGE CARD A1-D2 '
002C14                      1269 F00017   EQU   *
002C14  0001                1270          DC    AL2(0001)
002C16  0012                1271          DC    A(0018)
002C18  C5E7C3C8C1D5C7C54   1272          DC    CL0018'EXCHANGE BOARD A1 '
002C2A                      1273 F00108   EQU   *
002C2A  0002                1274          DC    AL2(0002)
002C2C  0014                1275          DC    A(0020)
002C2E  C5E7C3C8C1D5C7C54   1276          DC    CL0020'EXCHANGE CARD A1-C2 '
002C42  0014                1277          DC    A(0020)
002C44  C5E7C3C8C1D5C7C54   1278          DC    CL0020'EXCHANGE CARD A1-D2 '
002C58                      1279 F00172   EQU   *
002C58  0002                1280          DC    AL2(0002)
002C5A  0026                1281          DC    A(0038)
002C5C  C3C8C5C3D240E2C5C   1282          DC    CL0038'CHECK SEATING OF PROGRAM LINKS ON CARD'
002C82  0014                1283          DC    A(0020)
002C84  C5E7C3C8C1D5C7C54   1284          DC    CL0020'EXCHANGE CARD A1-D2 '
002C98                      1285 F00252   EQU   *
002C98  0001                1286          DC    AL2(0001)
002C9A  001C                1287          DC    A(0028)
002C9C  E3C8C9E240C9E240C   1288          DC    CL0028'THIS IS A GOOD MACHINE EXIT '
002CB8                      1289 F00015   EQU   *
002CB8  0001                1290          DC    AL2(0001)
002CBA  0014                1291          DC    A(0020)
002CBC  C5E7C3C8C1D5C7C54   1292          DC    CL0020'EXCHANGE CARD A1-E2 '
                            1293          PDIT  00
002CD0  0000                1295+OPTN1 DC     X'0000'                PROGRAM OPTION CONTROL WORD 1
                            1296+*
002CD2  0000                1297+OPTN2 DC     X'0000'                PROGRAM OPTION CONTROL WORD 2
                            1298+*                     BIT    HEX
000010                      1299+B48   EQU    16      0      8       PROBLEM PROGRAM CONTROL BITS
000011                      1300+B49   EQU    17      1      4       *
000012                      1301+B50   EQU    18      2      2       * THESE BITS ARE USED WITH THE
000013                      1302+B51   EQU    19      3      1       * SECOND OPTION WD   AND ARE TO
000014                      1303+B52   EQU    20      4      8       * BE ASSIGNED BY EACH PROGRAMMER
000015                      1304+B53   EQU    21      5      4       *
000016                      1305+B54   EQU    22      6      2       *
000017                      1306+B55   EQU    23      7      1       *
000018                      1307+B56   EQU    24      8      8       *
000019                      1308+B57   EQU    25      9      4       *
00001A                      1309+B58   EQU    26     10      2       *
00001B                      1310+B59   EQU    27     11      1       *
00001C                      1311+B60   EQU    28     12      8       *
00001D                      1312+B61   EQU    29     13      4       *
00001E                      1313+B62   EQU    30     14      2       *
00001F                      1314+B63   EQU    31     15      1       *
00001E                      1315+CH    EQU    30     14      2       CHARACTER SUPPLIED
00001F                      1316+CMP   EQU    31     15      1       COMPARE  OPERATION
002CD4  0000                1318+OPTN3 DC     X'0000'                PPROGRAM OPTION CONTROL WORD 3
                            1319+*
                            1320+*  0  MYSTERY INTERRUPT     MI        8  CS STATUS IN PROGRESS    CS
                            1321+*  1  ERROR INTERRUPT       ER        9  CS AVAILABLE             CSA
                            1322+*  2  EXPECTED INTERRUPT    XI       10  CS STATUS INTERRUPT ERR  CE
                            1323+*  3  INTERRUPT RECEIVED    IN       11  ISB BITS ON (1-7)        ISBON
                            1324+*
                            1325+*  4  EXPECTED ERR/ATTENT   XE       12  TEST UNIT RESULTS VOID   NG
                            1326+*  5  HARD ERROR FOUND      HE       13  OIO CC ERROR             IOCC
                            1327+*  6  WRONG INTR LEVEL      $LE      14  NO INTERRUPT             NOIN
                            1328+*  7  NO INTR EXPECTED      NI       15  INTERRUPT CC ERROR       INCC
                            1329+*                     BIT    HEX
000020                      1330+MI    EQU    32      0      8       MYSTERY INTERRUPT HAPPENED
000021                      1331+ER    EQU    33      1      4       ERROR RECEIVED ON INTERRUPT
000022                      1332+XI    EQU    34      2      2       EXPECTED INTERRUPT CONTROL BIT
000023                      1333+IN    EQU    35      3      1       INTERRUPT RECEIVED CONTROL BIT
000024                      1334+XE    EQU    36      4      8       EXPECTED ERROR RESPONSE
000025                      1335+HE    EQU    37      5      4       HARD ERROR, 8 RETRIES
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 LOCTR  OBJECT TEXT         STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
000026                      1336+$LE   EQU    38      6      2       INTERRUPT ON WRONG LEVEL ERROR
000027                      1337+NI    EQU    39      7      1       NO INTERRUPT EXPECTED E
000028                      1338+CS    EQU    40      8      8       CYCLE STATUS IN PROGRESS
000029                      1339+CSA   EQU    41      9      4       CYCLE STEAL AVAILABLE
00002A                      1340+CE    EQU    42     10      2       CYCLE STEAL STATUS INERRRUPT ERROR
00002B                      1341+ISBON EQU    43     11      1       ISB BITS ON (1-7)
00002C                      1342+NG    EQU    44     12      8       TEST UNIT RESULTS NO GOOD
00002D                      1343+IOCC  EQU    45     13      4       OIO CC ERROR
00002E                      1344+NOIN  EQU    46     14      2       NO INTERRUPT
00002F                      1345+INCC  EQU    47     15      1       INTERRUPT CC ERROR
                            1346+*
                            1347+**    COMMON BUFFER FOR PRINTING DATA
                            1348+**
002CD6  0000                1350+$TUID DC     A(*-*)                 TEST UNIT IDENTIFICATION
002CD8  0000                1351+$IOIN DC     A(*-*)                 I/O AND INTR CONDITION CODES
002CDA  0000                1352+$ISB  DC     A(*-*)                 R7, INTR STATUS BYTE & DEV ADRS
002CDC  0000                1353+LSTIO DC     A(*-*)                 ADRS OF LAST I/O + 4 BYTES
002CDE  000                 1354+DEV1  DC     A(*-*)                 DEVICE DEPENDENT DATA
002CE0  0000                1355+DEV2  DC     A(*-*)                 *
002CE2  0000                1356+DEV3  DC     A(*-*)                 *
002CE4  0000                1357+DEV4  DC     A(*-*)                 CS STATUS ERROR ISB & INTR CC
002CDE                      1358+SCTID EQU    DEV1                   READ ID BUFFER FOR IBIS & TERN
002CE6                      1359+DCBUF EQU    *                      DCB BUFFER FOR LAST DCB USED
002CE6  0000                1360+DCB1  DC     A(*-*)                 LAST DCB TABLE, CONTROL WORD
002CE8  0000                1361+DCB2  DC     A(*-*)                 LAST DCB TABLE, DEV DEP WORD
002CEA  0000                1362+DCB3  DC     A(*-*)                 LAST DCB TABLE, DEV DEP WORD
002CEC  0000                1363+DCB4  DC     A(*-*)                 LAST DCB TABLE, DEV DEP WORD
002CEE  0000                1364+DCB5  DC     A(*-*)                 LAST DCB TABLE, DEV DEP WORD
002CF0  0000                1365+DCB6  DC     A(*-*)                 LAST DCB TABLE, CHAIN ADRS
002CF2  0000                1366+DCB7  DC     A(*-*)                 LAST DCB TABLE, BYTE COUNT
002CF4  0000                1367+DCB8  DC     A(*-*)                 LAST DCB TABLE, BUFFER ADDRESS
                            1368+*
002CF6                      1369+CSBUF EQU    *                      CYCLE STEAL DATA BUFFER
002CF6  0000                1370+CSTL1 DC     A(*-*)                 CS STATUS WD 0, RESIDUAL ADDRESS
002CF8  0000                1371+CSTL2 DC     A(*-*)                 CS STATUS WD 1, RESIDUAL COUNT
002CFA  0000                1372+CSTL3 DC     A(*-*)                 CS STATUS WD 2, RETRY CNT WD 1
002CFC  0000                1373+CSTL4 DC     A(*-*)                 CS STATUS WD 3, RETRY CNT WD 2
002CFE  0000                1374+CSTL5 DC     A(*-*)                 CS STATUS WD 4, ERROR STATUS WD 1
002D00  0000                1375+CSTL6 DC     A(*-*)                 CS STATUS WD 5, ERROR STATUS WD 2
002D02  0000                1376+CSTL7 DC     A(*-*)                 CS STATUS WD 6, LAST DCB ADDRESS
002D04  0000                1377+CSTL8 DC     A(*-*)                 CS STATUS WD 7, PREVIOUS HD/CYL
002D06  0000                1378+CSTL9 DC     A(*-*)                 CS STATUS WD 8, CURRENT HD/CYL
002D08  0000                1379+CST10 DC     A(*-*)                 CS STATUS WD 9, FLAG/SECTOR
002D0A  0000                1380+CST11 DC     A(*-*)                 CS STATUS WD 10, HEAD/CYLINDER
002D0C  0000                1381+CST12 DC     A(*-*)                 CS STATUS WD 11, DIAG BYTES 1, 2,
002D0E  0000                1382+CST13 DC     A(*-*)                 CS STATUS WD 12, AND 3 + WRAP BYTE
                            1383+*
002D10  0000                1384+$SUBN DC     A(*-*)                 LAST SUBROUTINE ADDRESS USED
002D12  00000000            1385+$DATA DC     2A(*-*)                OPTIONAL DATA
002D16  0021                1386+$INTL DC     X'0021'                INTERRUPT LEVEL REQUESTED
002D18  0000                1387+TURTN DC     A(*-*)                 TEST UNIT RETURN ADRS TO MDI
002D1A  00                  1388+$DVID DC     X'00'                  DEVICE ID
002D1C  19D0                1389+SVCAL DC     A(DEVADD)              ADRS OF DEVICE ADDRESS
002D1E  0000                1390+      DC     A(*-*)                 IBIS CYLINDER ADDRESS
                            1391+**
                            1392+**    THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
                            1393+**    FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
                            1394+**    STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
                            1395+*
002D20  4020 2CD6 7A02      1396+T7A02 MVWI   X'7A02',$TUID           SET UP TEST UNIT ID
002D26  5700                1397+      BXS    (R7)                   RETURN TO MDI SUPVR
                            1399          COPY  COMEQU
                            1400 ********************************************************************************
                            1401 *                                                                              *
                            1402 *                EQUATED NAMES FOR SUPPORTED SVC'S                             *
                            1403 *                                                                              *
                            1404 ********************************************************************************
000000                      1405 OUT   EQU   0                       OUT SVC
000001                      1406 OUTIN EQU   1                       OUTIN SVC
000002                      1407 IDLE  EQU   2                       IDLE SVC
000003                      1408 IDLE5 EQU   3                       IDLE SVC - INDEPENDENT OF CPU TYPE
000004                      1409 CHNGE EQU   4                       CHANGE LEVEL SVC
000005                      1410 PGMCK EQU   5                       ALLOW RETURN ON PROGRAM CHECK SVC
000006                      1411 EXIT  EQU   6                       EXIT SVC
000007                      1412 TERM  EQU   7                       TERMINATE SVC
000008                      1413 RESET EQU   8                       RESET DEVICE SVC
000009                      1414 RID   EQU   9                       READ ID SVC
00000A                      1415 START EQU   10                      START CYCLE STEAL SVC
00000B                      1416 STCSS EQU   11                      START CYCLE STEAL STATUS SVC
00000C                      1417 PREP  EQU   12                      PREPARE DEVICE SVC
00000D                      1418 READ0 EQU   13                      READ WITH FUNCTION BIT 3 OFF SVC
00000E                      1419 READ1 EQU   14                      READ WITH FUNCTION BIT 3 ON SVC
00000F                      1420 RSTAT EQU   15                      READ STATUS SVC
000010                      1421 WRIT0 EQU   16                      WRITE WITH FUNCTION BIT 3 OFF SVC
000011                      1422 WRIT1 EQU   17                      WRITE WITH FUNCTION BIT 3 ON SVC
000012                      1423 CTRL  EQU   18                      CONTROL SVC
000013                      1424 RICB  EQU   19                      RELEASE INTERUPT CONTROL BLOCK SVC
000014                      1425 CICB  EQU   20                      CONNECT INTERUPT CONTROL BLOCK SVC
000015                      1426 HIO   EQU   21                      HALT ALL I/O
000016                      1427 REQSD EQU   22                      REQUEST USE OF DCP DISK SVC
000017                      1428 RELSD EQU   23                      RELEASE USE OF DCP DISK SVC
000018                      1429 HALT  EQU   24                      HALT SVC
000019                      1430 ETOH  EQU   25                      EBCDIC TO HEX SVC (STRING)
00001A                      1431 HTOE  EQU   26                      HEX TO EBCDIC SVC (STRING)
00001B                      1432 ATOH  EQU   27                      ASCII TO HEX SVC (STRING)
