G 16

```
FFFFFFFFFFFFFFF  DDDDDDDDDDDD      LLL
FFFFFFFFFFFFFFF  DDDDDDDDDDDD      LLL
FFFFFFFFFFFFFFF  DDDDDDDDDDDD      LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFFFFFFFFFFF     DDD         DDD  LLL
FFFFFFFFFFFF     DDD         DDD  LLL
FFFFFFFFFFFF     DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDD         DDD  LLL
FFF              DDDDDDDDDDDD     LLLLLLLLLLLLLLL
FFF              DDDDDDDDDDDD     LLLLLLLLLLLLLLL
FFF              DDDDDDDDDDDD     LLLLLLLLLLLLLLL
```

K 8

```
**FILE**ID**FDLDRIVER

FFFFFFFFFF  DDDDDDDD    LL          DDDDDDDD    RRRRRRRR      IIIIII    VV      VV  EEEEEEEEEE  RRRRRRRR
FFFFFFFFFF  DDDDDDDD    LL          DDDDDDDD    RRRRRRRR      IIIIII    VV      VV  EEEEEEEEEE  RRRRRRRR
FF          DD      DD  LL          DD      DD  RR      RR      II      VV      VV  EE          RR      RR
FF          DD      DD  LL          DD      DD  RR      RR      II      VV      VV  EE          RR      RR
FF          DD      DD  LL          DD      DD  RR      RR      II      VV      VV  EE          RR      RR
FF          DD      DD  LL          DD      DD  RR      RR      II      VV      VV  EE          RR      RR
FFFFFFFF    DD      DD  LL          DD      DD  RRRRRRRR        II      VV      VV  EEEEEEEE    RRRRRRRR
FFFFFFFF    DD      DD  LL          DD      DD  RRRRRRRR        II      VV      VV  EEEEEEEE    RRRRRRRR
FF          DD      DD  LL          DD      DD  RR  RR          II      VV      VV  EE          RR  RR
FF          DD      DD  LL          DD      DD  RR  RR          II      VV      VV  EE          RR  RR
FF          DD      DD  LL          DD      DD  RR    RR        II        VV  VV    EE          RR    RR        ....
FF          DD      DD  LL          DD      DD  RR    RR        II        VV  VV    EE          RR    RR        ....
FF          DDDDDDDD    LLLLLLLLLL  DDDDDDDD    RR      RR    IIIIII        VV      EEEEEEEEEE  RR      RR      ....
FF          DDDDDDDD    LLLLLLLLLL  DDDDDDDD    RR      RR    IIIIII        VV      EEEEEEEEEE  RR      RR      ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
%TITLE  'FDLDRIVER'
%SBTTL  'FDL Parse Table Drivers'
MODULE  FDLDRIVER        ( IDENT='V04-000',
                         ADDRESSING_MODE ( EXTERNAL = GENERAL ),
                         ADDRESSING_MODE ( NONEXTERNAL = GENERAL ),
                         OPTLEVEL=3
                         ) =
BEGIN

!****************************************************************************
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!*                                                                          *
!****************************************************************************

!++
!
! Facility:     RMS-32 FDL Utilities
!
! Abstract:
!
! Contents:
!               GET_LINE
!               UPCASE
!               SET_LINE
!               SET_TERM
!               SET_PRIMARY
!               SET_SECONDARY
!               START_STR
!               END_STR
!               SET_DATE_TIME
!               SET_COMMENT
!               SYNTAX_ERROR
!               ERROR_CHK
!               NEGATE
!               SET_BLANK
!               CLR_BLANK
!               FDL$$READ_ERROR
!               RMS_ERROR
!               RMS_OPEN_ERROR
```

```
1 !
1 ! Environment:
1 !
1 !               VAX/VMS Operating System
1 !
1 !--
```

```
1 !
1 !  Author:        Keith B Thompson          Creation date:  January-1981
1 !
1 !
1 !  Modified by:
1 !
1 !          V03-012 KFH0009           Ken Henderson            23 Aug 1983
1 !                  Fix to FDL$$GET_LINE to allow null
1 !                  FDL spec string.
1 !                  Fix calls to GET_VM and FREE_VM.
1 !
1 !          V03-011 KFH0008           Ken Henderson            10 Aug 1983
1 !                  Fixes to END_STR and SET_DATE_TIME
1 !                  Addition of EXTRACT_QUOTE routine
1 !                  Addition of TRIM_LEADING routine
1 !
1 !          V03-010 KFH0007           Ken Henderson            29 Jul 1983
1 !                  Check status of LIB$TPARSE call
1 !
1 !          V03-009 KFH0006           Ken Henderson            26 Apr 1983
1 !                  Fixed call to $BINTIM
1 !
1 !          V03-008 KFH0005           Ken Henderson            30 Dec 1982
1 !                  Fixed broken branches
1 !
1 !          V03-007 KFH0004           Ken Henderson            21 Dec 1982
1 !                  Fixed signal of FDL$_UNSECKW
1 !
1 !          V03-006 KFH0003           Ken Henderson            15-Nov-1982
1 !                  Added support for default and
1 !                  main parses
1 !                  Added support for more than 32
1 !                  secondaries per primary
1 !                  Added move to .FDL$GL_STNUMPTR of
1 !                  .FDL$GL_STMNTNUM
1 !
1 !          V03-005 KFH0002           Ken Henderson            6-Oct-1982
1 !                  Removed numtype
1 !                  Added support for ACL primary
1 !                  Added support for FDL STRINGS
1 !
1 !          V03-004 KFH0001           Ken F. Henderson         28-Jul-1982
1 !                  Changed terminator character from "/" to "\"
1 !
1 !          V03-003 KBT0067           Keith B. Thompson        23-Jun-1982
1 !                  Add support for multiple keywords per line
1 !
1 !          V03-002 KBT0029           Keith Thompson           30-Mar-1982
1 !                  Add upcase/lowercase processing and date/time routine
1 !
1 !          V03-001 KBT0019           Keith Thompson           22-Mar-1982
1 !                  Fix error message processing
1 !
1 !****
```

```
1
1 PSECT
1         OWN     = _FDL$OWN          (PIC),
1         GLOBAL  = _FDL$GLOBAL       (PIC),
1         PLIT    = _FDL$PLIT         (SHARE,PIC),
1         CODE    = _FDL$CODE         (SHARE,PIC);
1
1 LIBRARY 'SYS$LIBRARY:STARLET';
1 REQUIRE 'SRC$:FDLUTIL';
1 REQUIRE 'LIB$:FDLPARDEF';
1
1 EXTERNAL ROUTINE
1         FDL$$GET_VM,
1         FDL$$FREE_VM,
1         LIB$TPARSE,
1         STR$TRIM,
1         SYS$BINTIM;
1
1 DEFINE_ERROR_CODES;
1
1 FORWARD ROUTINE
1         EXTRACT_QUOTE,
1         TRIM_LEADING,
1         UPCASE                      : NOVALUE,
1         FDL$$SET_PRIMARY,
1         FDL$$SET_SECONDARY,
1         FDL$$START_STR,
1         FDL$$END_STR,
1         FDL$$SET_COMMENT,
1         FDL$$SYNTAX_ERROR,
1         FDL$$ERROR_CHK,
1         FDL$$READ_ERROR             : NOVALUE;
1
1 EXTERNAL
1
1 !       Parse control
1 !
1         FDL$AB_LINE                 : DESC_BLK,
1         FDL$AB_UPCASED              : DESC_BLK,
1         FDL$AB_ITEM                 : DESC_BLK,
1         FDL$AB_FDL_STRING           : DESC_BLK,
1         FDL$AB_PRE_PARSE_BLOCK      : BLOCK [ ,BYTE ],
1         FDL$AB_PRE_PARSE_STATE,
1         FDL$AB_PRE_PARSE_KEY,
1         FDL$GL_STNUMPTR,
1         FDL$GL_MAXLINE,
1         FDL$AB_CTRL                 : BLOCK [ ,BYTE ],
1         FDL$GL_PRIMARY,
1         FDL$GL_PRINUM,
1         FDL$AB_PRICTRL              : BLOCK [ ,BYTE ],
1         FDL$GL_SECONDARY,
1         FDL$GL_SECNUM,
1         FDL$AB_SECCTRL              : BITVECTOR [ FDL$K_SCTRL_VEC ],
1         FDL$AB_SECCTRLL             : VECTOR [ FDL$K_SCTRL_LONG, LONG ],
1         FDL$GL_QUALIFIER,
1         FDL$GL_NUMBER,
1         FDL$GL_SWITCH,
0897 1          FDL$GL_PROTECTION,
0898 1          FDL$AL_DATE_TIME        : VECTOR [ ,LONG ],
0899 1          FDL$AB_STRING           : DESC_BLK,
0900 1          FDL$AB_COMMENT          : DESC_BLK,
0901 1          FDL$GL_STMNTNUM,
0902 1          FDL$AB_FDL_RAB          : $RAB_DECL;
0903 1
0904 1 LITERAL
0905 1          SMALL_A         = 97,           ! ASCII character "a"
0906 1          SMALL_Z         = 122,          ! ASCII character "z"
0907 1          UPCASE_MASK     = 32,           ! Mask to convert to upercase ASCII
0908 1          COMMENT_MARK    = 33;           ! ASCII character "!"
0909 1
0910 1 OWN
0911 1          STRING_DESC     : DESC_BLK;
```

```
1 %SBTTL  'GET_LINE'
1 GLOBAL ROUTINE  FDL$$GET_LINE =
1 !++
1 !
1 ! Functional Description:
1 !
1 !         Set up a new item for the parse tables.  If there are no
1 !         more items on a line it then reads from the input file (or uses
1 !         the FDL STRING)
1 !         It then upcases it; inits some values and returns
1 !
1 ! Calling Sequence:
1 !
1 !         Called from the parse tables
1 !
1 ! Input Parameters:
1 !         none
1 !
1 ! Implicit Inputs:
1 !         none
1 !
1 ! Output Parameters:
1 !         none
1 !
1 ! Implicit Outputs:
1 !         none
1 !
1 ! Routine Value:
1 !         none
1 !
1 ! Side Effects:
1 !         none
1 !
1 !--
1
2     BEGIN
2
2     TPARSE_ARGS;
2
2     ! Main processing loop
2     !
2     DO
3         BEGIN
3
3         ! If there are no more items in the line get a new line
3         !
3         IF .FDL$AB_ITEM [ DSC$W_LENGTH ] EQL 0
3         THEN
4             BEGIN
4
4             IF .FDL$AB_CTRL [ FDL$V_STRING_SPEC ]
4             THEN
5                 BEGIN
5
5                 ! Only go thru once for the string.
5                 ! Don't go thru at all if the string is null.
5                 !
```

```
6                   IF (
7                   (.FDL$AB_CTRL [ FDL$V_USED_STRING ])
6                   OR
7                   (.FDL$AB_FDL_STRING [ DSC$W_LENGTH ] EQLU 0)
5                   ) THEN
5                       RETURN 0;
5
5                   CH$MOVE ( .FDL$AB_FDL_STRING [ DSC$W_LENGTH ],
5                             .FDL$AB_FDL_STRING [ DSC$A_POINTER ],
5                             .FDL$AB_LINE [ DSC$A_POINTER ] );
5
5                   FDL$AB_LINE [ DSC$W_LENGTH ] = .FDL$AB_FDL_STRING [ DSC$W_LENGTH ];
5                   FDL$AB_CTRL [ FDL$V_USED_STRING ] = _SET;
5
5                   END
4               ELSE
5                   BEGIN
5
5                   ! Loop until we get a non-zero line
5                   !
5                   DO
6                       BEGIN
6
6                       ! Get the new line from the FDL file.
6                       !
6                       RET_ON_ERROR( $GET ( RAB=FDL$AB_FDL_RAB,ERR=FDL$$READ_ERROR ) );
6
6                       END
6
6                   UNTIL ( FDL$AB_LINE [ DSC$W_LENGTH ] =
5                                           .FD[$AB_FDL_RAB [ RAB$W_RSZ ] ) NEQ 0;
5
4                   END;
4
4               ! Up case the whole line and move it into the upcase buffer
4               !
4               UPCASE();
4
4               ! Point the tables to the upcased line
4               !
4               FDL$AB_ITEM [ DSC$A_POINTER ] = .FDL$AB_UPCASED [ DSC$A_POINTER ]
4
3               END;
3
3           ! Point to the next item
3           !
3           FDL$AB_ITEM [ DSC$A_POINTER ] = .FDL$AB_ITEM [ DSC$A_POINTER ] +
3                                                   .FDL$AB_ITEM [ DSC$W_LENGTH ];
3
4           BEGIN
4
4           ! Get the string
4           !
4           FDL$AB_PRE_PARSE_BLOCK [ TPA$L_STRINGCNT ] =
4                                           .FDL$AB_UPCASED [ DSC$W_LENGTH ]
5                                           - (
5                                               .FDL$AB_ITEM [ DSC$A_POINTER ]
```

```
                                        - .FDL$AB_UPCASED [ DSC$A_POINTER ]
                                        );
        FDL$AB_PRE_PARSE_BLOCK [ TPA$L_STRINGPTR ] = .FDL$AB_ITEM [ DSC$A_POINTER ];

        ! Find where to chop it off - the Tparse will set these flags if
        ! it finds " or '
        !
        FDL$AB_CTRL [ FDL$V_QUOTE_PRES ] = _CLEAR;
        FDL$AB_CTRL [ FDL$V_APOST_PRES ] = _CLEAR;

        RET_ON_ERROR ( LIB$TPARSE (
        FDL$AB_PRE_PARSE_BLOCK,FDL$AB_PRE_PARSE_STATE,FDL$AB_PRE_PARSE_KEY ));

        ! Now set up the main tparse block to find our 'line'
        !
