```
FFFFFFFFFFFFFFF     OOOOOOOOO     RRRRRRRRRRRR     RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
FFFFFFFFFFFFFFF     OOOOOOOOO     RRRRRRRRRRRR     RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
FFFFFFFFFFFFFFF     OOOOOOOOO     RRRRRRRRRRRR     RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFF              OOO         OOO  RRR         RRR  RRR         RRR        TTT        LLL
FFFFFFFFFFFF     OOO         OOO  RRRRRRRRRRRR     RRRRRRRRRRRR           TTT        LLL
FFFFFFFFFFFF     OOO         OOO  RRRRRRRRRRRR     RRRRRRRRRRRR           TTT        LLL
FFFFFFFFFFFF     OOO         OOO  RRRRRRRRRRRR     RRRRRRRRRRRR           TTT        LLL
FFF              OOO         OOO  RRR   RRR        RRR   RRR              TTT        LLL
FFF              OOO         OOO  RRR   RRR        RRR   RRR              TTT        LLL
FFF              OOO         OOO  RRR   RRR        RRR   RRR              TTT        LLL
FFF              OOO         OOO  RRR      RRR     RRR      RRR           TTT        LLL
FFF              OOO         OOO  RRR      RRR     RRR      RRR           TTT        LLL
FFF              OOO         OOO  RRR      RRR     RRR      RRR           TTT        LLL
FFF                 OOOOOOOOO     RRR         RRR  RRR         RRR        TTT        LLLLLLLLLLLLLLL
FFF                 OOOOOOOOO     RRR         RRR  RRR         RRR        TTT        LLLLLLLLLLLLLLL
FFF                 OOOOOOOOO     RRR         RRR  RRR         RRR        TTT        LLLLLLLLLLLLLLL
```

```
**FILE**ID**FORDELETE                                    J 15
```

```
FFFFFFFFFF    OOOOOO    RRRRRRRR    DDDDDDDD    EEEEEEEEEE  LL          EEEEEEEEEE  TTTTTTTTTT  EEEEEEEEEE
FFFFFFFFFF    OOOOOO    RRRRRRRR    DDDDDDDD    EEEEEEEEEE  LL          EEEEEEEEEE  TTTTTTTTTT  EEEEEEEEEE
FF          OO      OO  RR      RR  DD      DD  EE          LL          EE              TT      EE
FF          OO      OO  RR      RR  DD      DD  EE          LL          EE              TT      EE
FF          OO      OO  RR      RR  DD      DD  EE          LL          EE              TT      EE
FF          OO      OO  RR      RR  DD      DD  EE          LL          EE              TT      EE
FFFFFFFF    OO      OO  RRRRRRRR    DD      DD  EEEEEEEE    LL          EEEEEEEE        TT      EEEEEEEE
FFFFFFFF    OO      OO  RRRRRRRR    DD      DD  EEEEEEEE    LL          EEEEEEEE        TT      EEEEEEEE
FF          OO      OO  RR  RR      DD      DD  EE          LL          EE              TT      EE
FF          OO      OO  RR  RR      DD      DD  EE          LL          EE              TT      EE
FF          OO      OO  RR    RR    DD      DD  EE          LL          EE              TT      EE              ....
FF          OO      OO  RR    RR    DD      DD  EE          LL          EE              TT      EE              ....
FF            OOOOOO    RR      RR  DDDDDDDD    EEEEEEEEEE  LLLLLLLLLL  EEEEEEEEEE      TT      EEEEEEEEEE      ....
FF            OOOOOO    RR      RR  DDDDDDDD    EEEEEEEEEE  LLLLLLLLLL  EEEEEEEEEE      TT      EEEEEEEEEE      ....

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
```

```
0 MODULE FOR$DELETE (      ! DELETE statement processor
0                   IDENT = '1-002'         ! Edit: SBL1002
0                   ) =
1 BEGIN
1
1 !
1 !****************************************************************************
1 !*                                                                          *
1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
1 !*  ALL RIGHTS RESERVED.                                                    *
1 !*                                                                          *
1 !*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED   *
1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE   *
1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
1 !*  TRANSFERRED.                                                            *
1 !*                                                                          *
1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
1 !*  CORPORATION.                                                            *
1 !*                                                                          *
1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1 !
1
1 !++
1 ! FACILITY: FORTRAN Language Support Library
1 !
1 ! ABSTRACT:
1 !