00001C                      1433 HTOA  EQU   28                      HEX TO ASCII SVC (STRING)
00001D                      1434 ETOA  EQU   29                      EBCDIC TO ASCII SVC (STRING)
00001E                      1435 ATOE  EQU   30                      ASCII TO EBCDIC SVC (STRING)
00001F                      1436 READI EQU   31                      READ DATA SETS FOR MDI/UTIL
000020                      1437 WRITI EQU   32                      WRITE DATA SETS FOR UTIL
                            1439 ********************************************************************************
                            1440 *                                                                              *
                            1441 *                EQUATES USED BY TU'S AS CONSTANTS                             *
                            1442 *                                                                              *
                            1443 ********************************************************************************
00004E                      1444 PLUS  EQU   C'+'                    PLUS CHAR
000060                      1445 MINUS EQU   C'-'                    MINUS CHAR
000000                      1447 ZERO  EQU   0
000001                      1448 ONE   EQU   1
000002                      1449 TWO   EQU   2
000003                      1450 THREE EQU   3
000004                      1451 FOUR  EQU   4
000005                      1452 FIVE  EQU   5
000006                      1453 SIX   EQU   6
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
000007                     1454 SEVEN  EQU   7
000008                     1455 EIGHT  EQU   8
000009                     1456 NINE   EQU   9
00000A                     1457 TEN    EQU   10
00000B                     1458 ELEVN  EQU   11                                   11
00000C                     1459 TWELV  EQU   12                                   12
00000D                     1460 THRTN  EQU   13                                   13
00000F                     1461 FIVTN  EQU   15                                   15
000010                     1462 SIXTN  EQU   16                                   16
000020                     1463 THRY2  EQU   32                                   32
000040                     1464 SIXT4  EQU   64                                   64
000080                     1465 ONE28  EQU   128                                  128
000100                     1466 TWO56  EQU   256                                  256
000400                     1467 ONEK   EQU   1024                                 1024
000800                     1468 TWOK   EQU   2048                                 2048
000C00                     1469 THREK  EQU   3072                                 3072
001000                     1470 FOURK  EQU   4096                                 4096
FFFFFF                     1472 M1     EQU   -1                                   -1
FFFFFE                     1473 M2     EQU   -2                                   -2
FFFFFD                     1474 M3     EQU   -3                                   -3
FFFFFC                     1475 M4     EQU   -4                                   -4
                           1477 *********************************************************************
                           1478 *                                                                   *
                           1479 *     THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE      *
                           1480 *     BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.    *
                           1481 *                                                                   *
                           1482 *********************************************************************
000000                     1483 BS0    EQU   0
000001                     1484 BS1    EQU   1
000002                     1485 BS2    EQU   2
000003                     1486 BS3    EQU   3
000004                     1487 BS4    EQU   4
000005                     1488 BS5    EQU   5
000006                     1489 BS6    EQU   6
000007                     1490 BS7    EQU   7
000008                     1491 BS8    EQU   8
000009                     1492 BS9    EQU   9
00000A                     1493 BS10   EQU   10
00000B                     1494 BS11   EQU   11
00000C                     1495 BS12   EQU   12
00000D                     1496 BS13   EQU   13
00000E                     1497 BS14   EQU   14
00000F                     1498 BS15   EQU   15
                           1500         COPY  T7A00DCB              10FEB78
                           1501 ** (T7A00DCB)
                           1502 *
                           1503 ***********************************************************4/28/77**********
                           1504 *
                           1505 *     DCB TABLES AND DC'S
                           1506 *
                           1507 *********************************************************************
                           1508 *
                           1509 ***** DIAGNOSTIC DCB   ********
                           1510 *
002D28  2008               1511 DGDCB DC    X'2008'                DIAGNOSTIC DCB
002D2A  0000               1512        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002D2C  0000               1513        DC    A(*-*)                HEAD / CYLINDER#'S
002D2E  0000               1514        DC    X'0000'               NOT USED
002D30  2E02               1515        DC    A(RSBA)               RSB ADDRESS
002D32  0000               1516        DC    A(*-*)                CHAINING ADDRESS
002D34  0100               1517        DC    X'0100'               BYTE COUNT
002D36  0000               1518        DC    A(*-*)                DATA ADDRESS
                           1519 *
                           1520 ***** RECALIBRATE DCB  ********
                           1521 *
002D38  0001               1522 CLDCB DC    X'0001'                RECALIBRATE DCB
002D3A  0000000000000000   1523        DC    7A(*-*)
                           1524 *
                           1525 ***** WRITE SECTOR ID  ********
                           1526 *
002D48  002D               1527 WSDCB DC    X'002D'                WRITE SECTOR ID CNTL WORD
002D4A  0000               1528        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002D4C  0000               1529        DC    A(*-*)                HEAD / CYLINDER#'S
002D4E  0000               1530        DC    X'0000'               NOT USED
002D50  2E02               1531        DC    A(RSBA)               RSB ADDRESS
002D52  0000               1532        DC    A(*-*)                CHAIN ADDRESS
002D54  0004               1533        DC    X'0004'               BYTE COUNT
002D56  2DF6               1534        DC    A(WRSID)              ADDR OF SECTOR ID DATA
                           1535 *
                           1536 ***** READ SECTOR ID DCB  *******
                           1537 *
002D58  201C               1538 RSDCB DC    X'201C'                READ SECTOR ID CNTL WORD
002D5A  0000               1539        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002D5C  0000               1540        DC    X'0000'               HEAD / CYLINDER#'S
002D5E  0000               1541        DC    X'0000'               NOT USED
002D60  2E02               1542        DC    A(RSBA)               RSB ADDRESS
002D62  0000               1543        DC    A(*-*)                CHAIN ADDRESS
002D64  0004               1544        DC    X'0004'               BYTE COUNT FOR READ SECTOR ID
002D66  2CDE               1545        DC    A(SCTID)              SECTOR ID DATA ADDRESS
                           1546 *
                           1547 ***** SEEK DCB  ********
                           1548 *
002D68  0000               1549 SKDCB DC    X'0000'                SEEK DCB CONTROL WORD
002D6A  0000               1550        DC    X'0000'               NOT USED
002D6C  0000               1551        DC    A(*-*)                HEAD / CYLINDER#'S
002D6E  0000               1552        DC    X'0000'               NOT USED
002D70  2E02               1553        DC    A(RSBA)               RSB ADDRESS
002D72  0000               1554        DC    A(*-*)                CHAIN ADDRESS
002D74  0000               1555        DC    X'0000'               NOT USED
002D76  0000               1556        DC    X'0000'               NOT USED
                           1557 *
                           1558 ***** CYCLE STEAL STATUS DCB  ********
                           1559 *
002D78  2000               1560 CSDCB DC    X'2000'                CONTROL WORD
002D7A  0000               1561        DC    F'0'                  NOT USED
002D7C  0000               1562        DC    F'0'                  NOT USED
002D7E  0000               1563        DC    F'0'                  NOT USED
002D80  0000               1564        DC    F'0'                  NOT USED
002D82  0000               1565        DC    F'0'                  NOT USED
002D84  001A               1566        DC    X'001A'               13 WORDS OF STATUS
002D86  2CF6               1567        DC    A(CSBUF)              ADDRESS OF CYCLE STEAL STATUS DATA
                           1568 *
                           1569 ***** WRITE DCB  **********
                           1570 *
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976
002D88  0028               1571 WRDCB DC    X'0028'                WRITE DATA DCB CNTL WORD
002D8A  0000               1572        DC    A(*-*)                FLAG / RECORD#
002D8C  0000               1573        DC    A(*-*)                HEAD / CYLINDER#'S
002D8E  0000               1574        DC    A(*-*)                SCAN / REPEAT COUNT
002D90  2E02               1575        DC    A(RSBA)               RSB ADDRESS
002D92  0000               1576        DC    A(*-*)                CHAIN ADDRESS
002D94  0100               1577        DC    X'0100'               BYTE COUNT
002D96  0000               1578        DC    A(*-*)                WRITE DATA ADDRESS
                           1579 *
                           1580 ***** VERIFY DCB   *******
                           1581 *
002D98  0019               1582 VRDCB DC    X'0019'                CONTROL WORD
002D9A  0000               1583        DC    A(*-*)                FLAG / RECORD#
002D9C  0000               1584        DC    A(*-*)                HEAD / CYLINDER#'S
002D9E  0000               1585        DC    A(*-*)                SCAN / REPEAT COUNT
002DA0  2E02               1586        DC    A(RSBA)               RSB ADDRESS
002DA2  0000               1587        DC    A(*-*)                CHAIN ADDRESS
002DA4  0000               1588        DC    A(*-*)                BYTE COUNT
002DA6  0000               1589        DC    F'0'                  NOT USED
                           1590 *
                           1591 ***** READ DCB   *******
                           1592 *
002DA8  2018               1593 RDDCB DC    X'2018'                READ DCB CONTROL WORD
002DAA  0000               1594        DC    A(*-*)                FLAG / RECORD#
002DAC  0000               1595        DC    A(*-*)                HEAD / CYLINDER#'S
002DAE  0000               1596        DC    A(*-*)                SCAN / REPEAT COUNT
002DB0  2E02               1597        DC    A(RSBA)               RSB ADDRESS
002DB2  0000               1598        DC    A(*-*)                CHAIN ADDRESS
002DB4  0100               1599        DC    X'0100'               BYTE COUNT
002DB6  0000               1600        DC    A(*-*)                READ DATA ADDRESS
                           1601 *
                           1602 ****  WRITE SECTOR ID SKEWED    ****
                           1603 *
002DB8  002F               1604 WKDCB DC    X'002F'                CONTROL WORD
002DBA  0000               1605        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002DBC  0000               1606        DC    A(*-*)                HEAD / CYLINDER#'S
002DBE  0000               1607        DC    F'0'                  NOT USED
002DC0  2E02               1608        DC    A(RSBA)               RSB ADDRESS
002DC2  0000               1609        DC    A(*-*)                CHAIN ADDRESS
002DC4  0004               1610        DC    X'0004'               BYTE COUNT
002DC6  2DF6               1611        DC    A(WRSID)              ADDR OF SECTOR ID DATA
                           1612 *
                           1613 ****  READ SECTOR ID SKEWED    ****
                           1614 *
002DC8  201D               1615 RKDCB DC    X'201D'                CONTROL WORD
002DCA  0000               1616        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002DCC  0000               1617        DC    A(*-*)                HEAD / CYLINDER#'S
002DCE  0000               1618        DC    F'0'                  NOT USED
002DD0  2E02               1619        DC    A(RSBA)               RSB ADDRESS
002DD2  0000               1620        DC    A(*-*)                CHAIN ADDRESS
002DD4  0004               1621        DC    X'0004'               BYTE COUNT
002DD6  2CDE               1622        DC    A(SCTID)              SECTOR ID DATA ADDRESS
                           1623 *
                           1624 ****  READ MULTIPLE SECTOR IDS     ****
                           1625 *
002DD8  201C               1626 RMDCB DC    X'201C'                CONTROL WORD
002DDA  0000               1627        DC    A(*-*)                FLAG / PHYSICAL SECTOR#
002DDC  0000               1628        DC    A(*-*)                HEAD / CYLINDER#'S