        TPARSE_BLOCK [ TPA$L_STRINGPTR ] = .FDL$AB_ITEM [ DSC$A_POINTER ];
        TPARSE_BLOCK [ TPA$L_STRINGCNT ] =
                  .FDL$AB_PRE_PARSE_BLOCK [ TPA$L_STRINGPTR ]
                  - .FDL$AB_ITEM [ DSC$A_POINTER ];

        FDL$AB_ITEM [ DSC$W_LENGTH ] = .TPARSE_BLOCK [ TPA$L_STRINGCNT ];

        END      ! of local

        END      ! of main loop

    UNTIL .FDL$AB_ITEM [ DSC$W_LENGTH ] NEQ 0;

    FDL$GL_STMNTNUM = .FDL$GL_STMNTNUM + 1;

    ! Update the user's cell that contains the statement number.
    !
    IF .FDL$AB_CTRL [ FDL$V_STVALID ]
    THEN
        .FDL$GL_STNUMPTR = .FDL$GL_STMNTNUM;

    ! Since there is a new secondary for each item clear some flags
    !
    FDL$GL_SECONDARY    = _CLEAR;
    FDL$GL_SECNUM       = _CLEAR;
    FDL$GL_SWITCH       = _CLEAR;
    FDL$GL_PROTECTION   = _CLEAR;
    FDL$AB_STRING [ DSC$W_LENGTH ] = 0;
    FDL$AB_CTRL [ FDL$V_WARNING ] = _CLEAR;
    FDL$AB_CTRL [ FDL$V_COMMENT ] = _CLEAR;
    FDL$AB_CTRL [ FDL$V_LINECMT ] = _CLEAR;

    RETURN SS$_NORMAL

    END;

                                                  .TITLE  FDLDRIVER VAX-11 FDL Utilities
                                                  .IDENT  \V04-000\

                                                  .PSECT  _FDL$OWN,NOEXE,  PIC,2
```

```
                                   00000 STRING_DESC:
                                              .BLKB    8

                                              .EXTRN   FDL$$GET_VM, FDL$$FREE_VM
                                              .EXTRN   LIB$TPARSE, STR$TRIM
                                              .EXTRN   SYS$BINTIM, FDL$_FACILITY
                                              .EXTRN   FDL$_FAO_MAX, FDL$_ABKW
                                              .EXTRN   FDL$_ABPRIKW, FDL$_CREATE
                                              .EXTRN   FDL$_CREATED, FDL$_CREATEDSTM
                                              .EXTRN   FDL$_FDLERROR, FDL$_ILL_ARG
                                              .EXTRN   FDL$_INSVIRMEM, FDL$_INVBLK
                                              .EXTRN   FDL$_INVDATIM, FDL$_MULPRI
                                              .EXTRN   FDL$_MULSEC, FDL$_NOQUAL
                                              .EXTRN   FDL$_NULLPRI, FDL$_OPENFDL
                                              .EXTRN   FDL$_OUTORDER, FDL$_OPENOUT
                                              .EXTRN   FDL$_WRITEERR, FDL$_READERR
                                              .EXTRN   FDL$_RFLOC, FDL$_TITLE
                                              .EXTRN   FDL$_SYNTAX, FDL$_VALPRI
                                              .EXTRN   FDL$_UNQUAKW, FDL$_UNPRIKW
                                              .EXTRN   FDL$_UNSECKW, FDL$_WARNING
                                              .EXTRN   FDL$AB_LINE, FDL$AB_UPCASED
                                              .EXTRN   FDL$AB_ITEM, FDL$AB_FDL_STRING
                                              .EXTRN   FDL$AB_PRE_PARSE_BLOCK
                                              .EXTRN   FDL$AB_PRE_PARSE_STATE
                                              .EXTRN   FDL$AB_PRE_PARSE_KEY
                                              .EXTRN   FDL$GL_STNUMPTR
                                              .EXTRN   FDL$GL_MAXLINE, FDL$AB_CTRL
                                              .EXTRN   FDL$GL_PRIMARY, FDL$GL_PRINUM
                                              .EXTRN   FDL$AB_PRICTRL, FDL$GL_SECONDARY
                                              .EXTRN   FDL$GL_SECNUM, FDL$AB_SECCTRL
                                              .EXTRN   FDL$AB_SECCTRLL
                                              .EXTRN   FDL$GL_QUALIFIER
                                              .EXTRN   FDL$GL_NUMBER, FDL$GL_SWITCH
                                              .EXTRN   FDL$GL_PROTECTION
                                              .EXTRN   FDL$AL_DATE_TIME
                                              .EXTRN   FDL$AB_STRING, FDL$AB_COMMENT
                                              .EXTRN   FDL$GL_STMNTNUM
                                              .EXTRN   FDL$AB_FDL_RAB, SYS$GET

                                              .PSECT   _FDL$CODE,NOWRT,  SHR,  PIC,2

                           0FFC 00000         .ENTRY   FDL$$GET_LINE, Save R2,R3,R4,R5,R6,R7,R8,-  ; 0913
                                                       R9,R10,R11                                  ;
         5B 00000000G  00   9E 00002          MOVAB    FDL$AB_FDL_STRING, R11                      ;
         5A 00000000G  00   9E 00009          MOVAB    FDL$AB_PRE_PARSE_BLOCK+12, R10              ;
         59 00000000G  00   9E 00010          MOVAB    FDL$AB_CTRL, R9                             ;
         58 00000000G  00   9E 00017          MOVAB    FDL$AB_ITEM, R8                             ;
         57            68   3C 0001E          MOVZWL   FDL$AB_ITEM, R7                             ; 0958
                       62   12 00021          BNEQ     6$                                          ;
2B     01  A9          04   E1 00023 1$:      BBC      #4, FDL$AB_CTRL+1, 4$                       ; 0962
03     01  A9          05   E1 00028          BBC      #5, FDL$AB_CTRL+1, 3$                       ; 0970
                     00EE   31 0002D 2$:      BRW      10$                                         ;
                       6B   B5 00030 3$:      TSTW     FDL$AB_FDL_STRING                           ; 0972
                       F9   13 00032          BEQL     2$                                          ;
         56            6B   3C 00034          MOVZWL   FDL$AB_FDL_STRING, R6                       ; 0976
         51        04  AB   D0 00037          MOVL     FDL$AB_FDL_STRING+4, R1                     ; 0977
         50 00000000G  00   D0 0003B          MOVL     FDL$AB_LINE+4, R0                           ; 0978
```

```
                 60          61           56  28 00042          MOVC3   R6, (R1), (R0)                                ;
         00000000G           00           56  B0 00046          MOVW    R6, FDL$AB_LINE                                ; 0980
                01           A9           20  88 0004D          BISB2   #32, FDL$AB_CTRL+1                             ; 0981
                                          23  11 00051          BRB     5$                                             ; 0962
                    00000000V             00  9F 00053 4$:      PUSHAB  FDL$$READ_ERROR                                ; 0994
                    00000000G             00  9F 00059          PUSHAB  FDL$AB_FDL_RAB                                 ;
         00000000G           00           02  FB 0005F          CALLS   #2, SYS$GET                                    ;
                             59           50  E9 00066          BLBC    STATUS, 7$                                     ;
         00000000G  00  00000000G         00  B0 00069          MOVW    FDL$AB_FDL_RAB+34, FDL$AB_LINE                 ; 0999
                                          DD  13 00074          BEQL    4$                                             ;
         00000000V           00           00  FB 00076 5$:      CALLS   #0, UPCASE                                     ; 1005
                04           A8  00000000G 00  D0 0007D          MOVL    FDL$AB_UPCASED+4, FDL$AB_ITEM+4                ; 1009
                             50           68  3C 00085 6$:      MOVZWL  FDL$AB_ITEM, R0                                ; 1016
                04           A8           50  C0 00088          ADDL2   R0, FDL$AB_ITEM+4                              ;
                             51      04   A8  D0 0008C          MOVL    FDL$AB_ITEM+4, R1                              ; 1025
            50   00000000G   00           51  C3 00090          SUBL3   R1, FDL$AB_UPCASED+4, R0                       ; 1026
                             52  00000000G 00  3C 00098          MOVZWL  FDL$AB_UPCASED, R2                             ; 1024
      FC        AA           50           52  C1 0009F          ADDL3   R2, R0, FDL$AB_PRE_PARSE_BLOCK+8               ;
                             6A           51  D0 000A4          MOVL    R1, FDL$AB_PRE_PARSE_BLOCK+12                  ; 1028
                01           A9      C0   8F  8A 000A7          BICB2   #192, FDL$AB_CTRL+1                            ; 1034
                    00000000G             00  9F 000AC          PUSHAB  FDL$AB_PRE_PARSE_KEY                           ; 1037
                    00000000G             00  9F 000B2          PUSHAB  FDL$AB_PRE_PARSE_STATE                         ;
                           F4             AA  9F 000B8          PUSHAB  FDL$AB_PRE_PARSE_BLOCK                         ;
         00000000G           00           03  FB 000BB          CALLS   #3, LIB$TPARSE                                 ;
                             5B           50  E9 000C2 7$:      BLBC    STATUS, 11$                                    ;
                             50      04   A8  D0 000C5          MOVL    FDL$AB_ITEM+4, R0                              ; 1041
                0C           AC           50  D0 000C9          MOVL    R0, 12(TPARSE_BLOCK)                           ;
      08        AC           6A           50  C3 000CD          SUBL3   R0, FDL$AB_PRE_PARSE_BLOCK+12, -               ; 1044
                                                                        8(TPARSE_BLOCK)                                ;
                             68      08   AC  B0 000D2          MOVW    8(TPARSE_BLOCK), FDL$AB_ITEM                   ; 1046
                             57           68  3C 000D6          MOVZWL  FDL$AB_ITEM, R7                                ; 1052
                                          03  12 000D9          BNEQ    8$                                             ;
                                     FF45     31 000DB          BRW     1$                                             ;
                    00000000G             00  D6 000DE 8$:      INCL    FDL$GL_STMNTNUM                                ; 1054
      0E        02           A9           02  E1 000E4          BBC     #2, FDL$AB_CTRL+2, 9$                          ; 1058
                             50  00000000G 00  D0 000E9          MOVL    FDL$GL_STNUMPTR, R0                            ; 1060
                             60  00000000G 00  D0 000F0          MOVL    FDL$GL_STMNTNUM, (R0)                          ;
                    00000000G             00  D4 000F7 9$:      CLRL    FDL$GL_SECONDARY                               ; 1064
                    00000000G             00  D4 000FD          CLRL    FDL$GL_SECNUM                                  ; 1065
                    00000000G             00  D4 00103          CLRL    FDL$GL_SWITCH                                  ; 1066
                    00000000G             00  D4 00109          CLRL    FDL$GL_PROTECTION                              ; 1067
                    00000000G             00  B4 0010F          CLRW    FDL$AB_STRING                                  ; 1068
                             69     0308  8F  AA 00115          BICW2   #776, FDL$AB_CTRL                              ; 1071
                             50           01  D0 0011A          MOVL    #1, R0                                         ; 1073
                                              04 0011D          RET                                                    ;
                                          50  D4 0011E 10$:     CLRL    R0                                             ; 1075
                                              04 00120 11$:     RET                                                    ;

; Routine Size:  289 bytes,    Routine Base:  _FDL$CODE + 0000
```

```
1 %SBTTL  'UPCASE'
1 ROUTINE UPCASE : NOVALUE =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       Upcases the input line while moving it into the upcase buffer
1 !
1 ! Calling Sequence:
1 !
1 !       UPCASE()
1 !
1 ! Input Parameters:
1 !       none
1 !
1 ! Implicit Inputs:
1 !
1 !       FDL$AB_LINE     - Descriptor of the input line
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !
1 !       FDL$AB_UPCASED  - Descriptor of the upcased input line
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2    BEGIN
2
2    LOCAL
2       CHAR    : REF VECTOR [ ,BYTE ],
2       UPCR    : REF VECTOR [ ,BYTE ];
2
2    ! Point to the string of characters and the upcase buffer
2    !
2    CHAR = .FDL$AB_LINE [ DSC$A_POINTER ];
2    UPCR = .FDL$AB_UPCASED [ DSC$A_POINTER ];
2
2    ! Loop for all the characters in a line
2    !
2    INCR I FROM 0 TO ( .FDL$AB_LINE [ DSC$W_LENGTH ] - 1 ) BY 1
2    DO
2
2       ! If the char. is a lower case letter upcase it
2       ! else just copy it over
2       !
3       IF ( .CHAR [ .I ] GEQU SMALL_A ) AND ( .CHAR [ .I ] LEQU SMALL_Z )
2       THEN
3          UPCR [ .I ] = .CHAR [ .I ] AND ( NOT UPCASE_MASK )
2       ELSE
```

```
;  415        1133  2             UPCR [ .I ] = .CHAR [ .I ];
;  416        1134  2
;  417        1135  2         ! Set the length of the upcased line
;  418        1136  2         !
;  419        1137  2         FDL$AB_UPCASED [ DSC$W_LENGTH ] = .FDL$AB_LINE [ DSC$W_LENGTH ];
;  420        1138  2
;  421        1139  2         RETURN
;  422        1140  2
;  423        1141  1         END;



                                          000C 00000 UPCASE: .WORD    Save R2,R3                          ; 1077
                   51 00000000G   00        D0 00002         MOVL     FDL$AB_LINE+4, CHAR                 ; 1118
                   50 00000000G   00        D0 00009         MOVL     FDL$AB_UPCASED+4, UPCR              ; 1119
                   53 00000000G   00        3C 00010         MOVZWL   FDL$AB_LINE, R3                     ; 1123
                   52             01        CE 00017         MNEGL    #1, I                               ; 1131
                                  1B        11 0001A         BRB      3$                                  ;
             61     8F          6241        91 0001C 1$:     CMPB     (I)[CHAR], #97                      ; 1129
                                  0F        1F 00021         BLSSU    2$                                  ;
             7A     8F          6241        91 00023         CMPB     (I)[CHAR], #122                     ;
                                  08        1A 00028         BGTRU    2$                                  ;
       6240         6241          20        8B 0002A         BICB3    #32, (I)[CHAR], (I)[UPCR]           ; 1131
                                  05        11 00030         BRB      3$                                  ;
                    6240        6241        90 00032 2$:     MOVB     (I)[CHAR], (I)[UPCR]                ; 1133
            E1        52          53        F2 00037 3$:     AOBLSS   R3, I, 1$                           ; 1129
         00000000G    00          53        B0 0003B         MOVW     R3, FDL$AB_UPCASED                  ; 1137
                                            04 00042         RET                                          ; 1141

; Routine Size:  67 bytes,    Routine Base:  _FDL$CODE + 0121
;  425          1142  1 %SBTTL  'SET_LINE'
;  426          1143  1 GLOBAL ROUTINE  FDL$$SET_LINE =
;  427          1144  1 !++
;  428          1145  1 !
;  429          1146  1 ! Functional Description:
;  430          1147  1 !
;  431          1148  1 ! Calling Sequence:
;  432          1149  1 !
;  433          1150  1 ! Input Parameters:
;  434          1151  1 !       none
;  435          1152  1 !
;  436          1153  1 ! Implicit Inputs:
;  437          1154  1 !       none
;  438          1155  1 !
;  439          1156  1 ! Output Parameters:
;  440          1157  1 !       none
;  441          1158  1 !
;  442          1159  1 ! Implicit Outputs:
;  443          1160  1 !       none
;  444          1161  1 !
;  445          1162  1 ! Routine Value:
;  446          1163  1 !       none
;  447          1164  1 !
;  448          1165  1 ! Side Effects:
;  449          1166  1 !       none
;  450          1167  1 !
;  451          1168  1 !--
;  452          1169  1
;  453          1170  2    BEGIN
;  454          1171  2
;  455          1172  2    TPARSE_ARGS;
;  456          1173  2
;  457          1174  2    FDL$AB_ITEM [ DSC$A_POINTER ] = .TPARSE_BLOCK [ TPA$L_TOKENPTR ];
;  458          1175  2
;  459          1176  2    RETURN SS$_NORMAL
;  460          1177  2
;  461          1178  1    END;



                                          0000 00000          .ENTRY   FDL$$SET_LINE, Save nothing                   ; 1143
                   00000000G  00      14   AC   D0 00002          MOVL     20(TPARSE_BLOCK), FDL$AB_ITEM+4              ; 1174
                              50           01   D0 0000A          MOVL     #1, R0                                       ; 1176
                                                04 0000D          RET                                                   ; 1178

; Routine Size:  14 bytes,    Routine Base:  _FDL$CODE + 0164
;  463     1179  1 %SBTTL  'SET_TERM'
;  464     1180  1 GLOBAL ROUTINE  FDL$$SET_TERM =
;  465     1181  1 !++
;  466     1182  1 !
;  467     1183  1 ! Functional Description:
;  468     1184  1 !
;  469     1185  1 ! Calling Sequence:
;  470     1186  1 !
;  471     1187  1 ! Input Parameters:
;  472     1188  1 !       none
;  473     1189  1 !
;  474     1190  1 ! Implicit Inputs:
;  475     1191  1 !       none
;  476     1192  1 !
;  477     1193  1 ! Output Parameters:
;  478     1194  1 !       none
;  479     1195  1 !
;  480     1196  1 ! Implicit Outputs:
;  481     1197  1 !       none
;  482     1198  1 !
;  483     1199  1 ! Routine Value:
;  484     1200  1 !       none
;  485     1201  1 !
;  486     1202  1 ! Side Effects:
;  487     1203  1 !       none
;  488     1204  1 !
;  489     1205  1 !--
;  490     1206  1
;  491     1207  2    BEGIN
;  492     1208  2
;  493     1209  2    TPARSE_ARGS;
;  494     1210  2
;  495     1211  2    FDL$AB_PRE_PARSE_BLOCK [ TPA$L_STRINGPTR ] =
;  496     1212  2                 .FDL$AB_PRE_PARSE_BLOCK [ TPA$L_STRINGPTR ] - 1;
;  497     1213  2
;  498     1214  2    RETURN SS$_NORMAL
;  499     1215  2
;  500     1216  1    END;




                              0000 00000           .ENTRY  FDL$$SET_TERM, Save nothing                          ; 1180
                 00000000G  00  D7 00002           DECL    FDL$AB_PRE_PARSE_BLOCK+12                            ; 1212
           50               01  D0 00008           MOVL    #1, R0                                               ; 1214
                                04 0000B           RET                                                          ; 1216

; Routine Size:  12 bytes,    Routine Base:  _FDL$CODE + 0172
```

```
1 %SBTTL  'SET PRIMARY'
1 GLOBAL ROUTINE  FDL$$SET_PRIMARY =
1 !++
1 !
1 ! Functional Description:
1 !
1 ! Calling Sequence:
1 !
1 ! Input Parameters:
1 !       none
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2     BEGIN
2
2     TPARSE_ARGS;
2
2     OWN
2         NXTPRINUM;        ! The next key or area primary number
2
2     LOCAL
2         PRIMASK;
2
2     PRIMASK = .TPARSE_BLOCK [ TPA$L_PARAM ];
2
2     ! If this is the first call then clear an go else check to make sure a
2     ! secondary was processed.
2     !
2     IF .FDL$AB_CTRL [ FDL$V_INITIAL ]
2     THEN
2         FDL$AB_CTRL [ FDL$V_INITIAL ] = _CLEAR
2     ELSE
2
2         ! If a secondary was processed the ok else null primary warning
2         !
2         IF .FDL$AB_CTRL [ FDL$V_SECONDARY ]
2         THEN
2             FDL$AB_CTRL [ FDL$V_SECONDARY ] = _CLEAR
2         ELSE
2             SIGNAL ( FDL$_NULLPRI );
2
3     IF (
4    ( NOT .FDL$AB_CTRL [ FDL$V_DFLT_PRES ] )
3    OR
4    ( .FDL$AB_CTRL [ FDL$V_REPARSE ] )
2    ) THEN
3        BEGIN
3
3        ! If this primary has been defied before check to see if it's a
3        ! key or area primary
3        !
3        IF ( .PRIMASK AND .FDL$AB_PRICTRL ) NEQU 0
3        THEN
3
3            ! Is it a key, area, analysis_of_key or analysis_of_area primary
3            ! check the order in case the last was the same
3            !
4            IF (
5            (
6                ( .PRIMASK )
5                AND
6                ( FDL$M_KEY OR FDL$M_AREA OR FDL$M_ANALK OR FDL$M_ANALA )
4            ) NEQU 0
4
3            ) THEN
3
3                ! What was the last primary
3                !
4                IF (
5                (.FDL$GL_PRIMARY EQLU FDL$C_KEY)
4                OR
5                (.FDL$GL_PRIMARY EQLU FDL$C_AREA)
4                OR
5                (.FDL$GL_PRIMARY EQLU FDL$C_ANALK)
4                OR
5                (.FDL$GL_PRIMARY EQLU FDL$C_ANALA)
3                ) THEN
3
3                    ! Check to see if the number is correct
3                    !
3                    IF .FDL$GL_PRINUM EQLU .NXTPRINUM
3                    THEN
3                        NXTPRINUM = .NXTPRINUM + 1
3                    ELSE
4                        BEGIN
4                        SIGNAL( FDL$_OUTORDER,1,.FDL$GL_STMNTNUM );
4                        RETURN FDL$_SYNTAX
4                        END
3
3                ELSE
3                    NXTPRINUM = 0
3
3            ELSE
3
3                ! Multiple primaries is only a warning
3                !
3                SIGNAL( FDL$_MULPRI,1,.FDL$GL_STMNTNUM )
3
3        ELSE
```

```
;   616          1331   3
;   617          1332   3                    ! Is it a first key or area or ect. primary check the number
;   618          1333   3                    !
;   619          1334   5                    IF ( .PRIMASK AND ( FDL$M_KEY OR FDL$M_AREA OR FDL$M_ANALK OR
;   620          1335   5                                                             FDL$M_ANALA ) ) NEQU 0
;   621          1336   3                    THEN
;   622          1337   3
;   623          1338   3                        ! If so check to see if the number is correct
;   624          1339   3                        !
;   625          1340   3                        IF .FDL$GL_PRINUM EQLU 0
;   626          1341   3                        THEN
;   627          1342   3                            NXTPRINUM = 1
;   628          1343   3                        ELSE
;   629          1344   4                            BEGIN
;   630          1345   4                            SIGNAL( FDL$_OUTORDER,1,.FDL$GL_STMNTNUM );
;   631          1346   4                            RETURN FDL$_SYNTAX
;   632          1347   4                            END;
;   633          1348   3
;   634          1349   2                END;
;   635          1350   2
;   636          1351   2            ! Flag it for latter
;   637          1352   2            !
;   638          1353   2            FDL$AB_PRICTRL = .FDL$AB_PRICTRL OR .PRIMASK;
;   639          1354   2
;   640          1355   2            ! Clear FDL$PRIMARY so that tparse can set it on return
;   641          1356   2            !
;   642          1357   2            FDL$GL_PRIMARY = _CLEAR;
;   643          1358   2
;   644          1359   2            ! Indicate that a new primary has been found
;   645          1360   2            !
;   646          1361   2            FDL$AB_CTRL [ FDL$V_NEWPRI ] = _SET;
;   647          1362   2
;   648          1363   2            ! Get ready for a new set of secondaries
;   649          1364   2            !
;   650          1365   3            INCR I FROM 0 TO (FDL$K_SCTRL_LONG-1)
;   651          1366   2            DO
;   652          1367   2                FDL$AB_SECCTRLL [ .I ] = _CLEAR;
;   653          1368   2
;   654          1369   2            RETURN SS$_NORMAL;
;   655          1370   2
;   656          1371   1            END;


                                                                      .PSECT  _FDL$OWN,NOEXE,  PIC,2

                                                     00008 NXTPRINUM:
                                                                      .BLKB   4


                                                                      .PSECT  _FDL$CODE,NOWRT,  SHR,  PIC,2

                                                03FC 00000            .ENTRY  FDL$$SET_PRIMARY, Save R2,R3,R4,R5,R6,R7,-   ; 1218
                                                                              R8,R9                                         ;
                                      59 00000000G  00  9E 00002      MOVAB   FDL$GL_STMNTNUM, R9                           ;
                                      58 00000000G  00  9E 00009      MOVAB   FDL$GL_PRINUM, R8                             ;
```

```
                  57 00000000G   00  9E 00010         MOVAB   FDL$GL_PRIMARY, R7                       ;
                  56 00000000G   00  9E 00017         MOVAB   FDL$AB_PRICTRL, R6                       ;
                  55 00000000G   00  9E 0001E         MOVAB   LIB$SIGNAL, R5                           ;
                  54 00000000'   00  9E 00025         MOVAB   NXTPRINUM, R4                            ;
                  53 00000000G   00  9E 0002C         MOVAB   FDL$AB_CTRL, R3                          ;
                  52         20  AC  D0 00033         MOVL    32(TPARSE_BLOCK), PRIMASK                ; 1255
                                 63  95 00037         TSTB    FDL$AB_CTRL                              ; 1260
                                 06  18 00039         BGEQ    1$                                       ;
                  63         80  8F  8A 0003B         BICB2   #128, FDL$AB_CTRL                        ; 1262
                                 13  11 0003F         BRB     3$                                       ;
         06       63             06  E1 00041  1$:    BBC     #6, FDL$AB_CTRL, 2$                      ; 1267
                  63         40  8F  8A 00045         BICB2   #64, FDL$AB_CTRL                         ; 1269
                                 09  11 00049         BRB     3$                                       ;
                     00000000G   8F  DD 0004B  2$:    PUSHL   #FDL$_NULLPRI                            ; 1271
                  65             01  FB 00051         CALLS   #1, LIB$SIGNAL                           ;
         04       02  A3         01  E1 00054  3$:    BBC     #1, FDL$AB_CTRL+2, 4$                    ; 1274
                  67         02  A3  E9 00059         BLBC    FDL$AB_CTRL[+2, 11$                      ; 1276
                                 50  D4 0005D  4$:    CLRL    R0                                       ; 1293
              041C  8F           52  B3 0005F         BITW    PRIMASK, #1052                           ;
                                 02  13 00064         BEQL    5$                                       ;
                                 50  D6 00066         INCL    R0                                       ;
                  66             52  D3 00068  5$:    BITL    PRIMASK, FDL$AB_PRICTRL                  ; 1283
                                 36  13 0006B         BEQL    9$                                       ;
                  24             50  E9 0006D         BLBC    R0, 8$                                   ; 1289
                  50             67  D0 00070         MOVL    FDL$GL_PRIMARY, R0                       ; 1301
                  0B             50  D1 00073         CMPL    R0, #11                                  ;
                                 0F  13 00076         BEQL    6$                                       ;
                  05             50  D1 00078         CMPL    R0, #5                                   ; 1303
                                 0A  13 0007B         BEQL    6$                                       ;
                  04             50  D1 0007D         CMPL    R0, #4                                   ; 1305
                                 05  13 00080         BEQL    6$                                       ;
                  03             50  D1 00082         CMPL    R0, #3                                   ; 1307
                                 09  12 00085         BNEQ    7$                                       ;
                  64             68  D1 00087  6$:    CMPL    FDL$GL_PRINUM, NXTPRINUM                 ; 1312
                                 23  12 0008A         BNEQ    10$                                      ;
                                 64  D6 0008C         INCL    NXTPRINUM                                ; 1314
                                 34  11 0008E         BRB     11$                                      ;
                                 64  D4 00090  7$:    CLRL    NXTPRINUM                                ; 1322
                                 30  11 00092         BRB     11$                                      ; 1300
                                 69  DD 00094  8$:    PUSHL   FDL$GL_STMNTNUM                          ; 1328
                                 01  DD 00096         PUSHL   #1                                       ;
                     00000000G   8F  DD 00098         PUSHL   #FDL$_MULPRI                             ;
                  65             03  FB 0009E         CALLS   #3, LIB$SIGNAL                           ;
                                 21  11 000A1         BRB     11$                                      ; 1289
                  1E             50  E9 000A3  9$:    BLBC    R0, 11$                                  ; 1335
                                 68  D5 000A6         TSTL    FDL$GL_PRINUM                            ; 1340
                                 05  12 000A8         BNEQ    10$                                      ;
                  64             01  D0 000AA         MOVL    #1, NXTPRINUM                            ; 1342
                                 15  11 000AD         BRB     11$                                      ;
                                 69  DD 000AF  10$:   PUSHL   FDL$GL_STMNTNUM                          ; 1345
                                 01  DD 000B1         PUSHL   #1                                       ;
                     00000000G   8F  DD 000B3         PUSHL   #FDL$_OUTORDER                           ;
                  65             03  FB 000B9         CALLS   #3, LIB$SIGNAL                           ;
                  50 00000000G   8F  D0 000BC         MOVL    #FDL$_SYNTAX, R0                         ; 1346
                                     04 000C3         RET                                              ;
                  66             52  C8 000C4  11$:   BISL2   PRIMASK, FDL$AB_PRICTRL                  ; 1353
                                 67  D4 000C7         CLRL    FDL$GL_PRIMARY                           ; 1357
```

```
                        63            20  88 000C9          BISB2   #32, FDL$AB_CTRL                          ; 1361
                                      50  D4 000CC          CLRL    I                                         ; 1365
                          00000000G0040  D4 000CE  12$:     CLRL    FDL$AB_SECCTRLL[I]                        ; 1367
              F5        50            05  F3 000D5          AOBLEQ  #5, I, 12$                                ;
                        50            01  D0 000D9          MOVL    #1, R0                                    ; 1369
                                          04 000DC          RET                                               ; 1371

; Routine Size:  221 bytes,    Routine Base:  _FDL$CODE + 017E
```

```
1 %SBTTL  'SET_SECONDARY'
1 GLOBAL ROUTINE  FDL$$SET_SECONDARY =
1 !++
1 !