002DDE  0000               1629        DC    F'0'                  NOT USED
002DE0  2E02               1630        DC    A(RSBA)               RSB ADDRESS
002DE2  0000               1631        DC    A(*-*)                CHAIN ADDRESS
002DE4  0084               1632        DC    X'0084'               BYTE COUNT
002DE6  2E12               1633        DC    A(ID00)               DATA AREA ADDRESS
                           1634 *
                           1635 *     CONSTANTS AND DEFINED STORAGE  LOCATIONS
002DE8  0000               1636 ZER00 DC    X'0000'                CONSTANT ZERO
002DEA  0001               1637 ONE1  DC    X'0001'                CONSTANT ONE
002DEC  0000               1638 RAY   DC    A(*-*)                 WRITE PARAMETER POINTER
002DEE  EB6D               1639 WDATA DC    X'EB6D'                WRITE DATA
002DF0  6BDB               1640        DC    X'6BDB'               *
002DF2  0000               1641 LGSEC DC    X'0000'                LOGICAL SECTOR #
002DF4  0000               1642 PHYSC DC    X'0000'                CONVERTED PHYSICAL SEC #
002DF6  0000               1643 WRSID DC    X'0000'                FLAG,SECTOR    (WRT SECTOR ID DATA)
002DF8  0000               1644        DC    X'0000'               HEAD,CYLINDER
002DFA  FF34               1645 WSIDT DC    X'FF34'                WRITE SECTOR ID TEST DATA
002DFC  5678               1646        DC    X'5678'               *
002DFE  0000               1647 SCTST DC    X'0000'                READ SECTOR ID TEST DATA BUFFER
002E00  0000               1648        DC    X'0000'
002E02  00000000000000000  1649 RSBA  DC    6A(*-*)                RESIDUAL STATUS BLOCK
002E0E  0000               1650 CTR02 DC    X'0000'                COUNTER
002E10  0000               1651 CTR03 DC    X'0000'                COUNTER
002E12  0000               1652 ID00  DC    X'0000'                ID ADDRESS TO BE SET BY USER
002E14  1010               1653 PDATA DC    X'1010'                WRITE DIAG WORD 1 DATA PATTERNS
002E16  5555               1654        DC    X'5555'               *
002E18  AAAA               1655        DC    X'AAAA'               *
002E1A  FFFF               1656        DC    X'FFFF'               *
                           1657 *
                           1658 ****************************4/06/77**********************************
                           1659 *
                           1660 *  SUBROUTINE
                           1661 *
                           1662 *     PURPOSE
                           1663 *
                           1664 *          COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
                           1665 *
                           1666 *     CALLING SEQUENCE
                           1667 *
                           1668 *          BAL  CMPRW,R6          (NORMAL)
                           1669 *
                           1670 *     RETURN
                           1671 *
                           1672 *          BXS (R6,2)     -   NORMAL
                           1673 *
                           1674 *
                           1675 *********************************************************************
                           1676 *
002E1C  4724 0004          1677 CMPRW MVWI  4,R7                   COMPARE BYTE COUNT
002E20  4324 2CDE          1678       MVA   SCTID,R3               ADDR OF RD SEC ID DATA
002E24  4524 2DF6          1679       MVA   WRSID,R5               ADDR OF WR SEC ID DATA
002E28  2BA6               1680       CFNEN (R3),(R5)              COMPARE ID DATA
002E2A  68C0 0002          1681       BE    (R6,2)                 ECH IF WRITE ID DATA OK
002E2E  68D2 0000          1682       B     (R6)*                  COMPARE ERROR
                           1684 *********************************************************************
                           1685 *
```

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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                         1686 *     EXECUTE INPUT & OUTPUT COMMANDS
                         1687 *     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                         1688 *     EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
                         1689 *     LIST AND ANY SPECIAL SWITCHES BEFOPE BRANCHING TO THE
                         1690 *     SUPVR CALL.
                         1691 *     .
                         1692 *     THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
                         1693 *     .
                         1694 *     1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
                         1695 *     2. ERROR INTERRUPTS RECEIVED FROM SUPVR
                         1696 *
                         1697 *     THIS ROUTINE HAS THE FOLLOWING ENTRIES:
                         1698 *     .
                         1699 * 1   BAL   $RKEW,R6              READ SECTOR ID SKEWED
                         1700 *     .
                         1701 * 2   BAL   $WKEW,R6              WRITE SECTOR ID SKEWED
                         1702 *     .
                         1703 * 3   BAL   $WSEC,R6              WRITE SECTOR ID
                         1704 *     .
                         1705 * 4   BAL   $DIAG,R6              DIAGNOSTIC
                         1706 *     .
                         1707 * 5   BAL   XIOCS,R6              CYCLE STEAL STATUS
                         1708 *     .
                         1709 * 6   BAL   $SEEK,R6              SEEK
                         1710 *     .
                         1711 * 7   BAL   $RECL,R6              RECALIBRATE
                         1712 *     .
                         1713 * 8   BAL   $RDID,R6              READ SECTOR ID
                         1714 *     .
                         1715 * 9   BAL   $RD,R6                READ
                         1716 *     .
                         1717 * 10  BAL   $RDVY,R6              READ VERIFY
                         1718 *     .
                         1719 * 11  BAL   $WRT,R6               WRITE
                         1720 *     .
                         1721 * 12  BAL   $RDIM,R6              READ MULTI SECTOR IDS
                         1722 *
                         1723 ************************************************************
                         1724 *
002E32  4020 304A 2D68   1725 $SEEK MVA   SKDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002E38  507F             1726       J     XIO
                         1727 *
002E3A  4020 304A 2D38   1728 $RECL MVA   CLDCB,IODCB          SET UP BLOCK FOR SVC CALL
002E40  507B             1729       J     XIO
                         1730 *
002E42  4020 304A 2D58   1731 $RDID MVA   RSDCB,IODCB          SET UP BLOCK FOR SVC CALL
002E48  0BBB             1732       MVBI  X'BB',R3            SET BUFFER TO B'S
002E4A  4524 2CDE        1733       MVA   SCTID,R5            SETUP READ SECTOR ID BUFFER ADRS
002E4E  4724 0004        1734       MVWI  4,R7                SETUP BUFFER LENGTH
002E52  2BAC             1735       FFN   R3,(R5)             INIT READ SECTOR ID BUFFER
002E54  4020 2D66 2CDE   1736       MVA   SCTID,RSDCB+14      DATA ADDR
002E5A  506E             1737       J     XIO
                         1738 *
002E5C  4020 304A 2DD8   1739 $RDIM MVA   RMDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002E62  4724 0084        1740       MVWI  132,R7              SET BUFFER LENGTH
002E66  4524 2E12        1741       MVA   ID00,R5             SET BUFFER ADDRESS
002E6A  0BBB             1742       MVBI  X'BB',R3            SET CLEAR CHARACTERS
002E6C  2BAC             1743       FFN   R3,(R5)             CLEAR THE BUFFER
002E6E  5064             1744       J     XIO
                         1745 *
002E70  0BFF             1746 $RD   MVBI  X'FF',R3            SETRD BUFFER TO ALL F'S
002E72  6D08 2DB6        1747       MVW   RDDCB+14,R5         SET UP READ BUFFER ADRS
002E76  6F08 2DB4        1748       MVW   RDDCB+12,R7         SET UP BUFFER LENGTH
002E7A  2BAC             1749       FFN   R3,(R5)             CLEAR READ BUFFER
002E7C  4020 304A 2DA8   1750 $RD$  MVA   RDDCB,IODCB         SET UP BLOCK FOR SVC CALL
002E82  505A             1751       J     XIO
                         1752 *
002E84  4020 304A 2D98   1753 $RDVY MVA   VRDCB,IODCB         SET UP CONTROL BLOCK FOR SVC CALL
002E8A  5056             1754       J     XIO
                         1755 *
002E8C  4020 304A 2D88   1756 $WRT  MVA   WRDCB,IODCB         SET UP CONTROL BLOCK FOR SVC CALL
002E92  5052             1757       J     XIO
                         1758 *
002E94  4020 304A 2DC8   1759 $RKEW MVA   RKDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002E9A  0BBB             1760       MVBI  X'BB',R3            SET BUFFER TO B'S
002E9C  4524 2CDE        1761       MVA   SCTID,R5            SETUP READ SECTOR ID BUFFER ADRS
002EA0  4724 0004        1762       MVWI  4,R7                SETUP BUFFER LENGTH
002EA4  2BAC             1763       FFN   R3,(R5)             INIT READ SECTOR ID BUFFER
002EA6  4020 2DD6 2CDE   1764       MVA   SCTID,RKDCB+14       DATA ADDR
002EAC  5045             1765       J     XIO
                         1766 *
002EAE  4020 304A 2DB8   1767 $WKEW MVA   WKDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002EB4  4020 2DC6 2DF6   1768       MVA   WRSID,WKDCB+14      DATA ADDR
002EBA  503E             1769       J     XIO
                         1770 *
002EBC  4020 304A 2D48   1771 $WSEC MVA   WSDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002EC2  4020 2D56 2DF6   1772       MVA   WRSID,WSDCB+14      DATA ADDR
002EC8  5037             1773       J     XIO
                         1774 *
002ECA  4020 304A 2D28   1775 $DIAG MVA   DGDCB,IODCB          SET UP CONTROL BLOCK FOR SVC CALL
002ED0  5033             1776       J     XIO
                         1777 *
002ED2  6E0D 2CDC        1778 $WRT0 MVW   R6,LSTIO            SAVE IAR FOR RETRY IF REQUESTED
002ED6  0BFF             1779       MVBI  255,R3              CLEAR CYCLE STATUS BUFFER
002ED8  4524 2CF6        1780       MVA   CSBUF,R5            *  TO ALL ONES  *
002EDC  0F16             1781       MVBI  22,R7               *
002EDE  2BAC             1782       FFN   R3,(R5)             *
002EE0  4524 2CE6        1783       MVA   DCBUF,R5            CLEAR DCB BUFFER TO ALL ONES
002EE4  0F10             1784       MVBI  16,R7               *
002EE6  2BAC             1785       FFN   R3,(R5)             *
002EE8  4020 2CD8 0708   1786       MVWI  X'0708',$IOIN       OVERLAY OLD CONDITION CODES
002EEE  CB25 2CDA        1787       MVWZ  $ISB,R3             ZERO OUT OLD ISB VALUE
002EF2  4CA3             1788       TBTR  (R4,IN)             CLEAR INTERRUPT RECEIVED CNTL BIT
002EF4  4CA1             1789       TBTR  (R4,ER)             RESET ANY ERROR BEFORE I/O COMMAND
002EF6  4C62             1790       TBTS  (R4,XI)             SET EXPECTED INTR CONTROL BIT
002EF8  4724 3046        1791       MVA   IOBLK,R7            SET UP CONTROL BLK FOR SUPR
002EFC  C020 304D        1792       MVB   IOMOD+1,R0          GET IDCB FUNC/MODIFIER
002F00  402D 304C 00F0   1793       RBTWI X'00F0',IOMOD       REMOVE FUNCTION FROM 'IOMOD'
002F06  3022             1794       SRL   4,R0                RIGHT JUSTIFY FUNCTION BITS IN R0
002F08  F005             1795       CBI   5,R0                IDCB FUNCTION = 5?
002F0A  1003             1796       JE    $WRT1               YES - ISSUE 'SVC  WRIT1'
002F0C  6010             1797       SVC   WRIT0               ISSUE WRITE DPC '4X' OP
002F0E  6802 2F92        1798       B     XIO8-4              GO WAIT FOR THE INTERRUPT
002F12  6011             1799 $WRT1 SVC   WRIT1               ISSUE WRITE DPC '5X' OP
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 LOCTR  OBJECT TEXT      STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
002F14  6802 2F92        1800       B     XIO8-4              GO WAIT FOR THE INTERRUPT
                         1801 *
002F18  4020 304A 2D88   1802 $DGWR MVA   WRDCB,IODCB         SET UP CONTROL BLK FOR SVC CALL
002F1E  6802 2F3E        1803       B     XIODG               ISSUE START CS DIAG CMD
                         1804 *
002F22  4020 304A 2DA8   1805 $DGRD MVA   RDDCB,IODCB         SET UP CONTROL BLK FOR SVC CALL
002F28  6F08 2DB4        1806       MVW   RDDCB+12,R7         GET NO. OF BYTES TO CLEAR
002F2C  6D08 2DB6        1807       MVW   RDDCB+14,R5         ADDR OF READ BUFFER
002F30  0BFF             1808       MVBI  X'FF',R3            CLEAR TO F'S
002F32  2BAC             1809       FFN   R3,(R5)             *
002F34  6802 2F3E        1810       B     XIODG               ISSUE START CS DIAG CMD
                         1812       COPY  T7AXEQ              09MAR78
                         1813        PRINT OFF
                         2377       T7AXEQ
                         2378+**************************************************************29JUL76**
                         2379+*
                         2380+* SUB-ROUTINE
                         2381+*
                         2382+*     EXECUTE INPUT AND OUTPUT COMMANDS
                         2383+*
                         2384+* PURPOSE
                         2385+*
                         2386+*     TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
                         2387+*     THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
                         2388+*
                         2389+*     1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
                         2390+*        THE I/O COMMAND.