1 ! Functional Description:
1 !
1 ! Calling Sequence:
1 !
1 ! Input Parameters:
1 !       none
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2     BEGIN
2
2     TPARSE_ARGS;
2
2     LOCAL
2         SECBIT   : LONG;
2
2     SECBIT = .TPARSE_BLOCK [ TPA$L_PARAM ];
2
2     ! See if the secondary has been defined before
2     !
2     IF .FDL$AB_SECCTRL [ .SECBIT ]
2     THEN
2
2         ! If it has then see if it was a key segment thing
2         !
3         IF (
4         ( .SECBIT EQLU FDL$C_SEGPOS )
3         OR
4         ( .SECBIT EQLU FDL$C_SEGLEN )
3         OR
4         ( .SECBIT EQLU FDL$C_SEGTYP )
2         ) THEN
3             BEGIN
3
3             ! If it's out of bounds it's an error
3             !
3             IF .FDL$GL_SECNUM GTR 7
3             THEN
```

```
;  715       1429 4                          BEGIN
;  716       1430 4                          SIGNAL( FDL$_UNSECKW,3,
;  717       1431 4                                  .FDL$GL_STMNTNUM,
;  718       1432 4                                  .TPARSE_BLOCK [ TPA$L_TOKENCNT ],
;  719       1433 4                                  .TPARSE_BLOCK [ TPA$L_TOKENPTR ] );
;  720       1434 4                          RETURN FDL$_SYNTAX
;  721       1435 4                          END
;  722       1436 3                      END
;  723       1437 2              ELSE
;  724       1438 2
;  725       1439 2                  ! If it has been defined before it's only a warning
;  726       1440 2                  !
;  727       1441 2                  SIGNAL( FDL$_MULSEC,1,.FDL$GL_STMNTNUM )
;  728       1442 2          ELSE
;  729       1443 2
;  730       1444 2              ! Flag it for next time (unless it's an ACL ENTRY - which can be repeated)
;  731       1445 2              !
;  732       1446 2              IF .SECBIT NEQU FDL$C_ACE
;  733       1447 2              THEN
;  734       1448 2                  FDL$AB_SECCTRL [ .SECBIT ] = _SET;
;  735       1449 2
;  736       1450 2          ! Get ready for a new an wonderous qualifier
;  737       1451 2          !
;  738       1452 2          FDL$GL_QUALIFIER = _CLEAR;
;  739       1453 2
;  740       1454 2          RETURN SS$_NORMAL
;  741       1455 2
;  742       1456 1          END;



                                      001C 00000           .ENTRY  FDL$$SET_SECONDARY, Save R2,R3,R4           ; 1373
                 54 00000000G   00     9E 00002           MOVAB   FDL$AB_SECCTRL, R4                           ;
                 53 00000000G   00     9E 00009           MOVAB   LIB$SIGNAL, R3                               ;
                 52 00000000G   00     9E 00010           MOVAB   FDL$GL_STMNTNUM, R2                          ;
                 50         20  AC     D0 00017           MOVL    32(TPARSE_BLOCK), SECBIT                     ; 1407
        4C       64             50     E1 0001B           BBC     SECBIT, FDL$AB_SECCTRL, 3$                   ; 1411
     00000086    8F             50     D1 0001F           CMPL    SECBIT, #134                                 ; 1417
                                12     13 00026           BEQL    1$                                           ;
     00000085    8F             50     D1 00028           CMPL    SECBIT, #133                                 ; 1419
                                09     13 0002F           BEQL    1$                                           ;
     00000087    8F             50     D1 00031           CMPL    SECBIT, #135                                 ; 1421
                                22     12 00038           BNEQ    2$                                           ;
                 07 00000000G   00     D1 0003A 1$:       CMPL    FDL$GL_SECNUM, #7                            ; 1427
                                31     15 00041           BLEQ    4$                                           ;
                 7E         10  AC     7D 00043           MOVQ    16(TPARSE_BLOCK), -(SP)                      ; 1432
                                62     DD 00047           PUSHL   FDL$GL_STMNTNUM                              ; 1431
                                03     DD 00049           PUSHL   #3                                           ; 1430
                    00000000G   8F     DD 0004B           PUSHL   #FDL$_UNSECKW                                ;
                 63             05     FB 00051           CALLS   #5, LIB$SIGNAL                               ;
                 50 00000000G   8F     D0 00054           MOVL    #FDL$_SYNTAX, R0                             ; 1434
                                       04 0005B           RET                                                  ;
                                62     DD 0005C 2$:       PUSHL   FDL$GL_STMNTNUM                              ; 1441
                                01     DD 0005E           PUSHL   #1                                           ;
                    00000000G   8F     DD 00060           PUSHL   #FDL$_MULSEC                                 ;
```

```
                                  63         03  FB 00066        CALLS   #3, LIB$SIGNAL                              ;
                                             09  11 00069        BRB     4$                                          ; 1416
                                  08         50  D1 0006B 3$:    CMPL    SECBIT, #8                                  ; 1446
                                             04  13 0006E        BEQL    4$                                          ;
                        00        64         50  E2 00070        BBSS    SECBIT, FDL$AB_SECCTRL, 4$                  ; 1448
                                  00000000G  00  D4 00074 4$:    CLRL    FDL$GL_QUALIFIER                            ; 1452
                                  50         01  D0 0007A        MOVL    #1, R0                                      ; 1454
                                                 04 0007D        RET                                                 ; 1456

; Routine Size:  126 bytes,    Routine Base:  _FDL$CODE + 025B
;  744       1457  1 %SBTTL  'START_STR'
;  745       1458  1 GLOBAL ROUTINE  FDL$$START_STR =
;  746       1459  1 !++
;  747       1460  1 !
;  748       1461  1 !  Functional Description:
;  749       1462  1 !
;  750       1463  1 !        Initializes the string descriptor
;  751       1464  1 !
;  752       1465  1 !  Calling Sequence:
;  753       1466  1 !
;  754       1467  1 !        Called from the parse tables
;  755       1468  1 !
;  756       1469  1 !  Input Parameters:
;  757       1470  1 !        none
;  758       1471  1 !
;  759       1472  1 !  Implicit Inputs:
;  760       1473  1 !        none
;  761       1474  1 !
;  762       1475  1 !  Output Parameters:
;  763       1476  1 !        none
;  764       1477  1 !
;  765       1478  1 !  Implicit Outputs:
;  766       1479  1 !        none
;  767       1480  1 !
;  768       1481  1 !  Routine Value:
;  769       1482  1 !        none
;  770       1483  1 !
;  771       1484  1 !  Side Effects:
;  772       1485  1 !        none
;  773       1486  1 !
;  774       1487  1 !--
;  775       1488  1
;  776       1489  2    BEGIN
;  777       1490  2
;  778       1491  2    TPARSE_ARGS;
;  779       1492  2
;  780       1493  2    ! Start the makings of a descriptor
;  781       1494  2    !
;  782       1495  2    FDL$AB_STRING [ DSC$A_POINTER ] = .TPARSE_BLOCK [ TPA$L_TOKENPTR ];
;  783       1496  2
;  784       1497  2    ! Process blanks
;  785       1498  2    !
;  786       1499  2    TPARSE_BLOCK [ TPA$V_BLANKS ] = _SET;
;  787       1500  2
;  788       1501  2    RETURN SS$_NORMAL
;  789       1502  2
;  790       1503  1    END;



                                              0000 00000     .ENTRY  FDL$$START_STR, Save nothing                        ; 1458
                00000000G  00        14   AC  D0 00002       MOVL    20(TPARSE_BLOCK), FDL$AB_STRING+4                    ; 1495
                       04  AC             01  88 0000A       BISB2   #1, 4(TPARSE_BLOCK)                                  ; 1499
                           50             01  D0 0000E       MOVL    #1, R0                                               ; 1501
                                              04 00011       RET                                                          ; 1503
```

```
; Routine Size:  18 bytes,    Routine Base:  _FDL$CODE + 02D9
```

```
%SBTTL  'END_STR'
GLOBAL ROUTINE  FDL$$END_STR =
!++
!
! Functional Description:
!
!       Terminates the processing of a string and determines the length
!
! Calling Sequence:
!
!       Called from the parse tables
!
! Input Parameters:
!       none
!
! Implicit Inputs:
!       none
!
! Output Parameters:
!       none
!
! Implicit Outputs:
!       none
!
! Routine Value:
!       none
!
! Side Effects:
!       none
!
!--

    BEGIN

    LOCAL
        SAVE_LEN        : WORD,
        CUT_LEN         : WORD;

    TPARSE_ARGS;

    TPARSE_BLOCK [ TPA$V_BLANKS ] = _CLEAR;

    ! The size is from where we are minus from where we is
    !
    FDL$AB_STRING [ DSC$W_LENGTH ] = .TPARSE_BLOCK [ TPA$L_STRINGPTR ] -
                                        .FDL$AB_STRING [ DSC$A_POINTER ];

    ! If the last char was a "!" then subtract one
    !
    IF .TPARSE_BLOCK [ TPA$B_CHAR ] EQL COMMENT_MARK
    THEN
        FDL$AB_STRING [ DSC$W_LENGTH ] = .FDL$AB_STRING [ DSC$W_LENGTH ] - 1;

    ! Save this length
    !
    SAVE_LEN = .FDL$AB_STRING [ DSC$W_LENGTH ];

```

```
;  849     1561  2         ! Remove trailing blanks
;  850     1562  2         !
;  851     1563  2         STR$TRIM ( FDL$AB_STRING,FDL$AB_STRING,CUT_LEN );
;  852     1564  2
;  853     1565  2         ! Set the trimmed length
;  854     1566  2         !
;  855     1567  2         FDL$AB_STRING [ DSC$W_LENGTH ] = .CUT_LEN;
;  856     1568  2
;  857     1569  2         ! Remove any leading white space from the string
;  858     1570  2         !
;  859     1571  2         FDL$AB_STRING [ DSC$W_LENGTH ] = TRIM_LEADING ();
;  860     1572  2
;  861     1573  2         ! Remove any quotes from the upcased string
;  862     1574  2         !
;  863     1575  2         FDL$AB_STRING [ DSC$W_LENGTH ] = EXTRACT_QUOTE ();
;  864     1576  2
;  865     1577  2         ! Adjust the pointer so that we are looking into the original input line
;  866     1578  2         !
;  867     1579  2         FDL$AB_STRING [ DSC$A_POINTER ] = .FDL$AB_STRING [ DSC$A_POINTER ] -
;  868     1580  2                                                             .FDL$GL_MAXLINE;
;  869     1581  2
;  870     1582  2         ! Restore the original length
;  871     1583  2         !
;  872     1584  2         FDL$AB_STRING [ DSC$W_LENGTH ] = .SAVE_LEN;
;  873     1585  2
;  874     1586  2         ! Remove trailing blanks
;  875     1587  2         !
;  876     1588  2         STR$TRIM ( FDL$AB_STRING,FDL$AB_STRING,CUT_LEN );
;  877     1589  2
;  878     1590  2         ! Set the trimmed length
;  879     1591  2         !
;  880     1592  2         FDL$AB_STRING [ DSC$W_LENGTH ] = .CUT_LEN;
;  881     1593  2
;  882     1594  2         ! Remove any leading white space from the string
;  883     1595  2         !
;  884     1596  2         FDL$AB_STRING [ DSC$W_LENGTH ] = TRIM_LEADING ();
;  885     1597  2
;  886     1598  2         ! Remove any quotes from the original string
;  887     1599  2         !
;  888     1600  2         FDL$AB_STRING [ DSC$W_LENGTH ] = EXTRACT_QUOTE ();
;  889     1601  2
;  890     1602  2         RETURN SS$_NORMAL;
;  891     1603  2
;  892     1604  1         END;



                                 007C 00000          .ENTRY  FDL$$END_STR, Save R2,R3,R4,R5,R6              ; 1505
              56 00000000V    00    9E 00002          MOVAB   EXTRACT_QUOTE, R6                              ;
              55 00000000V    00    9E 00009          MOVAB   TRIM_LEADING, R5                               ;
              54 00000000G    00    9E 00010          MOVAB   STR$TRIM, R4                                   ;
              53 00000000G    00    9E 00017          MOVAB   FDL$AB_STRING, R3                              ;
              5E              04    C2 0001E          SUBL2   #4, SP                                         ;
         04   AC              01    8A 00021          BICB2   #1, 4(TPARSE_BLOCK)                            ; 1544
  63     0C   AC        04    A3    A3 00025          SUBW3   FDL$AB_STRING+4, 12(TPARSE_BLOCK), -           ; 1549
```

```
                                                                    FDL$AB_STRING                                ;
                    21          18   AC  91 0002B          CMPB     24(TPARSE_BLOCK), #33                     ; 1553
                                     02  12 0002F          BNEQ     1$                                        ;
                                     63  B7 00031          DECW     FDL$AB_STRING                             ; 1555
                    52               63  B0 00033 1$:      MOVW     FDL$AB_STRING, SAVE_LEN                   ; 1559
                              4008   8F  BB 00036          PUSHR    #^M<R3,SP>                                ; 1563
                                     53  DD 0003A          PUSHL    R3                                        ;
                    64               03  FB 0003C          CALLS    #3, STR$TRIM                              ;
                    63               6E  B0 0003F          MOVW     CUT_LEN, FDL$AB_STRING                    ; 1567
                    65               00  FB 00042          CALLS    #0, TRIM_LEADING                          ; 1571
                    63               50  B0 00045          MOVW     R0, FDL$AB_STRING                         ;
                    66               00  FB 00048          CALLS    #0, EXTRACT_QUOTE                         ; 1575
                    63               50  B0 0004B          MOVW     R0, FDL$AB_STRING                         ;
              04    A3  00000000G    00  C2 0004E          SUBL2    FDL$GL_MAXLINE, FDL$AB_STRING+4           ; 1580
                    63               52  B0 00056          MOVW     SAVE_LEN, FDL$AB_STRING                   ; 1584
                              4008   8F  BB 00059          PUSHR    #^M<R3,SP>                                ; 1588
                                     53  DD 0005D          PUSHL    R3                                        ;
                    64               03  FB 0005F          CALLS    #3, STR$TRIM                              ;
                    63               6E  B0 00062          MOVW     CUT_LEN, FDL$AB_STRING                    ; 1592
                    65               00  FB 00065          CALLS    #0, TRIM_LEADING                          ; 1596
                    63               50  B0 00068          MOVW     R0, FDL$AB_STRING                         ;
                    66               00  FB 0006B          CALLS    #0, EXTRACT_QUOTE                         ; 1600
                    63               50  B0 0006E          MOVW     R0, FDL$AB_STRING                         ;
                    50               01  D0 00071          MOVL     #1, R0                                    ; 1602
                                         04 00074          RET                                                ; 1604

; Routine Size:  117 bytes,    Routine Base:  _FDL$CODE + 02EB
```

```
%SBTTL  'EXTRACT_QUOTE'
ROUTINE EXTRACT_QUOTE =
!++
!
! Functional Description:
!
!       It also extracts out embedded or bracketing quotes or apostrophes
!
! Calling Sequence:
!
!       Called from END_STR
!
! Input Parameters:
!       none
!
! Implicit Inputs:
!       none
!
! Output Parameters:
!       none
!
! Implicit Outputs:
!       none
!
! Routine Value:
!       The new string length - after the quotes are removed.
!
! Side Effects:
!       none
!
!--

    BEGIN

    LOCAL
        QCHAR   : BYTE,
        J       : LONG,
        NEW_LEN : LONG,
        CUT_LEN : LONG,
        STR     : REF VECTOR [ ,BYTE ],
        TMP_STR : REF VECTOR [ ,BYTE ];

    NEW_LEN = .FDL$AB_STRING [ DSC$W_LENGTH ];

    ! Now extract out any bracketing or embedded quotes or apostrophes
    !
    IF .FDL$AB_CTRL [ FDL$V_QUOTE_PRES ] OR .FDL$AB_CTRL [ FDL$V_APOST_PRES ]
    THEN
        BEGIN

        CUT_LEN = .FDL$AB_STRING [ DSC$W_LENGTH ];
        TMP_STR = FDL$$GET_VM ( .CUT_LEN );

        STR = .FDL$AB_STRING [ DSC$A_POINTER ];

        IF .FDL$AB_CTRL [ FDL$V_QUOTE_PRES ]
        THEN
```

```
3              QCHAR = '"'
3          ELSE IF .FDL$AB_CTRL [ FDL$V_APOST_PRES ]
3          THEN
3              QCHAR = '''';
3
3          CH$MOVE ( .CUT_LEN,.FDL$AB_STRING [ DSC$A_POINTER ],.TMP_STR );
3
3          NEW_LEN = 0;
3          J = 0;
3
4          WHILE .J LEQ (.CUT_LEN - 1)
3          DO
4              BEGIN
4
4              ! Now copy the string back, but stripping the QCHARs
4              ! according to the rules that embedded "" ==> " and '' ==> '
4              !
4              IF .TMP_STR [ .J ] EQLU .QCHAR
4              THEN
5                  BEGIN
5
5                  ! If we're not at the beginning or end of the string,
5                  ! copy one qchar and skip the next
5                  !
6                  IF NOT ((.J EQLU 0) OR (.J EQLU (.CUT_LEN-1)))
5                  THEN
6                      BEGIN
6
6                      IF .TMP_STR [ .J+1 ] EQLU .QCHAR
6                      THEN
6                          J = .J + 1;
6
6                      STR [ .NEW_LEN ] = .TMP_STR [ .J ];
6                      NEW_LEN = .NEW_LEN + 1
6
5                      END;
5                  END
5
4              ELSE
4                  ! Just copy the character back and bump the count
4                  !
5                  BEGIN
5                  STR [ .NEW_LEN ] = .TMP_STR [ .J ];
5                  NEW_LEN = .NEW_LEN + 1
4                  END;
4
4              J = .J + 1;
4
3              END;         ! do
3
3          ! Release the tmp string
3          !
3          FDL$$FREE_VM ( .CUT_LEN,.TMP_STR );
3
2          END;     ! IF QUOTE OR APOST PRESENT
2
2      ! The routine value is the new length
```

```
; 1008          1719  2     !
; 1009          1720  2     RETURN .NEW_LEN;
; 1010          1721  2
; 1011          1722  1     END;



                                               0FFC 00000 EXTRACT_QUOTE:
                                                                 .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11             ; 1606
                        5B 00000000G   00   9E 00002            MOVAB   FDL$AB_CTRL, R11
                        50 00000000G   00   3C 00009            MOVZWL  FDL$AB_STRING, R0                                 ; 1647
                        5A             50   D0 00010            MOVL    R0, NEW_LEN
                                 01    AB   95 00013            TSTB    FDL$AB_CTRL+1                                     ; 1651
                                       05   19 00016            BLSS    1$
              67         01    AB      06   E1 00018            BBC     #6, FDL$AB_CTRL+1, 8$
                        56             50   D0 0001D 1$:        MOVL    R0, CUT_LEN                                       ; 1655
                                       56   DD 00020            PUSHL   CUT_LEN                                           ; 1656
                 00000000G   00        01   FB 00022            CALLS   #1, FDL$$GET_VM
                        57             50   D0 00029            MOVL    R0, TMP_STR
                        50 00000000G   00   D0 0002C            MOVL    FDL$AB_STRING+4, R0                               ; 1658
                        58             50   D0 00033            MOVL    R0, STR
                                 01    AB   95 00036            TSTB    FDL$AB_CTRL+1                                     ; 1660
                                       05   18 00039            BGEQ    2$
                        59             22   90 0003B            MOVB    #34, QCHAR                                        ; 1662
                                       08   11 0003E            BRB     3$
              03         01    AB      06   E1 00040 2$:        BBC     #6, FDL$AB_CTRL+1, 3$                             ; 1663
                        59             27   90 00045            MOVB    #39, QCHAR                                        ; 1665
              67        60             56   28 00048 3$:        MOVC3   CUT_LEN, (R0), (TMP_STR)                          ; 1667
                                       5A   D4 0004C            CLRL    NEW_LEN                                           ; 1669
                                       50   D4 0004E            CLRL    J                                                 ; 1670
                        51       FF    A6   9E 00050            MOVAB   -1(R6), R1                                        ; 1672
                        51             50   D1 00054 4$:        CMPL    J, R1
                                       21   14 00057            BGTR    7$
                        59           6047   91 00059            CMPB    (J)[TMP_STR], QCHAR                               ; 1679
                                       12   12 0005D            BNEQ    5$
                                       50   D5 0005F            TSTL    J                                                 ; 1686
                                       13   13 00061            BEQL    6$
                        51             50   D1 00063            CMPL    J, R1
                                       0E   13 00066            BEQL    6$
                        59        01 A047   91 00068            CMPB    1(J)[TMP_STR], QCHAR                              ; 1690
                                       02   12 0006D            BNEQ    5$
                                       50   D6 0006F            INCL    J                                                 ; 1692
                      8A48           6047   90 00071 5$:        MOVB    (J)[TMP_STR], (NEW_LEN)+[STR]                     ; 1704
                                       50   D6 00076 6$:        INCL    J                                                 ; 1708
                                       DA   11 00078            BRB     4$                                                ; 1672
                        7E             56   7D 0007A 7$:        MOVQ    CUT_LEN, -(SP)                                    ; 1714
                 00000000G   00        02   FB 0007D            CALLS   #2, FDL$$FREE_VM
                        50             5A   D0 00084 8$:        MOVL    NEW_LEN, R0                                       ; 1720
                                            04 00087            RET                                                       ; 1722

; Routine Size:  136 bytes,    Routine Base:  _FDL$CODE + 0360
```

```
1 %SBTTL  'TRIM_LEADING'
1 ROUTINE TRIM_LEADING =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       It removes leading spaces and tabs from the input string
1 !
1 ! Calling Sequence:
1 !
1 !       Called from END_STR
1 !
1 ! Input Parameters:
1 !       none
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       The new string length - after the white space is removed.
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FLAG    : BYTE,
2         TMP     : BYTE,
2         BLANK   : BYTE,
2         TAB     : BYTE,
2         J       : LONG,
2         NEW_LEN : LONG,
2         CUT_LEN : LONG,
2         STR     : REF VECTOR [ ,BYTE ],
2         TMP_STR : REF VECTOR [ ,BYTE ];
2
2     BLANK = ' ';
2     TAB = '     ';
2     TMP = ..FDL$AB_STRING [ DSC$A_POINTER ];
2
2     NEW_LEN = .FDL$AB_STRING [ DSC$W_LENGTH ];
2
2     ! Now extract out any bracketing or embedded quotes or apostrophes
2     !
3     IF (.TMP EQLU .BLANK) OR (.TMP EQLU .TAB)
2     THEN
3         BEGIN
3
```

```
3           CUT_LEN = .FDL$AB_STRING [ DSC$W_LENGTH ];
3           TMP_STR = FDL$$GET_VM ( .CUT_LEN );
3
3           STR = .FDL$AB_STRING [ DSC$A_POINTER ];
3
3           CH$MOVE ( .CUT_LEN,.FDL$AB_STRING [ DSC$A_POINTER ],.TMP_STR );
3
3           NEW_LEN = 0;
3           J = 0;
3           FLAG = _CLEAR;
3
4           WHILE .J LEQ (.CUT_LEN - 1)
3           DO
4               BEGIN
4
4               ! Now copy the string back, but stripping the white space
4               !
5               IF (.TMP_STR [ .J ] EQLU .BLANK) OR (.TMP_STR [ .J ] EQLU .TAB)
4               THEN
5                   BEGIN
5
5                   ! If we have seen the a non-white character
5                   ! just copy this blank or tab like any other char
5                   !
5                   IF .FLAG
5                   THEN
6                       BEGIN
6
6                       STR [ .NEW_LEN ] = .TMP_STR [ .J ];
6                       NEW_LEN = .NEW_LEN + 1
6
5                       END;
4                   END
4               ELSE
4                   ! Just copy the character back and bump the count
4                   !
5                   BEGIN
5
5                   FLAG = _SET;
5                   STR [ .NEW_LEN ] = .TMP_STR [ .J ];
5                   NEW_LEN = .NEW_LEN + 1
5
4                   END;
4
4               J = .J + 1;
4
3               END;            ! do
3
3           ! Release the tmp string
3           !
3           FDL$$FREE_VM ( .CUT_LEN,.TMP_STR );
3
2           END;       ! IF THERE IS LEADING WHITE SPACE
2
2       ! The routine value is the new length
2       !