                         2391+*     2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
                         2392+*        ISSUED BY THIS SUBROUTINE.
                         2393+*     3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
                         2394+*        START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
                         2395+*     4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
                         2396+*        SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
                         2397+*        MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
                         2398+*     5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
                         2399+*        EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC  START'.
                         2400+*     6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
                         2401+*        STARTS TO DETERMINE A LOST INTERRUPT.
                         2402+*     7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
                         2403+*        WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
                         2404+*     8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
                         2405+*     9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
                         2406+*    10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
                         2407+*    11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
                         2408+*    12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
                         2409+*        ISSUED BY THIS SUBROUTINE.
                         2410+*    13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
                         2411+*        CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
                         2412+*        COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
                         2413+*
                         2414+* CALLING SEQUENCE
                         2415+*
                         2416+*     THIS ROUTINE HAS THE FOLLOWING ENTRIES:
                         2417+*
                         2418+* --> BAL   XIO         OR        XEQ ANY CYCLE STEAL COMMAND, MOD=0
                         2419+* --> BAL   XIO1                 MOD PARM PRELOADED IN 'IOMOD'
                         2420+* --> BAL   XIOCS,R6    OR        XEQ START CYCLE STEAL STATUS, MOD=F
                         2421+* --> BAL   XIOCS-4,R6           AUTO CS STATUS (FOLLOWING OTHER XIO
                         2422+*     .                         AND DOES NOT POST INTERRUPT STATUS)
                         2423+*
                         2424+* RETURN CONTROL
                         2425+*
                         2426+*     BXS   (R6,2)              RETURN TO USER NO ERROR
                         2427+* OR  B     (R6)*               RETURN AND RETRY ON ERROR
                         2428+**************************************************************
002F38  CB25 304C        2430+XIO   MVWZ  IOMOD,R3            SET MOF OF 0 FOR CYCLE STEAL OP
002F3C  500E             2431+      J     XIO1               CS I/O'S ARE NOT RETRIED
                         2432+*
002F32  4020 304C 000D   2433+XIODG MVWI  X'000D',IOMOD       SET MODIFIER FOR DIAGNOSTIC OPS
002F44  500A             2434+      J     XIO1               GO TO CS OPS
                         2435+*
002F46  4CAA             2436+      TBTR  (R4,CE)            RESET CS STATUS INTER ERROR INDICAT.
002F48  4C68             2437+      TBTS  (R4,CS)            SET 'CYCLE STEAL STATUS' IN PROGRESS
002F4A  0F1A             2438+XIOCS MVBI  CSCB,IODCB         SET UP CONTROL BLOCK FOR SVC CALL
002F50  4020 304C 000F   2439+      MVWI  X'000F',IOMOD       SET CYCLE STEAL MODIFIER
002F56  4C28             2440+      TBT   (R4,CS)            IS CS IN PROGRESS, ERROR CONDITION
002F58  1213             2441+      JON   XIO2               * YES, BYPASS SAVING I/O ADRS
002F5A  6E0D 2CDC        2442+XIO1  MVW   R6,LSTIO           SAVE IAR FOR RETRY IF REQUESTED
002F5E  4324 2CE6        2443+      MVA   DCBUF,R3           SET UP TO ADRS TO MOVE DCB TABLE
002F62  6D08 304A        2444+      MVW   IODCB,R5           * AND THE FROM ADRS, ALONG WITH
002F66  0F1A             2445+      MVBI  26,R7              * THE NUMBER OF MOVES
002F68  2D64             2446+      MVBN  (R5),(R3)          MOVE 1 STATUS WORD AND ADJUST
002F6A  0BFF             2447+      MVBI  255,R3             CLEAR CYCLE STATUS BUFFER
002F6C  4524 2CF6        2448+      MVA   CSBUF,R5           *  TO ALL ONES  *
002F70  0F1A             2449+      MVBI  26,R7              *
002F72  2BAC             2450+      FFN   R3,(R5)            *
002F74  4020 2CD8 0708   2451+      MVWI  X'0708',$IOIN      OVERLAY OLD CONDITION CODES
002F7A  CB25 2CDA        2452+      MVWZ  $ISB,R3            ZERO OUT OLD ISB VALUE
                         2453+*
002F7E  4CA1             2454+      TBTR  (R4,ER)            RESET ANY ERROR BEFORE I/O COMMAND
002F80  4CA3             2455+XIO2  TBTR  (R4,IN)            CLEAR INTERRUPT RECEIVED CNTL BIT
002F82  4724 3046        2456+      MVA   IOBLK,R7           SET UP CONTROL BLOCK FOR SUPVR
002F86  4CA6             2457+      TBTR  (R4,$LE)           RESET LEVEL ERROR INDICATOR
002F88  4C62             2458+      TBTS  (R4,XI)            SET EXPECTED INTR CONTROL BIT
002F8A  600A             2459+      SVC   START              CALL SUPVR FOR I/O COMMAND
                         2460+*
002F8C  4CA7             2461+      TBTR  (R4,NI)            IS AN INTR EXPECTED
002F8E  6AC0 0002        2462+      BN    (R6,2)             * NO, RETURN TO USER
                         2463+*
                         2464+*     THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
                         2465+*
002F92  4524 0000        2466+      MVWI  0,R5               SET UP WORK REG FOR 'LOST INTR'
002F96  4CA3             2467+XIO8  TBTR  (R4,IN)            HAS INTERRUPT BEEN RECEIVED
002F98  1239             2468+      JON   XIOCK              * YES, CHECK IF ALL WAS SATISFACTORY
002F9A  6002             2469+      SVC   IDLE               ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                         2470+*                              SUPVR WILL RETURN HERE
002F9C  6002             2471+      SVC   IDLE               ALLOW ANOTHER PROGRAM A CHANCE TO RUN
                         2472+*                              SUPVR WILL RETURN HERE
002F9E  7DA1 0001        2473+      AWI   1,R5               ADVANCE TIME OUT COUNT
002FA2  18F9             2474+      JNZ   XIO8               BCH IF TIME OUT NOT REACHED
002FA4  4C61             2475+      TBTS  (R4,ER)            SET ON ERROR CONTROL BIT
002FA6  68D2 0000        2476+      B     (R6)*              ERR 'NO INTERRUPT'
                         2478+**************************************************************03FEB76**
                         2479+*
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

                           2480+* SUBROUTINE
                           2481+*
                           2482+*     I/O EXECUTE ERROR HANDLING ROUTINE
                           2483+*
                           2484+* PURPOSE
                           2485+*
                           2486+*     THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
                           2487+*     PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
                           2488+*     SUPERVISOR AND IT WAS NOT ACCEPTED.
                           2489+*
                           2490+* CALLING SEQUENCE
                           2491+*
                           2492+*     SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
                           2493+*
                           2494+* RETURN CONTROL
                           2495+*
                           2496+*     B     (R6)*                    RETURN TO USERS ERROR HANDLER
                           2497+*
                           2498+*************************************************************************
                           2499+*
                           2500+* CC        0= DEVICE NOT ATTACHED
                           2501+* FOR       1= DEVICE BUSY
                           2502+* I/O       2= DEVICE BUSY AFTER RESET
                           2503+*           3= COMMAND REJECT
                           2504+*           4= INTERVENTION REQUIRED
                           2505+*           5= INTERFACE DATA CHECK
                           2506+*           6= CONTROLLER BUSY
                           2507+*           7= I/O COMMAND EXCEPTED
                           2508+*
002FAA  706E               2509+XIOER CPLSR R3                         COPY STATUS ANY LEVEL INTO R3
002FAC  336A               2510+      SRL   13,R3                      POSITION CC CODE TO BITS 13-15
002FAE  C328 2CD8          2511+      MVB   R3,$IOIN                   * PUT IN LOG OUT AREA
002FB2  68D2 0000          2512+      B     (R6)*                      RETURN TO USER ERROR HANDLER
                           2514+*************************************************************14APR76**
                           2515+*                                                                      IL
                           2516+* SUB-ROUTINE                                                         IL
                           2517+*                                                                      IL
                           2518+*     ERROR INTERRUPT              RUNS ON INTERRUPT LEVEL '$INTL'     IL
                           2519+*                                                                      IL
                           2520+* PURPOSE                                                            IL
                           2521+*                                                                      IL
                           2522+*     THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR     IL
                           2523+*     OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE       IL
                           2524+*     EXPECTED CODE.                                                   IL
                           2525+*                                                                      IL
                           2526+* CALLING SEQUENCE                                                   IL
                           2527+*                                                                      IL
                           2528+*     SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT        IL
                           2529+*                                                                      IL