2       RETURN .NEW_LEN;
```

```
; 1127           1837  2
; 1128           1838  1       END;



                                                   0FFC 00000 TRIM_LEADING:
                                                                  .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11                   ; 1724
                        5B               20  90 00002             MOVB    #32, BLANK                                             ; 1768
                        5A               09  90 00005             MOVB    #9, TAB                                                ; 1769
                        50 00000000G     00  D0 00008             MOVL    FDL$AB_STRING+4, R0                                    ; 1770
                        51               60  90 0000F             MOVB    (R0), TMP                                              ;
                        50 00000000G     00  3C 00012             MOVZWL  FDL$AB_STRING, R0                                      ; 1772
                        59               50  D0 00019             MOVL    R0, NEW_LEN                                            ;
                        5B               51  91 0001C             CMPB    TMP, BLANK                                             ; 1776
                                         05  13 0001F             BEQL    1$                                                     ;
                        5A               51  91 00021             CMPB    TMP, TAB                                               ;
                                         53  12 00024             BNEQ    8$                                                     ;
                        56               50  D0 00026 1$:         MOVL    R0, CUT_LEN                                            ; 1780
                                         56  DD 00029             PUSHL   CUT_LEN                                                ; 1781
              00000000G 00               01  FB 0002B             CALLS   #1, FDL$$GET_VM                                        ;
                        57               50  D0 00032             MOVL    R0, TMP_STR                                            ;
                        50 00000000G     00  D0 00035             MOVL    FDL$AB_STRING+4, R0                                    ; 1783
                        58               50  D0 0003C             MOVL    R0, STR                                                ;
                 67     60               56  28 0003F             MOVC3   CUT_LEN, (R0), (TMP_STR)                               ; 1785
                                         59  D4 00043             CLRL    NEW_LEN                                                ; 1787
                                         50  D4 00045             CLRL    J                                                      ; 1788
                                         52  94 00047             CLRB    FLAG                                                   ; 1789
                        51          FF   A6  9E 00049             MOVAB   -1(R6), R1                                             ; 1791
                        51               50  D1 0004D 2$:         CMPL    J, R1                                                  ;
                                         1D  14 00050             BGTR    7$                                                     ;
                        5B             6047  91 00052             CMPB    (J)[TMP_STR], BLANK                                    ; 1797
                                         06  13 00056             BEQL    3$                                                     ;
                        5A             6047  91 00058             CMPB    (J)[TMP_STR], TAB                                      ;
                                         05  12 0005C             BNEQ    4$                                                     ;
                        0A               52  E9 0005E 3$:         BLBC    FLAG, 6$                                               ; 1804
                                         03  11 00061             BRB     5$                                                     ; 1808
                        52               01  90 00063 4$:         MOVB    #1, FLAG                                               ; 1818
                      8948             6047  90 00066 5$:         MOVB    (J)[TMP_STR], (NEW_LEN)+[STR]                          ; 1819
                                         50  D6 0006B 6$:         INCL    J                                                      ; 1824
                                         DE  11 0006D             BRB     2$                                                     ; 1791
                        7E               56  7D 0006F 7$:         MOVQ    CUT_LEN, -(SP)                                         ; 1830
              00000000G 00               02  FB 00072             CALLS   #2, FDL$$FREE_VM                                       ;
                        50               59  D0 00079 8$:         MOVL    NEW_LEN, R0                                            ; 1836
                                             04 0007C             RET                                                            ; 1838

; Routine Size:  125 bytes,    Routine Base:  _FDL$CODE + 03E8
```

```
1 %SBTTL  'SET_DATE_TIME'
1 GLOBAL ROUTINE  FDL$$SET_DATE_TIME =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       Sets up the date/time quadword
1 !
1 ! Calling Sequence:
1 !
1 !       Called from the parse tables
1 !
1 ! Input Parameters:
1 !       none
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2    BEGIN
2
2    TPARSE_ARGS;
2
2    LOCAL
2        TEMP_DESC       : DESC_BLK;
2
2    ! We must adjust the pointer so it points to the upcased buffer
2    !
2    TEMP_DESC [ DSC$W_LENGTH ] = .FDL$AB_STRING [ DSC$W_LENGTH ];
2    TEMP_DESC [ DSC$A_POINTER ] = .FDL$AB_STRING [ DSC$A_POINTER ] +
2                                   .FDL$GL_MAXLINE;
2
2    ! If there is an error signal it and return failure
2    !
2    IF NOT SYS$BINTIM( TEMP_DESC,FDL$AL_DATE_TIME )
2    THEN
3        BEGIN
3
3        BUILTIN CALLG;
3
3        TPARSE_BLOCK [ TPA$L_PARAM ] = FDL$_INVDATIM;
3
3        CALLG( .TPARSE_BLOCK,FDL$$SYNTAX_ERROR );
3
```

```
; 1187          1896  3          RETURN 0
; 1188          1897  3
; 1189          1898  2          END;
; 1190          1899  2
; 1191          1900  2      RETURN SS$_NORMAL
; 1192          1901  2
; 1193          1902  1      END;



                                       0000 00000            .ENTRY  FDL$$SET_DATE_TIME, Save nothing              ; 1840
                    5E                   08  C2 00002            SUBL2   #8, SP                                            ;
                    6E 00000000G         00  B0 00005            MOVW    FDL$AB_STRING, TEMP_DESC                          ; 1880
         04   AE 00000000G  00 00000000G 00  C1 0000C            ADDL3   FDL$GL_MAXLINE, FDL$AB_STRING+4, -                ; 1882
                                                                         TEMP_DESC+4                                       ;
                       00000000G         00  9F 00019            PUSHAB  FDL$AL_DATE_TIME                                  ; 1886
                              04         AE  9F 0001F            PUSHAB  TEMP_DESC                                         ;
              00000000G  00              02  FB 00022            CALLS   #2, SYS$BINTIM                                    ;
                         11              50  E8 00029            BLBS    R0, 1$                                            ;
                 20      AC 00000000G    8F  D0 0002C            MOVL    #FDL$_INVDATIM, 32(TPARSE_BLOCK)                  ; 1892
              00000000V  00              6C  FA 00034            CALLG   (TPARSE_BLOCK), FDL$$SYNTAX_ERROR                 ; 1894
                                         04  11 0003B            BRB     2$                                                ; 1896
                         50              01  D0 0003D  1$:       MOVL    #1, R0                                            ; 1900
                                             04 00040            RET                                                       ;
                                         50  D4 00041  2$:       CLRL    R0                                                ; 1902
                                             04 00043            RET                                                       ;

; Routine Size:  68 bytes,    Routine Base:  _FDL$CODE + 0465
; 1195          1903  1 %SBTTL  'SET COMMENT'
; 1196          1904  1 GLOBAL ROUTINE  FDL$$SET_COMMENT =
; 1197          1905  1 !++
; 1198          1906  1 !
; 1199          1907  1 ! Functional Description:
; 1200          1908  1 !
; 1201          1909  1 !       Sets up the comment descriptor
; 1202          1910  1 !
; 1203          1911  1 ! Calling Sequence:
; 1204          1912  1 !
; 1205          1913  1 !       Called from the parse tables
; 1206          1914  1 !
; 1207          1915  1 ! Input Parameters:
; 1208          1916  1 !       none
; 1209          1917  1 !
; 1210          1918  1 ! Implicit Inputs:
; 1211          1919  1 !       none
; 1212          1920  1 !
; 1213          1921  1 ! Output Parameters:
; 1214          1922  1 !       none
; 1215          1923  1 !
; 1216          1924  1 ! Implicit Outputs:
; 1217          1925  1 !       none
; 1218          1926  1 !
; 1219          1927  1 ! Routine Value:
; 1220          1928  1 !       none
; 1221          1929  1 !
; 1222          1930  1 ! Side Effects:
; 1223          1931  1 !       none
; 1224          1932  1 !
; 1225          1933  1 !--
; 1226          1934  1
; 1227          1935  2     BEGIN
; 1228          1936  2
; 1229          1937  2     TPARSE_ARGS;
; 1230          1938  2
; 1231          1939  2     ! The comment is the rest of the line
; 1232          1940  2     !
; 1233          1941  2     FDL$AB_COMMENT [ DSC$W_LENGTH ] = .TPARSE_BLOCK [ TPA$L_STRINGCNT ] + 1;
; 1234          1942  2     FDL$AB_COMMENT [ DSC$A_POINTER ] = .TPARSE_BLOCK [ TPA$L_STRINGPTR ] - 1;
; 1235          1943  2
; 1236          1944  2     ! Adjust the pointer so that we are looking into the original input line
; 1237          1945  2     !
; 1238          1946  2     FDL$AB_COMMENT [ DSC$A_POINTER ] = .FDL$AB_COMMENT [ DSC$A_POINTER ] -
; 1239          1947  2                                                   .FDL$GL_MAXLINE;
; 1240          1948  2
; 1241          1949  2     RETURN SS$_NORMAL
; 1242          1950  2
; 1243          1951  1     END;



                                              0004 00000          .ENTRY  FDL$$SET_COMMENT, Save R2                        ; 1904
                             52 00000000G  00  9E 00002          MOVAB   FDL$AB_COMMENT+4, R2                             ;
             FC   A2       08   AC          01  A1 00009          ADDW3   #1, 8(TPARSE_BLOCK), FDL$AB_COMMENT              ; 1941
```

```
                 62         0C   AC               01   C3 0000F        SUBL3   #1, 12(TPARSE_BLOCK), FDL$AB_COMMENT+4    ; 1942
                                 62  00000000G    00   C2 00014        SUBL2   FDL$GL_MAXLINE, FDL$AB_COMMENT+4          ; 1947
                                 50               01   D0 0001B        MOVL    #1, R0                                    ; 1949
                                                       04 0001E        RET                                               ; 1951

; Routine Size:  31 bytes,    Routine Base:  _FDL$CODE + 04A9
```

```
1 %SBTTL  'SYNTAX_ERRROR'
1 GLOBAL ROUTINE  FDL$$SYNTAX_ERROR =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       Syntax_error has two functions: If called with the argument fdl$_abkw
1 !       or fdl$_abprikw it checks if there has been an ambigous keyword, if
1 !       there has been then it signals the error else it returns failure. If
1 !       it is called with some other error it is signaled and return is normal.
1 !
1 ! Calling Sequence:
1 !
1 !       Called from the parse tables
1 !
1 !       Can be called from a bliss routine by:
1 !
1 !       BUILTIN CALLG;
1 !
1 !       CALLG( tparse_block,FDL$$SYNTAX_ERROR )
1 !
1 ! Input Parameters:
1 !
1 !       Error code in the tpa$l_param field of the tparse_block
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !
1 !       ss$_normal or 0 (see above)
1 !
1 ! Side Effects:
1 !
1 !       Signals an error
1 !
1 !--
1
2    BEGIN
2
2    TPARSE_ARGS;
2
2    LOCAL       STATUS  : LONG;
2
2    BIND        CODE = STATUS : BLOCK [ 4,BYTE ];
2
2    ! Get the error code passed to us by the parse tables
2    !
2    STATUS = .TPARSE_BLOCK [ TPA$L_PARAM ];
2
2    ! If this is a ambiguity check and there is none return failure
```

```
; 1302          2009  2        ! else signal the error
; 1303          2010  2        !
; 1304          2011  2        IF ( ( .STATUS EQLU FDL$_ABKW ) OR ( .STATUS EQLU FDL$_ABPRIKW ) ) AND
; 1305          2012  3                                   ( NOT .TPARSE_BLOCK [ TPA$V_AMBIG ] )
; 1306          2013  2        THEN
; 1307          2014  2            RETURN 0;
; 1308          2015  2
; 1309          2016  2        ! If this is not a information message the set some error flags
; 1310          2017  2        !
; 1311          2018  3        IF ( NOT ( .CODE [ STS$V_SEVERITY ] EQLU STS$K_INFO ) )
; 1312          2019  2        THEN
; 1313          2020  2
; 1314          2021  2            ! Say that there is an error on this secondary
; 1315          2022  2            !
; 1316          2023  2            FDL$AB_CTRL [ FDL$V_WARNING ] = _SET;
; 1317          2024  2
; 1318          2025  2        ! Signal the error with:
; 1319          2026  2        !
; 1320          2027  2        !    a) Line number
; 1321          2028  2        !    b) Length of the current token
; 1322          2029  2        !    c) Pointer to the token
; 1323          2030  2        !    d) Length of the remainer of the line
; 1324          2031  2        !    e) Pointer to the rest of the line
; 1325          2032  2        !
; 1326          2033  2        SIGNAL ( .TPARSE_BLOCK [ TPA$L_PARAM ],5,
; 1327          2034  2                 .FDL$GL_STMNTNUM,
; 1328          2035  2                 .TPARSE_BLOCK [ TPA$L_TOKENCNT ],
; 1329          2036  2                 .TPARSE_BLOCK [ TPA$L_TOKENPTR ],
; 1330          2037  2                 .TPARSE_BLOCK [ TPA$L_STRINGCNT ],
; 1331          2038  2                 .TPARSE_BLOCK [ TPA$L_STRINGPTR ] );
; 1332          2039  2
; 1333          2040  2        RETURN SS$_NORMAL
; 1334          2041  2
; 1335          2042  1        END;



                                         0000 00000          .ENTRY  FDL$$SYNTAX_ERROR, Save nothing                ; 1953
                     50         20   AC   D0 00002           MOVL    32(TPARSE_BLOCK), STATUS                       ; 2006
           00000000G 8F              50   D1 00006           CMPL    STATUS, #FDL$_ABKW                             ; 2011
                                     09   13 0000D           BEQL    1$                                             ;
           00000000G 8F              50   D1 0000F           CMPL    STATUS, #FDL$_ABPRIKW                          ;
                                     04   12 00016           BNEQ    2$                                             ;
                     2C         06   AC   E9 00018 1$:       BLBC    6(TPARSE_BLOCK), 4$                            ; 2012
      03        50   03              00   ED 0001C 2$:       CMPZV   #0, #3, CODE, #3                               ; 2018
                                     07   13 00021           BEQL    3$                                             ;
           00000000G 00              08   88 00023           BISB2   #8, FDL$AB_CTRL                                ; 2023
                     7E         08   AC   7D 0002A 3$:       MOVQ    8(TPARSE_BLOCK), -(SP)                         ; 2037
                     7E         10   AC   7D 0002E           MOVQ    16(TPARSE_BLOCK), -(SP)                        ; 2035
                     00000000G  00        DD 00032           PUSHL   FDL$GL_STMNTNUM                                ; 2034
                                05        DD 00038           PUSHL   #5                                             ; 2033
                                20   AC   DD 0003A           PUSHL   32(TPARSE_BLOCK)                               ;
           00000000G 00              07   FB 0003D           CALLS   #7, LIB$SIGNAL                                 ;
                     50              01   D0 00044           MOVL    #1, R0                                         ; 2040
                                          04 00047           RET                                                    ;
```

```
                                   50  D4 00048 4$:      CLRL    R0                                        ; 2042
                                       04 0004A          RET                                               ;

; Routine Size:  75 bytes,    Routine Base:  _FDL$CODE + 04C8
; 1337          2043   1 %SBTTL  'NEGATE'
; 1338          2044   1 GLOBAL ROUTINE  FDL$$NEGATE : NOVALUE =
; 1339          2045   1 !++
; 1340          2046   1 !
; 1341          2047   1 ! Functional Description:
; 1342          2048   1 !