                           2530+* RETURN CONTROL                                                     IL
                           2531+*                                                                      IL
                           2532+*     SVC   EXIT                   RETURN TO USER VIA SUPVR            IL
                           2533+*                                                                      IL
                           2534+*************************************************************************IL
                           2535+*                                                                      IL
                           2536+* CC        0= CONTROLLER END                ISB   0= ADD STATUS      IL
                           2537+* FOR       1= PROGRAM CONTROL INTERRUPT     BITS  1= COMD REJECT     IL
                           2538+* INTR      2= EXCEPTION INTERRUPT           FOR   2= INCOR LENGTH    IL
                           2539+*           3= DEVICE END INTERRUPT          INTR  3= DCB SPEC CK     IL
                           2540+*           4= ATTENTION INTERRUPT                 4= STG DATA CK     IL
                           2541+*           5= ATTENTION / PROGRAM CNTL INTR       5= INV STG ADRS    IL
                           2542+*           6= ATTENTION / EXCEPTION INTR          6= PROTECT CK      IL
                           2543+*           7= ATTENTION / DEVICE END INTR         7= I-FACE DATA     IL
                           2544+*                                                                      IL
002FB6  706E               2545+INTER CPLSR R3                         COPY STATUS ANY LEVEL INTO R3    IL
002FB8  336A               2546+      SRL   13,R3                      POSITION INDICATORS IN R3        IL
002FBA  4424 2CD0          2547+      MVA   OPTN1,R4                   SET UP BASE ADRS                 IL
002FBE  4C28               2548+      TBT   (R4,CS)                    IS CS IN PROGRESS                IL
002FC0  1006               2549+      JOFF  INTES                      * NO                             IL
002FC2  4C6A               2550+      TBTS  (R4,CE)                    TURN ON CYCLE STEAL INTER ERROR  IL
002FC4  6F0D 2CE4          2551+      MVW   R7,DEV4                    SAVE CS ERR ISB VALUE, BITS 0-7  IL
002FC8  C328 2CE5          2552+      MVB   R3,DEV4+1                  * AND THE COND CODE              IL
002FCC  500A               2553+      J     INTR1                                                     IL
002FCE  4C24               2554+INTES TBT   (R4,XE)                    TEST  EXPECTED ATTEN / ERROR IND IL
002FD0  1002               2555+      JOFF  INTET                      BCH IF NOT EXPECTED              IL
002FD2  F304               2556+      CBI   4,R3                       IS THIS AN 'ATTENTION' INTR      IL
002FD4  1006               2557+      JE    INTR1                      * YES,  BCH TO END INTR SEQUENCE IL
002FD6  4C61               2558+INTET TBTS  (R4,ER)                    SET ERROR ON I/O COMMAND CNTL BIT IL
002FD8  5004               2559+      J     INTR1                                                     IL
                           2560+*                                     THE ERROR INTERRUPT USES THE SAME IL
                           2561+*                                     ENDING SEQUENCE AS THE NORMAL INTR IL
                           2563+*************************************************************14APR76IL
                           2564+*                                                                      IL
                           2565+* SOUBROUTINE                                                         IL
                           2566+*                                                                      IL
                           2567+*     OKAY  INTERRUPT              RUNS ON INTERRUPT LEVEL '$INTL'     IL
                           2568+*                                                                      IL
                           2569+* PURPOSE                                                            IL
                           2570+*                                                                      IL
                           2571+*     TO CHECK THE INTERRUPT AND CONTINUE THE TEST                     IL
                           2572+*                                                                      IL
                           2573+* CALLING SEQUENCE                                                   IL
                           2574+*                                                                      IL
                           2575+*     SUPERVISOR WILL ENTER HERE  IF INTR CC IS AS REQUESTED           IL
                           2576+*     THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE          IL
                           2577+*     AFTER THE SPECIAL PART HAS BEEN COMPLETED  AND THE               IL
                           2578+*     COMMON SECTION IS HANDLED HERE.                                  IL
                           2579+*                                                                      IL
                           2580+* RETURN CONTROL                                                     IL
                           2581+*                                                                      IL
                           2582+*     SVC   EXIT                   RETURN TO USER VIA SUPVR            IL
                           2583+*                                                                      IL
                           2584+*************************************************************************IL
002FDA  706E               2585+INTOK CPLSR R3                         COPY STATUS ANY LEVEL INTO R3    IL
002FDC  336A               2586+      SRL   13,R3                      POSITION INDICATORS IN R3        IL
002FDE  4424 2CD0          2587+      MVA   OPTN1,R4                   SET UP BASE ADRS                 IL
002FE2  4C63               2588+INTR1 TBTS  (R4,IN)                    SET   INTERRUPT RECEIVED         IL
002FE4  4C28               2589+      TBT   (R4,CS)                    IS 'CS IN PROGRESS' ON           IL
002FE6  1204               2590+      JON   INTR2                      * YES,  BCH AROUND UPDATE        IL
002FE8  C328 2CD9          2591+      MVB   R3,$IOIN+1                 SAVE INTERRUPTING CC CODE        IL
002FEC  6F0D 2CDA          2592+      MVW   R7,$ISB                    SAVE INTR STATUS AND DEV ADRS    IL
002FF0                     2593+INTR2 EQU   *                                                         IL
                           2594+*     CPCL  R5                         CURRENT LEVEL COPIED BY DCP      IL
002FF0  3521               2595+      SLL   4,R5                       POSITION INTR LEVEL AND PUT      IL
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                                  COPYRIGHT IBM CORP 1976

002FF2  0501               2596+      ABI   1,R5                       * IN 'I' BIT                     IL
002FF4  CD24 2D16          2597+      CW    $INTL,R5                   IS THIS THE CORRECT INTR LEVEL   IL
002FF8  1002               2598+      JE    INTR3                      * YES, GO EXIT THIS LEVEL        IL
002FFA  4C66               2599+      TBTS  (R4,$LE)                   SET INTR LEVEL ERROR CONTROL BIT IL
002FFC  4C61               2600+      TBTS  (R4,ER)                    SET ERROR ON I/O COMMAND CNTL BIT IL
002FFE  4CA2               2601+INTR3 TBTR  (R4,XI)                    WAS INTERRUPT EXPECTED           IL
003000  1204               2602+      JON   INTRX                      * YES, EXIT OFF THIS INTR LEVEL  IL
003002  4C60               2603+      TBTS  (R4,MI)                    * NO, SET MYSTERY INTR CONTROL BIT IL
003004  F304               2604+      CBI   4,R3                       ATTENTION INTERRUPT?             IL
003006  1001               2605+      JE    INTRX                      YES                              IL
003008  4C6C               2606+      TBTS  (R4,NG)                    ERROR,UNEXPECTED INTERRUPT       IL
00300A  6006               2607+INTRX SVC   EXIT                       EXIT THIS LEVEL VIA SUPVR TO PGM IL
                           2609+*************************************************************03FEB76**
                           2610+*
                           2611+*     THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
                           2612+*     HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
                           2613+*     RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
                           2614+*
                           2615+*
00300C  4CA4               2616+XIOCK TBTR  (R4,XE)                    WAS AN ERROR EXPECTED
00300E  6AC0 0002          2617+      BN    (R6,2)                     * YES,  EXIT THIS ROUTINE
003012  4CA8               2618+      TBTR  (R4,CS)                    WAS AUTO CS IN PROGRESS
003014  1006               2619+      JOFF  XIOCV                      * NO,  CONTINUE CHECKING
003016  4C2A               2620+      TBT   (R4,CE)                    IS CS IN AN ERR CONDITION
003018  1002               2621+      JOFF  XIOCQ                      * NO,  BCH
00301A  68D2 0000          2622+      B     (R6)*                      CS ERROR
00301E  4C69               2623+XIOCO TBTS  (R4,CSA)                   TURN ON CS STATS AVAIL FLAG
003020  5601               2624+      BXS   (R6,2)                     GO TO USER
003022  4C21               2625+XIOCV TBT   (R4,ER)                    WAS ERROR INTR CONTROL BIT ON
003024  100D               2626+      JOFF  XIOCX                      * NO,  EXIT THIS ROUTINE
                           2627+*
003026  C520 2CD9          2628+      MVB   $IOIN+1,R5                 GET LAST INTR CC CODE
00302A  F502               2629+      CBI   2,R5                       IS THIS CC=2
00302C  1003               2630+      JE    XIOCQ                      YES
00302E  F506               2631+      CBI   6,R5                       IS THIS CC=6
003030  68D1 0000          2632+      BNE   (R6)*                      * NO,  BCH TO ERROR HANDLER
003034  C520 2CDA          2633+XIOCQ MVB   $ISB,R5                    GET LAST ISB DATA BYTE AND IF CS
003038  6A00 2F46          2634+      BN    XIOCS-4                    * AVAILABLE, GO AND GET IT
00303C  68D2 0000          2635+      B     (R6)*                      ERROR
003040  CB25 2CD4          2636+XIOCX MVWZ  OPTN3,R3                   CLEAR OUT OPTION 3 CNTL BITS
003044  5601               2637+      BXS   (R6,2)                     RETURN TO USER VIA REG 6
                           2638+*
                           2639+*           I/O   PARAMETER LIST
                           2640+*