; 1343          2049   1 !       Produces the negative version of a number
; 1344          2050   1 !
; 1345          2051   1 ! Calling Sequence:
; 1346          2052   1 !
; 1347          2053   1 !       Called from the parse tables
; 1348          2054   1 !
; 1349          2055   1 ! Input Parameters:
; 1350          2056   1 !       none
; 1351          2057   1 !
; 1352          2058   1 ! Implicit Inputs:
; 1353          2059   1 !       none
; 1354          2060   1 !
; 1355          2061   1 ! Output Parameters:
; 1356          2062   1 !       none
; 1357          2063   1 !
; 1358          2064   1 ! Implicit Outputs:
; 1359          2065   1 !       none
; 1360          2066   1 !
; 1361          2067   1 ! Routine Value:
; 1362          2068   1 !
; 1363          2069   1 !       none
; 1364          2070   1 !
; 1365          2071   1 ! Side Effects:
; 1366          2072   1 !       none
; 1367          2073   1 !
; 1368          2074   1 !--
; 1369          2075   1
; 1370          2076   2    BEGIN
; 1371          2077   2
; 1372          2078   2    TPARSE_ARGS;
; 1373          2079   2
; 1374          2080   2    ! Just negate the number
; 1375          2081   2    !
; 1376          2082   2    FDL$GL_NUMBER = -.FDL$GL_NUMBER;
; 1377          2083   2
; 1378          2084   2    RETURN
; 1379          2085   2
; 1380          2086   1    END;



                                              0004 00000          .ENTRY  FDL$$NEGATE, Save R2                          ; 2044
                          52 00000000G  00  9E 00002          MOVAB   FDL$GL_NUMBER, R2                             ;
                          62                62  CE 00009          MNEGL   FDL$GL_NUMBER, FDL$GL_NUMBER                  ; 2082
                                              04 0000C          RET                                                   ; 2086

; Routine Size:  13 bytes,    Routine Base:  _FDL$CODE + 0513
; 1382        2087  1 %SBTTL  'SET_BLANK'
; 1383        2088  1 GLOBAL ROUTINE  FDL$$SET_BLANK : NOVALUE =
; 1384        2089  1 !++
; 1385        2090  1 !
; 1386        2091  1 ! Functional Description:
; 1387        2092  1 !
; 1388        2093  1 !       Sets the Tparse blanks flag to allow parsing of blanks
; 1389        2094  1 !
; 1390        2095  1 ! Calling Sequence:
; 1391        2096  1 !
; 1392        2097  1 !       Called from the parse tables
; 1393        2098  1 !
; 1394        2099  1 ! Input Parameters:
; 1395        2100  1 !       none
; 1396        2101  1 !
; 1397        2102  1 ! Implicit Inputs:
; 1398        2103  1 !       none
; 1399        2104  1 !
; 1400        2105  1 ! Output Parameters:
; 1401        2106  1 !       none
; 1402        2107  1 !
; 1403        2108  1 ! Implicit Outputs:
; 1404        2109  1 !       none
; 1405        2110  1 !
; 1406        2111  1 ! Routine Value:
; 1407        2112  1 !
; 1408        2113  1 !       none
; 1409        2114  1 !
; 1410        2115  1 ! Side Effects:
; 1411        2116  1 !       none
; 1412        2117  1 !
; 1413        2118  1 !--
; 1414        2119  1
; 1415        2120  2     BEGIN
; 1416        2121  2
; 1417        2122  2     TPARSE_ARGS;
; 1418        2123  2
; 1419        2124  2     ! Just set the flag
; 1420        2125  2     !
; 1421        2126  2     TPARSE_BLOCK [ TPA$V_BLANKS ] = _SET;
; 1422        2127  2
; 1423        2128  2     RETURN
; 1424        2129  2
; 1425        2130  1     END;



                                          0000 00000        .ENTRY  FDL$$SET_BLANK, Save nothing                  ; 2088
                 04   AC               01  88 00002         BISB2   #1, 4(TPARSE_BLOCK)                           ; 2126
                                           04 00006         RET                                                   ; 2130

; Routine Size:  7 bytes,    Routine Base:  _FDL$CODE + 0520
; 1427        2131  1 %SBTTL  'CLR_BLANK'
; 1428        2132  1 GLOBAL ROUTINE  FDL$$CLR_BLANK : NOVALUE =
; 1429        2133  1 !++
; 1430        2134  1 !
; 1431        2135  1 ! Functional Description:
; 1432        2136  1 !
; 1433        2137  1 !       Clears the Tparse blanks flag
; 1434        2138  1 !
; 1435        2139  1 ! Calling Sequence:
; 1436        2140  1 !
; 1437        2141  1 !       Called from the parse tables
; 1438        2142  1 !
; 1439        2143  1 ! Input Parameters:
; 1440        2144  1 !       none
; 1441        2145  1 !
; 1442        2146  1 ! Implicit Inputs:
; 1443        2147  1 !       none
; 1444        2148  1 !
; 1445        2149  1 ! Output Parameters:
; 1446        2150  1 !       none
; 1447        2151  1 !
; 1448        2152  1 ! Implicit Outputs:
; 1449        2153  1 !       none
; 1450        2154  1 !
; 1451        2155  1 ! Routine Value:
; 1452        2156  1 !
; 1453        2157  1 !       none
; 1454        2158  1 !
; 1455        2159  1 ! Side Effects:
; 1456        2160  1 !       none
; 1457        2161  1 !
; 1458        2162  1 !--
; 1459        2163  1
; 1460        2164  2    BEGIN
; 1461        2165  2
; 1462        2166  2    TPARSE_ARGS;
; 1463        2167  2
; 1464        2168  2    ! Just clear the flag
; 1465        2169  2    !
; 1466        2170  2    TPARSE_BLOCK [ TPA$V_BLANKS ] = _CLEAR;
; 1467        2171  2
; 1468        2172  2    RETURN
; 1469        2173  2
; 1470        2174  1    END;



                                          0000 00000       .ENTRY  FDL$$CLR_BLANK, Save nothing            : 2132
                     04   AC           01   8A 00002       BICB2   #1, 4(TPARSE_BLOCK)                     : 2170
                                            04 00006       RET                                             : 2174

; Routine Size:  7 bytes,    Routine Base:  _FDL$CODE + 0527
; 1472        2175  1 %SBTTL  'ERRROR_CHK'
; 1473        2176  1 GLOBAL ROUTINE  FDL$$ERROR_CHK =
; 1474        2177  1 !++
; 1475        2178  1 !
; 1476        2179  1 ! Functional Description:
; 1477        2180  1 !
; 1478        2181  1 !       Does a check if there was a warning
; 1479        2182  1 !
; 1480        2183  1 ! Calling Sequence:
; 1481        2184  1 !
; 1482        2185  1 !       Called from the parse tables
; 1483        2186  1 !
; 1484        2187  1 ! Input Parameters:
; 1485        2188  1 !       none
; 1486        2189  1 !
; 1487        2190  1 ! Implicit Inputs:
; 1488        2191  1 !       none
; 1489        2192  1 !
; 1490        2193  1 ! Output Parameters:
; 1491        2194  1 !       none
; 1492        2195  1 !
; 1493        2196  1 ! Implicit Outputs:
; 1494        2197  1 !       none
; 1495        2198  1 !
; 1496        2199  1 ! Routine Value:
; 1497        2200  1 !
; 1498        2201  1 !       Value of fdl$ab_ctrl [ fdl$v_warning ]
; 1499        2202  1 !
; 1500        2203  1 ! Side Effects:
; 1501        2204  1 !       none
; 1502        2205  1 !
; 1503        2206  1 !--
; 1504        2207  1
; 1505        2208  2     BEGIN
; 1506        2209  2
; 1507        2210  2     TPARSE_ARGS;
; 1508        2211  2
; 1509        2212  2     ! If there is a warning return true else fail
; 1510        2213  2     !
; 1511        2214  2     RETURN .FDL$AB_CTRL [ FDL$V_WARNING ]
; 1512        2215  2
; 1513        2216  1     END;



                                            0000 00000          .ENTRY  FDL$$ERROR_CHK, Save nothing                    ; 2176
        50 00000000G  00         01      03  EF 00002          EXTZV   #3, #1, FDL$AB_CTRL, R0                          ; 2214
                                              04 0000B          RET                                                      ; 2216

; Routine Size:  12 bytes,    Routine Base:  _FDL$CODE + 052E

; 1514        2217  1
```

```
1 %SBTTL  'FDL$$READ_ERROR'
1 GLOBAL ROUTINE  FDL$$READ_ERROR : NOVALUE =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       This routine will signal an rms error and stop execution if the RMS
1 !       error is NOT end of file.  It is to be used for detecting errors
1 !       during rms $GETs or $READs.
1 !
1 ! Calling Sequence:
1 !
1 !       This routine is call as an AST by RMS
1 !
1 ! Input Parameters:
1 !
1 !       AST argument block which has a pointer to a RAB
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Routines Called:
1 !
1 !       SIGNAL_STOP
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2    BEGIN
2
2    BUILTIN
2       AP;
2
2    BIND
2       AST_BLOCK = AP : REF VECTOR [ ,LONG ];
2
2    LOCAL
2       RAB : REF BLOCK [ ,BYTE ],
2       FAB : REF BLOCK [ ,BYTE ],
2       NAM : REF BLOCK [ ,BYTE ];
2
2    ! Get the rab (Pointer to by the second ast parameter)
2    !
2    RAB = .AST_BLOCK [ 1 ];
2
2    ! If this is only an end of file then return
```

```
; 1573      2275  2       !
; 1574      2276  2       IF .RAB [ RAB$L_STS ] EQLU RMS$_EOF
; 1575      2277  2       THEN
; 1576      2278  2           RETURN;
; 1577      2279  2
; 1578      2280  2       ! Now get the fab it points to
; 1579      2281  2       !
; 1580      2282  2       FAB = .RAB [ RAB$L_FAB ];
; 1581      2283  2
; 1582      2284  2       ! Get the name block
; 1583      2285  2       !
; 1584      2286  2       NAM = .FAB [ FAB$L_NAM ];
; 1585      2287  2
; 1586      2288  2       ! Signal the FDL error with the best file name string
; 1587      2289  2       !
; 1588      2290  2       ! First try the resultant string
; 1589      2291  2       !
; 1590      2292  2       IF .NAM [ NAM$B_RSL ] NEQU 0
; 1591      2293  2       THEN
; 1592      2294  3           BEGIN
; 1593      2295  3           STRING_DESC [ DSC$W_LENGTH ] = .NAM [ NAM$B_RSL ];
; 1594      2296  3           STRING_DESC [ DSC$A_POINTER ] = .NAM [ NAM$L_RSA ]
; 1595      2297  3           END
; 1596      2298  3
; 1597      2299  3       ! Next try the expanded string
; 1598      2300  3       !
; 1599      2301  2       ELSE IF .NAM [ NAM$B_ESL ] NEQU 0
; 1600      2302  2       THEN
; 1601      2303  3           BEGIN
; 1602      2304  3           STRING_DESC [ DSC$W_LENGTH ] = .NAM [ NAM$B_ESL ];
; 1603      2305  3           STRING_DESC [ DSC$A_POINTER ] = .NAM [ NAM$L_ESA ]
; 1604      2306  3           END
; 1605      2307  3
; 1606      2308  3       ! If all else fails use the name string
; 1607      2309  3       !
; 1608      2310  2       ELSE
; 1609      2311  3           BEGIN
; 1610      2312  3           STRING_DESC [ DSC$W_LENGTH ] = .FAB [ FAB$B_FNS ];
; 1611      2313  3           STRING_DESC [ DSC$A_POINTER ] = .FAB [ FAB$L_FNA ]
; 1612      2314  2           END;
; 1613      2315  2
; 1614      2316  2       SIGNAL_STOP( .RAB [ RAB$L_CTX ],1,STRING_DESC,
; 1615      2317  2                    .RAB [ FAB$L_STS ],.RAB [ FAB$L_STV ] )
; 1616      2318  2
; 1617      2319  1       END;



                                    000C 00000          .ENTRY   FDL$$READ_ERROR, Save R2,R3                 ; 2219
                   53 00000000'  00   9E 00002          MOVAB    STRING_DESC, R3                              ;
                   52        04  AC   D0 00009          MOVL     4(AST_BLOCK), RAB                            ; 2272
         0001827A  8F        08  A2   D1 0000D          CMPL     8(RAB), #98938                               ; 2276
                             43  13      00015          BEQL     4$                                           ;
                   51        3C  A2   D0 00017          MOVL     60(RAB), FAB                                 ; 2282
                   50        28  A1   D0 0001B          MOVL     40(FAB), NAM                                 ; 2286
```

```
                        03  A0  95 0001F        TSTB    3(NAM)                                  ; 2292
                            0B  13 00022        BEQL    1$                                      ;
              63        03  A0  9B 00024        MOVZBW  3(NAM), STRING_DESC                     ; 2295
         04   A3        04  A0  D0 00028        MOVL    4(NAM), STRING_DESC+4                   ; 2296
                            19  11 0002D        BRB     3$                                      ;
                        0B  A0  95 0002F 1$:    TSTB    11(NAM)                                 ; 2301
                            0B  13 00032        BEQL    2$                                      ;
              63        0B  A0  9B 00034        MOVZBW  11(NAM), STRING_DESC                    ; 2304
         04   A3        0C  A0  D0 00038        MOVL    12(NAM), STRING_DESC+4                  ; 2305
                            09  11 0003D        BRB     3$                                      ;
              63        34  A1  9B 0003F 2$:    MOVZBW  52(FAB), STRING_DESC                    ; 2312
         04   A3        2C  A1  D0 00043        MOVL    44(FAB), STRING_DESC+4                  ; 2313
              7E        08  A2  7D 00048 3$:    MOVQ    8(RAB), -(SP)                           ; 2317
                            53  DD 0004C        PUSHL   R3                                      ; 2316
                            01  DD 0004E        PUSHL   #1                                      ;
                        18  A2  DD 00050        PUSHL   24(RAB)                                 ;
     00000000G  00          05  FB 00053        CALLS   #5, LIB$STOP                            ;
                            04  0005A 4$:       RET                                             ; 2319

; Routine Size:  91 bytes,    Routine Base:  _FDL$CODE + 053A

; 1618          2320  1
```

```
1 %SBTTL  'FDL$$RMS_ERROR'
1 GLOBAL ROUTINE  FDL$$RMS_ERROR  : NOVALUE =
1 !++
1 !
1 ! Functional Description:
1 !
1 !        This routine will signal and rms error and stop execution.  It is
1 !        to be primarly used for detecting errors during asynchronous operations
1 !
1 ! Calling Sequence:
1 !
1 !        This routine is call as an AST by RMS
1 !
1 ! Input Parameters:
1 !
1 !        AST argument block which has a pointer to a rms block
1 !
1 ! Implicit Inputs:
1 !        none
1 !
1 ! Output Parameters:
1 !        none
1 !
1 ! Implicit Outputs:
1 !        none
1 !
1 ! Routine Value:
1 !        none
1 !
1 ! Routines Called:
1 !
1 !        SIGNAL_STOP
1 !
1 ! Side Effects:
1 !        none
1 !
1 !--
1
2     BEGIN
2
2     BUILTIN AP;
2
2     BIND
2         AST_BLOCK = AP : REF VECTOR [ ,LONG ];
2
2     LOCAL
2         RMS_BLOCK : REF BLOCK [ ,BYTE ];
2
2     ! Get the rms control block (second argument in the block)
2     !
2     RMS_BLOCK = .AST_BLOCK [ 1 ];
2
2     ! NOTE: We use the RAB$x_zzz codes but they are valid for the FAB as well
2
2     ! Signal the FDL error
2     !
2     SIGNAL_STOP( .RMS_BLOCK [ RAB$L_CTX ],
; 1677          2378  2                        .RMS_BLOCK [ RAB$L_STS ],.RMS_BLOCK [ RAB$L_STV ] )
; 1678          2379  2
; 1679          2380  1       END;



                                                   0000 00000       .ENTRY  FDL$$RMS_ERROR, Save nothing                  ; 2322
                                50        04   AC   D0 00002        MOVL    4(AST_BLOCK), RMS_BLOCK                       ; 2371
                                7E        08   A0   7D 00006        MOVQ    8(RMS_BLOCK), -(SP)                           ; 2378
                                          18   A0   DD 0000A        PUSHL   24(RMS_BLOCK)                                 ; 2377
                          00000000G  00        03   FB 0000D        CALLS   #3, LIB$STOP                                  ;
                                                 04 00014        RET                                                   ; 2380

; Routine Size:  21 bytes,    Routine Base:  _FDL$CODE + 0595


; 1680          2381  1
```

```
1 %SBTTL  'FDL$$RMS_OPEN_ERROR'
1 GLOBAL ROUTINE  FDL$$RMS_OPEN_ERROR : NOVALUE =
1 !++
1 !
1 ! Functional Description:
1 !
1 !       This routine will signal an rms error and stop execution.  It is
1 !       to be primarily used for detecting errors during file opens.
1 !
1 ! Calling Sequence:
1 !
1 !       This routine is call as an AST by RMS
1 !
1 ! Input Parameters:
1 !
1 !       AST argument block which has a pointer to a FAB
1 !
1 ! Implicit Inputs:
1 !       none
1 !
1 ! Output Parameters:
1 !       none
1 !
1 ! Implicit Outputs:
1 !       none
1 !
1 ! Routine Value:
1 !       none
1 !
1 ! Routines Called:
1 !
1 !       SIGNAL_STOP
1 !
1 ! Side Effects:
1 !       none
1 !
1 !--
1
2     BEGIN
2
2     BUILTIN
2         AP;
2
2     BIND
2         AST_BLOCK = AP : REF VECTOR [ ,LONG ];
2
2     LOCAL
2         FAB : REF BLOCK [ ,BYTE ],
2         NAM : REF BLOCK [ ,BYTE ];
2
2     ! Get the fab (Pointer to by the second ast parameter)
2     !
2     FAB = .AST_BLOCK [ 1 ];
2
2     ! If this is really a RAB (from a connect) then get the fab it points to
2     !
2     IF .FAB [ FAB$B_BID ] EQLU RAB$C_BID
```

```
; 1739          2439 2      THEN
; 1740          2440 2          FAB = .FAB [ RAB$L_FAB ];          ! This looks strange but it's ok!
; 1741          2441 2
; 1742          2442 2      ! Get the name block
; 1743          2443 2      !
; 1744          2444 2      NAM = .FAB [ FAB$L_NAM ];
; 1745          2445 2
; 1746          2446 2      ! Signal the FDL error with the best file name string
; 1747          2447 2      !
; 1748          2448 2      ! First try the resultant string
; 1749          2449 2
; 1750          2450 2      IF .NAM [ NAM$B_RSL ] NEQU 0
; 1751          2451 2      THEN
; 1752          2452 3          BEGIN
; 1753          2453 3          STRING_DESC [ DSC$W_LENGTH ] = .NAM [ NAM$B_RSL ];
; 1754          2454 3          STRING_DESC [ DSC$A_POINTER ] = .NAM [ NAM$L_RSA ]
; 1755          2455 3          END
; 1756          2456 3
; 1757          2457 3      ! Next try the expanded string
; 1758          2458 3      !
; 1759          2459 2      ELSE IF .NAM [ NAM$B_ESL ] NEQU 0
; 1760          2460 2      THEN
; 1761          2461 3          BEGIN
; 1762          2462 3          STRING_DESC [ DSC$W_LENGTH ] = .NAM [ NAM$B_ESL ];
; 1763          2463 3          STRING_DESC [ DSC$A_POINTER ] = .NAM [ NAM$L_ESA ]
; 1764          2464 3          END
; 1765          2465 3
; 1766          2466 3      ! If all else fails use the name string
; 1767          2467 3      !
; 1768          2468 2      ELSE
; 1769          2469 3          BEGIN
; 1770          2470 3          STRING_DESC [ DSC$W_LENGTH ] = .FAB [ FAB$B_FNS ];
; 1771          2471 3          STRING_DESC [ DSC$A_POINTER ] = .FAB [ FAB$L_FNA ]
; 1772          2472 2          END;
; 1773          2473 2
; 1774          2474 2      SIGNAL_STOP( .FAB [ RAB$L_CTX ],1,STRING_DESC,
; 1775          2475 2                   .FAB [ FAB$L_STS ],.FAB [ FAB$L_STV ] )
; 1776          2476 2
; 1777          2477 1      END;



                                   0004 00000          .ENTRY  FDL$$RMS_OPEN_ERROR, Save R2                 ; 2383
             52 00000000'    00   9E 00002          MOVAB   STRING_DESC, R2                              ;
             51          04  AC   D0 00009          MOVL    4(AST_BLOCK), FAB                            ; 2434
             01              61   91 0000D          CMPB    (FAB), #1                                    ; 2438
                             04   12 00010          BNEQ    1$                                           ;
             51          3C  A1   D0 00012          MOVL    60(FAB), FAB                                 ; 2440
             50          28  A1   D0 00016  1$:     MOVL    40(FAB), NAM                                 ; 2444
                         03  A0   95 0001A          TSTB    3(NAM)                                       ; 2450
                             0B   13 0001D          BEQL    2$                                           ;
             62          03  A0   9B 0001F          MOVZBW  3(NAM), STRING_DESC                          ; 2453
         04  A2          04  A0   D0 00023          MOVL    4(NAM), STRING_DESC+4                        ; 2454
                             19   11 00028          BRB     4$                                           ;
                         0B  A0   95 0002A  2$:     TSTB    11(NAM)                                      ; 2459
```

```
                                        0B  13 0002D            BEQL    3$                                      ;
                        62        0B    A0  9B 0002F            MOVZBW  11(NAM), STRING_DESC                    ; 2462
                  04    A2        0C    A0  D0 00033            MOVL    12(NAM), STRING_DESC+4                  ; 2463
                                        09  11 00038            BRB     4$                                      ;
                        62        34    A1  9B 0003A 3$:        MOVZBW  52(FAB), STRING_DESC                    ; 2470
                  04    A2        2C    A1  D0 0003E            MOVL    44(FAB), STRING_DESC+4                  ; 2471
                        7E        08    A1  7D 00043 4$:        MOVQ    8(FAB), -(SP)                           ; 2475
                                        52  DD 00047            PUSHL   R2                                      ; 2474
                                        01  DD 00049            PUSHL   #1                                      ;
                                  18    A1  DD 0004B            PUSHL   24(FAB)                                 ;
            00000000G   00              05  FB 0004E            CALLS   #5, LIB$STOP                            ;
                                            04 00055            RET                                             ; 2477

; Routine Size:  86 bytes,    Routine Base:  _FDL$CODE + 05AA


; 1778          2478  1
; 1779          2479  0 END ELUDOM



                                                                .EXTRN  LIB$SIGNAL, LIB$STOP

;                                     PSECT SUMMARY
;
;       Name                        Bytes                       Attributes
;
;  _FDL$OWN                            12  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
;  _FDL$CODE                         1536  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)



;                               Library Statistics
;
;                                                -------- Symbols --------       Pages       Processing
;       File                                     Total    Loaded   Percent       Mapped      Time
;
;  _$255$DUA28:[SYSLIB]STARLET.L32;1              9776        39         0          581        00:01.0




;                                      COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:FDLDRIVER/OBJ=OBJ$:FDLDRIVER MSRC$:FDLDRIVER/UPDATE=(ENH$:FDLDRIVER)

; Size:           1536 code + 12 data bytes
; Run Time:          00:36.1
; Elapsed Time:      02:08.7
; Lines/CPU Min:      4125
; Lexemes/CPU-Min: 21518
; Memory Used:  175 pages
; Compilation Complete
```

0176 AH-BT13A-SE
VAX/VMS V4.0

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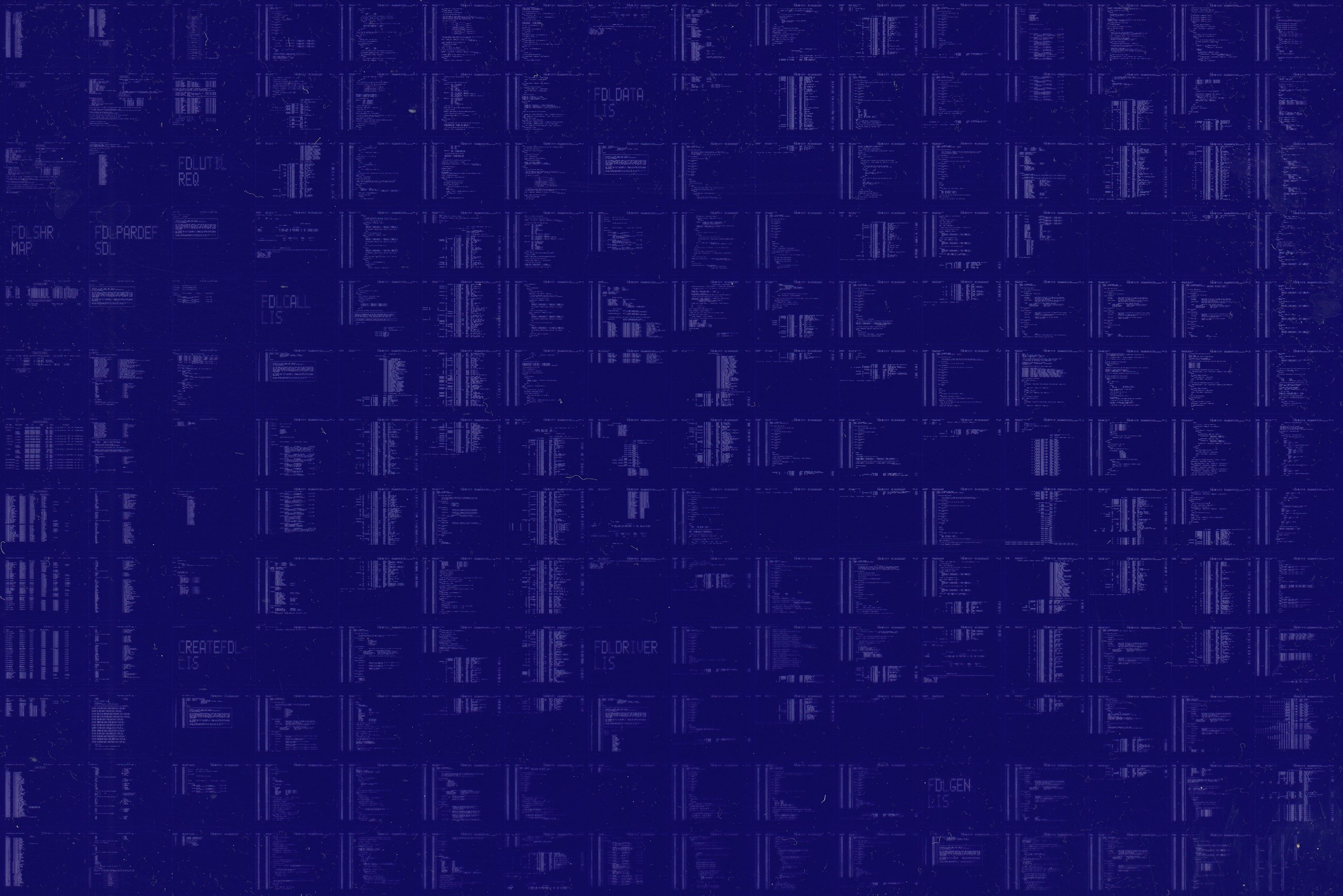

FDLDATA
LIS

FDLUTIL
REQ

FDLSHR
MAP

FDLPARDEF
SDL

FDLCALL
LIS

CREATEFDL
LIS

FDLDRIVER
LIS

FDLGEN
LIS