003046  19D0               2641+IOBLK DC    A(DEVADD)                  ADRS OF DEVICE ADRS
003048  2FAA               2642+      DC    A(XIOER)                   ERROR ROUTINE ADRS
00304A  0000               2643+IODCB DC    A(*-*)                     DCB ADRS OR LEVEL & INTR
00304C  0000               2644+IOMOD DC    A(*-*)                     MODIFIER
00304E  0000               2645+      DC    A(*-*)                     ADRS OF LAST SVC CALL
003050  0000               2646+IORSP DC    A(*-*)                     SECOND WORD OF LAST IDCB
                           2647+*
                           2648+*           INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
                           2649+*
003052  19D0               2650+INTBL DC    A(DEVADD)                  ADRS OF DEVICE ADRS
003054  2FDA               2651+      DC    A(INTOK)                   INTERRUPT OK RETURN ADRS
003056  2FB6               2652+      DC    A(INTER)                   INTERRUPT ERROR ADRS
003058  0003               2653+INTCC DC    X'0003'                    INTERRUPT CODE EXPECTED
                           2655+*************************************************************11MAY76**
                           2656+*
                           2657+* SUBROUTINE
                           2658+*
                           2659+*     CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
                           2660+*
                           2661+* PURPOSE
                           2662+*
                           2663+*     TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                           2664+*     PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
                           2665+*     TO INTERRUPT.
                           2666+*
                           2667+* CALLING SEQUENCE
                           2668+*
                           2669+*     THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                           2670+*
                           2671+* --> BAL   $CONC,R6                   CLEAR DEV DEP STG AND CONNECT I/O BLK
                           2672+* --> BAL   $CONP,R6                   PREPARE DEVICE ONLY, ALREADY CONNECT
                           2673+*
                           2674+* RETURN CONTROL
                           2675+*
                           2676+*     BXS   (R6,2)                     RETURN TO USER VIA REG 6 IF OKAY
                           2677+* OR  B     (R6)*                      IF THE DEVICE COULD NOT BE CONNECTED
                           2678+*
                           2679+*************************************************************************
00305A  0F06               2680+$CONC MVBI  6,R7                       NUMBER OF BYTE TO CLEAR
00305C  0B00               2681+      MVBI  0,R3                       * AND THE DATA TO USE
00305E  4524 2CDE          2682+      MVA   DEV1,R5                    * ALONG WITH THE ADRS TO USE
003062  2BAC               2683+      FFN   R3,(R5)                    *
003064  CB25 2CD4          2684+      MVWZ  OPTN3,R3                   CLEAR OLD CONTROLS FOR NEW ROUTINE
003068  4724 3052          2685+      MVA   INTBL,R7                   SET R7 TO CONTROL BLOCK AND
00306C  6014               2686+      SVC   CICB                       * CONNECT IT TO THIS DEVICE
00306E  6AD0 0000          2687+      BN    (R6)*                      ERROR RETURN TO USER
                           2688+*
003072  8828 2D16 304A     2689+$CONP MVW   $INTL,IODCB                PUT IN LEVEL & INTR PARAMETER
003078  4724 3046          2690+      MVA   IOBLK,R7                   SET R7 TO CONTROL BLOCK TO PREPARE
00307C  4020 2CD8 0708     2691+      MVWI  X'0708',$IOIN              INITIALIZE CONDITION CODE STORAGE
003082  CB25 2CDA          2692+      MVWZ  $ISB,R3                    * AND CLEAR OLD ISB VALUE
003086  6E0D 2CDC          2693+      MVW   R6,LSTIO                   SET UP ADDRESS THAT STARTED LAST I/O
00308A  600C               2694+      SVC   PREP                       * AND CALL ON SUPVR
00308C  5601               2695+      BXS   (R6,2)                     RETURN TO USER
                           2697+*************************************************************06APR76**
                           2698+*
                           2699+* SUBROUTINE
                           2700+*
                           2701+*     DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
                           2702+*
                           2703+* PURPOSE
                           2704+*
                           2705+*     DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
                           2706+*     SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
                           2707+*     BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
                           2708+*
                           2709+* CALLING SEQUENCE
                           2710+*
                           2711+*     THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
                           2712+*
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
                           2713+* --> B     $ERR$                   SET 'NG' BIT AND CONVERT DATA TO LOG
                           2714+* --> B     $CONX                   RETURN TO MDI SUPERVISOR TO TEST STS
                           2715+*
                           2716+* RETURN CONTROL
                           2717+*
                           2718+*       B     TURTN*                 RETURN TO MDI
                           2719+* OR    B     (R6)*                  IF THE DEVICE COULD NOT BE CONNECTED
                           2720+*
                           2721+*************************************************************************
00308E  4020 1818 8000     2722+$ERR$  MVWI    X'8000',TUSTATUS       SET ON 'NO GOOD' STATUS BIT
003094  4724 325E          2723+       MVA     HEBLK,R7               GET ADRS OF CONTROL BLOCK
003098  601A               2724+       SVC     HTOE                   CONVERT HEX TO EBC VIS DCP
00309A  4020 188E 4040     2725+       MVWI    X'4040',TUWORK+116
0030A0  4020 1890 4040     2726+       MVWI    X'4040',TUWORK+118
0030A6  4020 1892 4040     2727+       MVWI    X'4040',TUWORK+120
0030AC  0D04               2728+$PRNT  MVBI    4,R5
0030AE  4324 181A          2729+       MVA     TUWORK,R3              SET UP BUFFER STORAGE
0030B2  6B0D 3256          2730+       MVW     R3,BUFPT
0030B6  4124 3132          2731+       MVA     LINE1,R1
0030BA  0F04               2732+       MVBI    4,R7
0030BC  0E08               2733+       MVBI    8,R6
0030BE  2B24               2734+MVBUF  MVFN    (R3),(R1)
0030C0  0F04               2735+       MVBI    4,R7
0030C2  0A40               2736+       MVBI    X'40',R2
0030C4  C258               2737+       MVB     R2,(R1)+
0030C6  BEFB               2738+       JCT     MVBUF,R6
0030C8  0E08               2739+       MVBI    8,R6
0030CA  7921 002C          2740+       AWI     44,R1
0030CE  BDF7               2741+       JCT     MVBUF,R5
0030D0  4020 1802 F1F0     2742+       MVWI    PIDMSG10,PID+2
0030D6  4020 19B8 325C     2743+       MVA     FAKETU,@DCADD1
0030DC  4020 19BA 3258     2744+       MVA     DC2PT,@DCADD2
0030E2  402C 19C4 0080     2745+       OWI     BIT0080,SUPSTAT
0030E8  4324 2CD6          2746+       MVA     $TUID,R3               SET UP BUFFER STORAGE
0030EC  6F13 18BA          2747+       BAL     TUMSGWTR*,R7           GO TO MESSAGE WRITER
                           2748+*
0030F0                     2749+$CONX  EQU     *
0030F0  C720 19D0          2750+       MVB     DEVADD,R7              GET DEVICE ADDRESS FROM MDI
0030F4  6013               2751+       SVC     RICB                   RELEASE INTERRUPT CONTROL BLOCK
0030F6  6812 2D18          2752+       B       TURTN*                 RETURN TO MDI SUPERVISOR
                           2753+*
0030FA  0009               2754+BEGIN  DC      A(0009)                NUMBER OF LINES TO PRINT
0030FC  0008               2755+       DC      A(0008)                LINE LENGTH = 8 CHAR
0030FE  5C5C40C1C2D6D9E3   2756+       DC      C'** ABORT'
003106  0028               2757+       DC      A(0040)                LINE LENGTH = 40 CHAR
003108  E3E4C9C440C9D6C9D  2758+       DC      C'TUID IOIN ISB  INST SECT  ID  DATA CSCC '
003130  0028               2759+       DC      A(0040)                LINE LENGTH = 40 CHAR
003132  4040404040404040   2760+LINE1  DC      C'                                       '
00315A  0028               2761+       DC      A(0040)                LINE LENGTH = 40 CHAR
00315C  C3D5E3D340C4C3C2F  2762+       DC      C'CNTL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS '
003184  0028               2763+       DC      A(0040)                LINE LENGTH = 40 CHAR
003186  4040404040404040   2764+LINE2  DC      C'                                       '
0031AE  0028               2765+       DC      A(0040)                LINE LENGTH = 40 CHAR
0031B0  C3E260F040C3E260F  2766+       DC      C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 '
0031D8  0028               2767+       DC      A(0040)                LINE LENGTH = 40 CHAR
0031DA  4040404040404040   2768+LINE3  DC      C'                                       '
003202  0028               2769+       DC      A(0040)                LINE LENGTH = 40 CHAR
003204  C3E260F840C3E260F  2770+       DC      C'CS-8 CS-9 CS-A CS-B CS-C               '
00322C  0028               2771+       DC      A(0040)                LINE LENGTH = 40 CHAR
00322E  4040404040404040   2772+LINE4  DC      C'                                       '
                           2773+*
003256  0000               2774+BUFPT  DC      A(*-*)
003258  30FA               2775+DC2PT  DC      A(BEGIN)
00325A  0101               2776+FIXTU  DC      X'0101'
00325C  0101               2777+FAKETU   DC    X'0101'
00F1F0                     2778+PIDMSG10 EQU   X'F1F0'
000080                     2779+BIT0080  EQU   X'0080'
                           2780+*
                           2781+*       DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
                           2782+*
00325E  003A               2783+HEBLK  DC      A(58)                  NUMBER OF BYTES TO CONVERT
003260  2CD6               2784+       DC      A($TUID)               FROM ADRS
003262  181A               2785+       DC      A(TUWORK)              AND THE TO ADRS
                           2786        COPY    T7A10                 10FEB78
                           2787 T7A10 TUIT
                           2788+*****************************************************************06FEB76**
                           2789+*
                           2790+* TEST UNIT
                           2791+*
                           2792+*      ERROR HALT CODE/DIAG SENSE BYTE CHECK
                           2793+*
                           2794+* PURPOSE
                           2795+*
                           2796+*      TO MOVE THE ERROR HALT CODE, STATUS BYTE, AND DIAG BYTES 1,2 3
                           2797+*      TO THE TU RESULTS BUFFER (TURESUL).
                           2798+*      .
                           2799+*      MDI=$TUXX,T7A10,01,0708,EQ
                           2800+*      .
                           2801+*      TURESUL BIT(S) 0-7 ........ ERROR HALT CODE
                           2802+*      .              8-15 ........ STATUS (SENSE) BYTE
                           2803+*      .             16-23 ........ SINGLE SHOT BYTE 1 (5-HURSLEY)
                           2804+*      .             24-31 ........ SINGLE SHOT BYTE 2 (6-HURSLEY)
                           2805+*      .             32-39 ........ SINGLE SHOT BYTE 3 (7-HURSLEY)
                           2806+*      .             48-55 ........ NOT USED
                           2807+*      .             56-63 ........ MULTISAMPLE BYTE 1 (5-HURSLEY)
                           2808+*      .             64-71 ........ MULTISAMPLE BYTE 2 (6-HURSLEY)
                           2809+*      .             72-79 ........ MULTISAMPLE BYTE 3 (7-HURSLEY)
                           2810+*      .             80-87 ........ WRAP BYTE
                           2811+*
                           2812+* CALLING SEQUENCE
                           2813+*
                           2814+       MVW   TUWORK,TURESUL         MOVE ERROR HALT CODE & STATUS BYTES
                           2815+       MVD   TUWORK+6,TURESUL+2     SINGLE SHOT BYTES 1, 2, AND 3
                           2816+       MVD   TUWORK+10,TURESUL+6    MULTISAMPLE BYTES 1, 2, AND 3
                           2817+*                                   AND WRAP BYTE
                           2818+* RETURN CONTROL
                           2819+*
                           2820+*      B     TURTN*                 RETURN TO MDI SUPERVISOR
                           2821+*
                           2822+*************************************************************************
003264  6F0D 2D18          2823+T7A10  MVW   R7,TURTN                SAVE RETURN ADDRESS
003268  4020 2CD6 7A10     2824+       MVWI  X'7A10',$TUID          SAVE TU ID FOR DISPLAY
00326E  4424 2CD0          2825+       MVA   OPTN1,R4               SET UP POINTER ADRS IN R4
003272  6E03 305A          2826+       BAL   $CONC,R6               CLEAR DEV DEP STG AND CONNECT I/O BL
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 LOCTR  OBJECT TEXT        STMT SOURCE STATEMENT                    COPYRIGHT IBM CORP 1976
003276  308E               2827+       DC    A($ERR$)               ERROR ADRS FOR INVALID PREP
                           2828+*
003278  9028 181C 18D2     2829        MVD   TUWORK+2,TURESUL+10    MOVE ERROR WORDS 4,5
00327E  8028 1827 18CD     2830        MVB   TUWORK+13,TURESUL+5    MOVE WRAP CHECK RESULTS
                           2831        TXIT
003284  6802 30F0          2832+       B     $CONX                  RETURN TO MDI CONTROLLER
                           2833+*************************************************************************
000000                     2835        END
```

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
2680	$CONC	ADDRESS. HEX LOCATION(0000305A) IN CSECT(I7A51) LENGTH(2) 2826
2749	$CONX	ADDRESS. HEX LOCATION(000030F0) IN CSECT(I7A51) LENGTH(1) 2832
2722	ERR	ADDRESS. HEX LOCATION(0000308E) IN CSECT(I7A51) LENGTH(6) 2827
1386	$INTL	ADDRESS. HEX LOCATION(00002D16) IN CSECT(I7A51) LENGTH(2) 2597 2689
1351	$IOIN	ADDRESS. HEX LOCATION(00002CD8) IN CSECT(I7A51) LENGTH(2) 1786 2451 2511 2591 2628 2691
1352	$ISB	ADDRESS. HEX LOCATION(00002CDA) IN CSECT(I7A51) LENGTH(2) 1787 2452 2592 2633 2692
1336	$LE	ABSOLUTE. HEX VALUE(00000026) 2457 2599
1350	$TUID	ADDRESS. HEX LOCATION(00002CD6) IN CSECT(I7A51) LENGTH(2) 1396 2746 2784 2824
1799	$WRT1	ADDRESS. HEX LOCATION(00002F12) IN CSECT(I7A51) LENGTH(2) 1796
42	@CALL	ABSOLUTE. HEX VALUE(00000201) 750
102	@DCADD1	ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7A51) LENGTH(1) 2743
103	@DCADD2	ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7A51) LENGTH(1) 2744
39	@FIXT	ABSOLUTE. HEX VALUE(00000101) 669 684 693 696 699 762 765 768 771 804 807 810 813 834 837 840 855 882 951 954 957 978 981 984 1005 1008 1011 1038 1053 1128 1131 1137 1140 1143 1146 1149 1152 1155 1158 1161 1164 1167 1170 1173 1200 1206 1209 1212 1215
38	@QUES	ABSOLUTE. HEX VALUE(00000100) 687 690 756 759 798 801 828 831 945 948 972 975 999 1002 1134 1203
45	@TUXX	ABSOLUTE. HEX VALUE(00000500) 621 633 645 657 672 702 714 726 738 774 786 816 843 858 870 885 897 909 921 933 960 987 1014 1026 1041 1056 1068 1080 1092 1104 1116 1176 1188
2754	BEGIN	ADDRESS. HEX LOCATION(000030FA) IN CSECT(I7A51) LENGTH(2) 2775
2779	BIT0080	ABSOLUTE. HEX VALUE(00000080) 2745
2774	BUFPT	ADDRESS. HEX LOCATION(00003256) IN CSECT(I7A51) LENGTH(2) 2730
1340	CE	ABSOLUTE. HEX VALUE(0000002A) 2436 2550 2620
1425	CICB	ABSOLUTE. HEX VALUE(00000014) 2686
1522	CLDCB	ADDRESS. HEX LOCATION(00002D38) IN CSECT(I7A51) LENGTH(2) 1728
1338	CS	ABSOLUTE. HEX VALUE(00000028) 2437 2440 2548 2589 2618
1339	CSA	ABSOLUTE. HEX VALUE(00000029) 2623
1369	CSBUF	ADDRESS. HEX LOCATION(00002CF6) IN CSECT(I7A51) LENGTH(1) 1567 1780 2448
1560	CSDCB	ADDRESS. HEX LOCATION(00002D78) IN CSECT(I7A51) LENGTH(2) 2438
1359	DCBUF	ADDRESS. HEX LOCATION(00002CE6) IN CSECT(I7A51) LENGTH(1) 1783 2443
2775	DC2PT	ADDRESS. HEX LOCATION(00003258) IN CSECT(I7A51) LENGTH(2) 2744
105	DEVADD	ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7A51) LENGTH(1) 1389 2641 2650 2750
1354	DEV1	ADDRESS. HEX LOCATION(00002CDE) IN CSECT(I7A51) LENGTH(2) 1358 2682
1357	DEV4	ADDRESS. HEX LOCATION(00002CE4) IN CSECT(I7A51) LENGTH(2) 2551 2552
1511	DGDCB	ADDRESS. HEX LOCATION(00002D28) IN CSECT(I7A51) LENGTH(2) 1775
67	DUMMY	ABSOLUTE. HEX VALUE(00000000) 612 1217 1229
1218	ENTPT	ADDRESS. HEX LOCATION(00002AD0) IN CSECT(I7A51) LENGTH(1) 198
1331	ER	ABSOLUTE. HEX VALUE(00000021) 1789 2454 2475 2558 2600 2625
1411	EXIT	ABSOLUTE. HEX VALUE(00000006) 2607
2777	FAKETU	ADDRESS. HEX LOCATION(0000325C) IN CSECT(I7A51) LENGTH(2) 2743
1241	F00013	ADDRESS. HEX LOCATION(00002AEE) IN CSECT(I7A51) LENGTH(1) 685 700 769 772 814 841 856 883 958 985 1012 1039 1054 1129 1138 1144 1147 1150 1153 1156 1162 1165 1168 1171 1207 1213
1265	F00014	ADDRESS. HEX LOCATION(00002BFC) IN CSECT(I7A51) LENGTH(1) 763 805 835 979 1006 1159
1289	F00015	ADDRESS. HEX LOCATION(00002CB8) IN CSECT(I7A51) LENGTH(1) 1216
1237	F00016	ADDRESS. HEX LOCATION(00002AD6) IN CSECT(I7A51) LENGTH(1) 670 697 1141 1174 1201 1210
1269	F00017	ADDRESS. HEX LOCATION(00002C14) IN CSECT(I7A51) LENGTH(1) 766 808 838 955 982 1009
1245	F00049	ADDRESS. HEX LOCATION(00002B06) IN CSECT(I7A51) LENGTH(1) 694
1259	F00075	ADDRESS. HEX LOCATION(00002BB4) IN CSECT(I7A51) LENGTH(1) 751
1273	F00108	ADDRESS. HEX LOCATION(00002C2A) IN CSECT(I7A51) LENGTH(1) 811
1279	F00172	ADDRESS. HEX LOCATION(00002C58) IN CSECT(I7A51) LENGTH(1) 952
1285	F00252	ADDRESS. HEX LOCATION(00002C98) IN CSECT(I7A51) LENGTH(1) 1132
2783	HEBLK	ADDRESS. HEX LOCATION(0000325E) IN CSECT(I7A51) LENGTH(2) 2723
1431	HTOE	ABSOLUTE. HEX VALUE(0000001A) 2724
1407	IDLE	ABSOLUTE. HEX VALUE(00000002) 2469 2471
1652	ID00	ADDRESS. HEX LOCATION(00002E12) IN CSECT(I7A51) LENGTH(2) 1633 1741

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
1333	IN	ABSOLUTE. HEX VALUE(00000023) 1788 2455 2467 2588
2650	INTBL	ADDRESS. HEX LOCATION(00003052) IN CSECT(I7A51) LENGTH(2) 2685
2545	INTER	ADDRESS. HEX LOCATION(00002FB6) IN CSECT(I7A51) LENGTH(2) 2652
2554	INTES	ADDRESS. HEX LOCATION(00002FCE) IN CSECT(I7A51) LENGTH(2) 2549
2558	INTET	ADDRESS. HEX LOCATION(00002FD6) IN CSECT(I7A51) LENGTH(2) 2555
2585	INTOK	ADDRESS. HEX LOCATION(00002FDA) IN CSECT(I7A51) LENGTH(2) 2651
2607	INTRX	ADDRESS. HEX LOCATION(0000300A) IN CSECT(I7A51) LENGTH(2) 2602 2605
2588	INTR1	ADDRESS. HEX LOCATION(00002FE2) IN CSECT(I7A51) LENGTH(2) 2553 2557 2559
2593	INTR2	ADDRESS. HEX LOCATION(00002FF0) IN CSECT(I7A51) LENGTH(1) 2590
2601	INTR3	ADDRESS. HEX LOCATION(00002FFE) IN CSECT(I7A51) LENGTH(2) 2598
2641	IOBLK	ADDRESS. HEX LOCATION(00003046) IN CSECT(I7A51) LENGTH(2) 1791 2456 2690
2643	IODCB	ADDRESS. HEX LOCATION(0000304A) IN CSECT(I7A51) LENGTH(2) 1725 1728 1731 1739 1750 1753 1756 1759 1767 1771 1775 1802 1805 2438 2444 2689
2644	IOMOD	ADDRESS. HEX LOCATION(0000304C) IN CSECT(I7A51) LENGTH(2) 1792 1793 2430 2433 2439
37	I7A51	CSECT. START(00002500) LENGTH(3464) ESDID(1) 37
2760	LINE1	ADDRESS. HEX LOCATION(00003132) IN CSECT(I7A51) LENGTH(40) 2731
1353	LSTIO	ADDRESS. HEX LOCATION(00002CDC) IN CSECT(I7A51) LENGTH(2) 1778 2442 2693
1330	MI	ABSOLUTE. HEX VALUE(00000020) 2603
2734	MVBUF	ADDRESS. HEX LOCATION(000030BE) IN CSECT(I7A51) LENGTH(2) 2738 2741
1342	NG	ABSOLUTE. HEX VALUE(0000002C) 2606
1337	NI	ABSOLUTE. HEX VALUE(00000027) 2461
621	N00001	ADDRESS. HEX LOCATION(00002690) IN CSECT(I7A51) LENGTH(2) 315 1228
633	N00002	ADDRESS. HEX LOCATION(000026AA) IN CSECT(I7A51) LENGTH(2) 318
645	N00003	ADDRESS. HEX LOCATION(000026C2) IN CSECT(I7A51) LENGTH(2) 321
657	N00004	ADDRESS. HEX LOCATION(000026DA) IN CSECT(I7A51) LENGTH(2) 324
669	N00005	ADDRESS. HEX LOCATION(000026F2) IN CSECT(I7A51) LENGTH(2) 327
672	N00006	ADDRESS. HEX LOCATION(000026F6) IN CSECT(I7A51) LENGTH(2) 330 658
684	N00007	ADDRESS. HEX LOCATION(0000270E) IN CSECT(I7A51) LENGTH(2) 333
687	N00008	ADDRESS. HEX LOCATION(00002712) IN CSECT(I7A51) LENGTH(2) 336 673
690	N00009	ADDRESS. HEX LOCATION(00002716) IN CSECT(I7A51) LENGTH(2) 339
693	N00010	ADDRESS. HEX LOCATION(0000271A) IN CSECT(I7A51) LENGTH(2) 342
696	N00011	ADDRESS. HEX LOCATION(0000271E) IN CSECT(I7A51) LENGTH(2) 345 691
699	N00012	ADDRESS. HEX LOCATION(00002722) IN CSECT(I7A51) LENGTH(2) 348 688
702	N00013	ADDRESS. HEX LOCATION(00002726) IN CSECT(I7A51) LENGTH(2) 351 646
714	N00014	ADDRESS. HEX LOCATION(0000273E) IN CSECT(I7A51) LENGTH(2) 354
726	N00015	ADDRESS. HEX LOCATION(00002758) IN CSECT(I7A51) LENGTH(2) 357
738	N00016	ADDRESS. HEX LOCATION(00002772) IN CSECT(I7A51) LENGTH(2) 360
750	N00017	ADDRESS. HEX LOCATION(0000278A) IN CSECT(I7A51) LENGTH(2) 363
756	N00018	ADDRESS. HEX LOCATION(00002796) IN CSECT(I7A51) LENGTH(2) 366 739
759	N00019	ADDRESS. HEX LOCATION(0000279A) IN CSECT(I7A51) LENGTH(2) 369
762	N00020	ADDRESS. HEX LOCATION(0000279E) IN CSECT(I7A51) LENGTH(2) 372
765	N00021	ADDRESS. HEX LOCATION(000027A2) IN CSECT(I7A51) LENGTH(2) 375 760
768	N00022	ADDRESS. HEX LOCATION(000027A6) IN CSECT(I7A51) LENGTH(2) 378 757
771	N00023	ADDRESS. HEX LOCATION(000027AA) IN CSECT(I7A51) LENGTH(2) 381 727
774	N00024	ADDRESS. HEX LOCATION(000027AE) IN CSECT(I7A51) LENGTH(2) 384 715
786	N00025	ADDRESS. HEX LOCATION(000027C6) IN CSECT(I7A51) LENGTH(2) 387
798	N00026	ADDRESS. HEX LOCATION(000027DE) IN CSECT(I7A51) LENGTH(2) 390
801	N00027	ADDRESS. HEX LOCATION(000027E2) IN CSECT(I7A51) LENGTH(2) 393
804	N00028	ADDRESS. HEX LOCATION(000027E6) IN CSECT(I7A51) LENGTH(2) 396
807	N00029	ADDRESS. HEX LOCATION(000027EA) IN CSECT(I7A51) LENGTH(2) 399 802
810	N00030	ADDRESS. HEX LOCATION(000027EE) IN CSECT(I7A51) LENGTH(2) 402 799
813	N00031	ADDRESS. HEX LOCATION(000027F2) IN CSECT(I7A51) LENGTH(2) 405 787
816	N00032	ADDRESS. HEX LOCATION(000027F6) IN CSECT(I7A51) LENGTH(2) 408 775
828	N00033	ADDRESS. HEX LOCATION(0000280E) IN CSECT(I7A51) LENGTH(2) 411
831	N00034	ADDRESS. HEX LOCATION(00002812) IN CSECT(I7A51) LENGTH(2) 414
834	N00035	ADDRESS. HEX LOCATION(00002816) IN CSECT(I7A51) LENGTH(2) 417

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
837	N00036	ADDRESS. HEX LOCATION(0000281A) IN CSECT(I7A51) LENGTH(2) 420 832
840	N00037	ADDRESS. HEX LOCATION(0000281E) IN CSECT(I7A51) LENGTH(2) 423 829
843	N00038	ADDRESS. HEX LOCATION(00002822) IN CSECT(I7A51) LENGTH(2) 426 817
855	N00039	ADDRESS. HEX LOCATION(0000283A) IN CSECT(I7A51) LENGTH(2) 429
858	N00040	ADDRESS. HEX LOCATION(0000283E) IN CSECT(I7A51) LENGTH(2) 432 844
870	N00041	ADDRESS. HEX LOCATION(00002858) IN CSECT(I7A51) LENGTH(2) 435
882	N00042	ADDRESS. HEX LOCATION(00002872) IN CSECT(I7A51) LENGTH(2) 438
885	N00043	ADDRESS. HEX LOCATION(00002876) IN CSECT(I7A51) LENGTH(2) 441 871
897	N00044	ADDRESS. HEX LOCATION(0000288E) IN CSECT(I7A51) LENGTH(2) 444
909	N00045	ADDRESS. HEX LOCATION(000028A6) IN CSECT(I7A51) LENGTH(2) 447
921	N00046	ADDRESS. HEX LOCATION(000028C0) IN CSECT(I7A51) LENGTH(2) 450
933	N00047	ADDRESS. HEX LOCATION(000028D8) IN CSECT(I7A51) LENGTH(2) 453
945	N00048	ADDRESS. HEX LOCATION(000028F0) IN CSECT(I7A51) LENGTH(2) 456
948	N00049	ADDRESS. HEX LOCATION(000028F4) IN CSECT(I7A51) LENGTH(2) 459
951	N00050	ADDRESS. HEX LOCATION(000028F8) IN CSECT(I7A51) LENGTH(2) 462
954	N00051	ADDRESS. HEX LOCATION(000028FC) IN CSECT(I7A51) LENGTH(2) 465 949
957	N00052	ADDRESS. HEX LOCATION(00002900) IN CSECT(I7A51) LENGTH(2) 468 946
960	N00053	ADDRESS. HEX LOCATION(00002904) IN CSECT(I7A51) LENGTH(2) 471 934
972	N00054	ADDRESS. HEX LOCATION(0000291C) IN CSECT(I7A51) LENGTH(2) 474
975	N00055	ADDRESS. HEX LOCATION(00002920) IN CSECT(I7A51) LENGTH(2) 477
978	N00056	ADDRESS. HEX LOCATION(00002924) IN CSECT(I7A51) LENGTH(2) 480
981	N00057	ADDRESS. HEX LOCATION(00002928) IN CSECT(I7A51) LENGTH(2) 483 976
984	N00058	ADDRESS. HEX LOCATION(0000292C) IN CSECT(I7A51) LENGTH(2) 486 973
987	N00059	ADDRESS. HEX LOCATION(00002930) IN CSECT(I7A51) LENGTH(2) 489 961
999	N00060	ADDRESS. HEX LOCATION(0000294A) IN CSECT(I7A51) LENGTH(2) 492
1002	N00061	ADDRESS. HEX LOCATION(0000294E) IN CSECT(I7A51) LENGTH(2) 495
1005	N00062	ADDRESS. HEX LOCATION(00002952) IN CSECT(I7A51) LENGTH(2) 498
1008	N00063	ADDRESS. HEX LOCATION(00002956) IN CSECT(I7A51) LENGTH(2) 501 1003
1011	N00064	ADDRESS. HEX LOCATION(0000295A) IN CSECT(I7A51) LENGTH(2) 504 1000
1014	N00065	ADDRESS. HEX LOCATION(0000295E) IN CSECT(I7A51) LENGTH(2) 507 988
1026	N00066	ADDRESS. HEX LOCATION(00002976) IN CSECT(I7A51) LENGTH(2) 510
1038	N00067	ADDRESS. HEX LOCATION(0000298E) IN CSECT(I7A51) LENGTH(2) 513
1041	N00068	ADDRESS. HEX LOCATION(00002992) IN CSECT(I7A51) LENGTH(2) 516 1027
1053	N00069	ADDRESS. HEX LOCATION(000029AA) IN CSECT(I7A51) LENGTH(2) 519
1056	N00070	ADDRESS. HEX LOCATION(000029AE) IN CSECT(I7A51) LENGTH(2) 522 1042
1068	N00071	ADDRESS. HEX LOCATION(000029C6) IN CSECT(I7A51) LENGTH(2) 525
1080	N00072	ADDRESS. HEX LOCATION(000029E0) IN CSECT(I7A51) LENGTH(2) 528
1092	N00073	ADDRESS. HEX LOCATION(000029FA) IN CSECT(I7A51) LENGTH(2) 531
1104	N00074	ADDRESS. HEX LOCATION(00002A12) IN CSECT(I7A51) LENGTH(2) 534
1116	N00075	ADDRESS. HEX LOCATION(00002A2A) IN CSECT(I7A51) LENGTH(2) 537
1128	N00076	ADDRESS. HEX LOCATION(00002A46) IN CSECT(I7A51) LENGTH(2) 540
1131	N00077	ADDRESS. HEX LOCATION(00002A4A) IN CSECT(I7A51) LENGTH(2) 543 1117
1134	N00078	ADDRESS. HEX LOCATION(00002A4E) IN CSECT(I7A51) LENGTH(2) 546 1105
1137	N00079	ADDRESS. HEX LOCATION(00002A52) IN CSECT(I7A51) LENGTH(2) 549
1140	N00080	ADDRESS. HEX LOCATION(00002A56) IN CSECT(I7A51) LENGTH(2) 552 1135
1143	N00081	ADDRESS. HEX LOCATION(00002A5A) IN CSECT(I7A51) LENGTH(2) 555 1093
1146	N00082	ADDRESS. HEX LOCATION(00002A5E) IN CSECT(I7A51) LENGTH(2) 558 1081
1149	N00083	ADDRESS. HEX LOCATION(00002A62) IN CSECT(I7A51) LENGTH(2) 561 1069
1152	N00084	ADDRESS. HEX LOCATION(00002A66) IN CSECT(I7A51) LENGTH(2) 564 1057
1155	N00085	ADDRESS. HEX LOCATION(00002A6A) IN CSECT(I7A51) LENGTH(2) 567 1015
1158	N00086	ADDRESS. HEX LOCATION(00002A6E) IN CSECT(I7A51) LENGTH(2) 570 922
1161	N00087	ADDRESS. HEX LOCATION(00002A72) IN CSECT(I7A51) LENGTH(2) 573 910
1164	N00088	ADDRESS. HEX LOCATION(00002A76) IN CSECT(I7A51) LENGTH(2) 576 898
1167	N00089	ADDRESS. HEX LOCATION(00002A7A) IN CSECT(I7A51) LENGTH(2) 579 886
1170	N00090	ADDRESS. HEX LOCATION(00002A7E) IN CSECT(I7A51) LENGTH(2) 582 859
1173	N00091	ADDRESS. HEX LOCATION(00002A82) IN CSECT(I7A51) LENGTH(2)

CROSS-REFERENCE LISTING

DECLARED	NAME	ATTRIBUTES AND REFERENCES
		585 703
1176	N00092	ADDRESS. HEX LOCATION(00002A86) IN CSECT(I7A51) LENGTH(2) 588 634
1188	N00093	ADDRESS. HEX LOCATION(00002A9E) IN CSECT(I7A51) LENGTH(2) 591
1200	N00094	ADDRESS. HEX LOCATION(00002AB6) IN CSECT(I7A51) LENGTH(2) 594
1203	N00095	ADDRESS. HEX LOCATION(00002ABA) IN CSECT(I7A51) LENGTH(2) 597 1189
1206	N00096	ADDRESS. HEX LOCATION(00002ABE) IN CSECT(I7A51) LENGTH(2) 600
1209	N00097	ADDRESS. HEX LOCATION(00002AC2) IN CSECT(I7A51) LENGTH(2) 603 1204
1212	N00098	ADDRESS. HEX LOCATION(00002AC6) IN CSECT(I7A51) LENGTH(2) 606 1177
1215	N00099	ADDRESS. HEX LOCATION(00002ACA) IN CSECT(I7A51) LENGTH(2) 609 622
58	OF	ABSOLUTE. HEX VALUE(00000202) 636 648 675 729 846 861 888 900 912 924 936 963 990 1017 1029 1044 1059 1071 1083 1095 1107 1119 1179
57	ON	ABSOLUTE. HEX VALUE(00000200) 624 660 705 717 741 777 789 819 873 1191
1295	OPTN1	ADDRESS. HEX LOCATION(00002CD0) IN CSECT(I7A51) LENGTH(2) 2547 2587 2825
1318	OPTN3	ADDRESS. HEX LOCATION(00002CD4) IN CSECT(I7A51) LENGTH(2) 2636 2684
101	PARMARA	ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7A51) LENGTH(1) 631 643 655 667 682 712 724 736 748 784 796 826 853 868 880 895 907 919 931 943 970 997 1024 1036 1051 1066 1078 1090 1102 1114 1126 1186 1198
69	PID	ADDRESS. HEX LOCATION(00001800) IN CSECT(I7A51) LENGTH(1) 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 2742
2778	PIDMSG10	ABSOLUTE. HEX VALUE(0000F1F0) 2742
1417	PREP	ABSOLUTE. HEX VALUE(0000000C) 2694
1593	RDDCB	ADDRESS. HEX LOCATION(00002DA8) IN CSECT(I7A51) LENGTH(2) 1747 1748 1750 1805 1806 1807
1424	RICB	ABSOLUTE. HEX VALUE(00000013) 2751
1615	RKDCB	ADDRESS. HEX LOCATION(00002DC8) IN CSECT(I7A51) LENGTH(2) 1759 1764
1626	RMDCB	ADDRESS. HEX LOCATION(00002DD8) IN CSECT(I7A51) LENGTH(2) 1739
1649	RSBA	ADDRESS. HEX LOCATION(00002E02) IN CSECT(I7A51) LENGTH(2) 1515 1531 1542 1553 1575 1586 1597 1608 1619 1630
1538	RSDCB	ADDRESS. HEX LOCATION(00002D58) IN CSECT(I7A51) LENGTH(2) 1731 1736
0	R0	REGISTER. HEX VALUE(00000000) 1792 1794 1795
0	R1	REGISTER. HEX VALUE(00000001) 2731 2734 2737 2740
0	R2	REGISTER. HEX VALUE(00000002) 2736 2737
0	R3	REGISTER. HEX VALUE(00000003) 1678 1680 1732 1735 1742 1743 1746 1749 1760 1763 1779 1782 1785 1787 1808 1809 2430 2443 2446 2447 2450 2452 2509 2510 2511 2545 2546 2552 2556 2585 2586 2591 2604 2636 2681 2683 2684 2692 2729 2730 2734 2746
0	R4	REGISTER. HEX VALUE(00000004) 1788 1789 1790 2436 2437 2440 2454 2455 2457 2458 2461 2467 2475 2547 2548 2550 2554 2558 2587 2588 2589 2599 2600 2601 2603 2606 2616 2618 2620 2623 2625 2825
0	R5	REGISTER. HEX VALUE(00000005) 1679 1680 1733 1735 1741 1743 1747 1749 1761 1763 1780 1782 1783 1785 1807 1809 2444 2446 2448 2450 2466 2473 2595 2596 2597 2628 2629 2631 2633 2682 2683 2728 2741
0	R6	REGISTER. HEX VALUE(00000006) 1681 1682 1778 2442 2462 2476 2512 2617 2622 2624 2632 2635 2637 2687 2693 2695 2733 2738 2739 2826
0	R7	REGISTER. HEX VALUE(00000007) 1397 1677 1734 1740 1748 1762 1781 1784 1791 1806 2445 2449 2456 2551 2592 2680 2685 2690 2723 2732 2735 2747 2750 2823
1358	SCTID	ADDRESS. HEX LOCATION(00002CDE) IN CSECT(I7A51) LENGTH(2) 1545 1622 1678 1733 1736 1761 1764
1549	SKDCB	ADDRESS. HEX LOCATION(00002D68) IN CSECT(I7A51) LENGTH(2) 1725
1415	START	ABSOLUTE. HEX VALUE(0000000A) 2459
104	SUPSTAT	ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7A51) LENGTH(1) 2745
92	TUMSGWTR	ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7A51) LENGTH(1) 2747
98	TURESUL	ADDRESS. HEX LOCATION(000018C8) IN CSECT(I7A51) LENGTH(1) 2829 2830
1387	TURTN	ADDRESS. HEX LOCATION(00002D18) IN CSECT(I7A51) LENGTH(2) 2752 2823
74	TUSTATUS	ADDRESS. HEX LOCATION(00001818) IN CSECT(I7A51) LENGTH(1) 2722
75	TUWORK	ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7A51) LENGTH(1) 2725 2726 2727 2729 2785 2829 2830
1396	T7A02	ADDRESS. HEX LOCATION(00002D20) IN CSECT(I7A51) LENGTH(6) 635 647 659 674 704 716 728 740 776 788 818 845 860 872 887 899 911 923 935 962 989 1016 1028 1043 1058 1070 1082 1094 1106 1118 1178 1190
2823	T7A10	ADDRESS. HEX LOCATION(00003264) IN CSECT(I7A51) LENGTH(4) 623

I7A51 --- DORMANT FAILURES P/N=8327683 EC=375222 PAGE 13A

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
1582	VRDCB	ADDRESS. HEX LOCATION(00002D98) IN CSECT(I7A51) LENGTH(2) 1753
1604	WKDCB	ADDRESS. HEX LOCATION(00002DB8) IN CSECT(I7A51) LENGTH(2) 1767 1768
1571	WRDCB	ADDRESS. HEX LOCATION(00002D88) IN CSECT(I7A51) LENGTH(2) 1756 1802
1421	WRIT0	ABSOLUTE. HEX VALUE(00000010) 1797
1422	WRIT1	ABSOLUTE. HEX VALUE(00000011) 1799
1643	WRSID	ADDRESS. HEX LOCATION(00002DF6) IN CSECT(I7A51) LENGTH(2) 1534 1611 1679 1768 1772
1527	WSDCB	ADDRESS. HEX LOCATION(00002D48) IN CSECT(I7A51) LENGTH(2) 1771 1772
1334	XE	ABSOLUTE. HEX VALUE(00000024) 2554 2616
1332	XI	ABSOLUTE. HEX VALUE(00000022) 1790 2458 2601
2430	XIO	ADDRESS. HEX LOCATION(00002F38) IN CSECT(I7A51) LENGTH(4) 1726 1729 1737 1744 1751 1754 1757 1765 1769 1773 1776
2616	XIOCK	ADDRESS. HEX LOCATION(0000300C) IN CSECT(I7A51) LENGTH(2) 2468
2623	XIOCO	ADDRESS. HEX LOCATION(0000301E) IN CSECT(I7A51) LENGTH(2) 2621
2633	XIOCQ	ADDRESS. HEX LOCATION(00003034) IN CSECT(I7A51) LENGTH(4) 2630
2438	XIOCS	ADDRESS. HEX LOCATION(00002F4A) IN CSECT(I7A51) LENGTH(6) 2634
2625	XIOCV	ADDRESS. HEX LOCATION(00003022) IN CSECT(I7A51) LENGTH(2) 2619
2636	XIOCX	ADDRESS. HEX LOCATION(00003040) IN CSECT(I7A51) LENGTH(4) 2626
2433	XIODG	ADDRESS. HEX LOCATION(00002F3E) IN CSECT(I7A51) LENGTH(6) 1803 1810
2509	XIOER	ADDRESS. HEX LOCATION(00002FAA) IN CSECT(I7A51) LENGTH(2) 2642
2442	XIO1	ADDRESS. HEX LOCATION(00002F5A) IN CSECT(I7A51) LENGTH(4) 2431 2434
2455	XIO2	ADDRESS. HEX LOCATION(00002F80) IN CSECT(I7A51) LENGTH(2) 2441
2467	XIO8	ADDRESS. HEX LOCATION(00002F96) IN CSECT(I7A51) LENGTH(2) 1798 1800 2474
62	XTRNL	ABSOLUTE. HEX VALUE(00000001) 754

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