1 !      Contains routines to implement FORTRAN DELETE for relative
1 !      and indexed organization files.
1 !
1 ! ENVIRONMENT:  User mode, AST reentrant
1 !
1 ! AUTHOR: Steven B. Lionel, CREATION DATE: 14-May-1979
1 !
1 ! EDIT HISTORY:
1 !
1 ! 1-001 - Original.  SBL 14-May-1979
1 ! 1-002 - Move ACTUALCOUNT declaration inside routine.  SBL 15-June-1982
1 !--
```

```
;   1 !
;   1 ! SWITCHES:
;   1 !
;   1
;   1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
;   1
;   1 !
;   1 ! LINKAGES:
;   1 !
;   1
;   1 REQUIRE 'RTLIN:OTSLNK';                              . Define all linkages
;   1
;   1 !
;   1 ! TABLE OF CONTENTS:
;   1 !
;   1
;   1 FORWARD ROUTINE
;   1         FOR$DELETE : CALL_CCB,                       ! Sequential access delete entry
;   1         FOR$DELETE_D : CALL_CCB;                     . Direct access delete entry
;   1
;   1 !
;   1 ! INCLUDE FILES:
;   1 !
;   1
;   1 LIBRARY 'RTLSTARLE';                                 ! STARLET library for macros and symbols
;   1 REQUIRE 'RTLML:FORERR';                              ! FORTRAN error numbers
;   1 REQUIRE 'RTLML:OTSLUB';                              ! Logical Unit Block Definitions
;   1 REQUIRE 'RTLML:OTSISB';                              ! Inter-statement Block Definitions
;   1 REQUIRE 'RTLIN:RTLPSECT';                            ! P-SECT declaration macros
;   1 REQUIRE 'RTLML:FORPAR';                              ! Inter-module parameters
;   1
;   1 !
;   1 ! MACROS:
;   1 !
;   1
;   1 !
;   1 ! EQUATED SYMBOLS:
;   1 !
;   1
;   1 !
;   1 ! PSECT DEFINITIONS:
;   1 !
;   1
;   1 DECLARE_PSECTS (FOR);
;   1
;   1 !
;   1 ! OWN STORAGE:
;   1 !
;   1
;   1 !
;   1 ! EXTERNAL REFERENCES:
;   1 !
;   1
;   1 EXTERNAL ROUTINE
;   1         FOR$$IOSTAT_HND,                             ! IOSTAT error handler
;   1         FOR$$SIGNAL_STO : NOVALUE,                   ! Signal_stop routine
;   1         FOR$$SIG_NO_LUB : NOVALUE,                   ! Signal without LUB
;  106          1022  1          FOR$$CB_PUSH : JSB_CB_PUSH NOVALUE,      ! Push a CCB
;  107          1023  1          FOR$$CB_POP : JSB_CB_POP NOVALUE;        ! Pop a CCB
```

```
:  109        1024  1 GLOBAL ROUTINE FOR$DELETE (
:  110        1025  1         UNIT,                    ! Unit number on which to delete
:  111        1026  1         ERR_EQL                  ! 1 if ERR= or IOSTAT= present
:  112        1027  1         ) : CALL_CCB =
:  113        1028  1
:  114        1029  1 !++
:  115        1030  1 ! FUNCTIONAL DESCRIPTION:
:  116        1031  1 !
:  117        1032  1 ! FOR$DELETE deletes the current record of the indexed or relative organization file
:  118        1033  1 ! open on unit UNIT.
:  119        1034  1 !
:  120        1035  1 ! CALLING SEQUENCE:
:  121        1036  1 !
:  122        1037  1 !       iostat.wl.v = FOR$DELETE (unit.rl.v [, err_eql.rlu.v])
:  123        1038  1 !
:  124        1039  1 ! FORMAL PARAMETERS:
:  125        1040  1 !
:  126        1041  1 !       unit            - The unit number on which to delete the record.
:  127        1042  1 !                         There must be a "current record" on this unit.
:  128        1043  1 !       err_eql         - If absent or zero, all errors are signalled.
:  129        1044  1 !                       - If 1, errors return an IOSTAT error code value.
:  130        1045  1 !
:  131        1046  1 ! IMPLICIT INPUTS:
:  132        1047  1 !
:  133        1048  1 !       CCB
:  134        1049  1 !
:  135        1050  1 ! IMPLICIT OUTPUTS:
:  136        1051  1 !
:  137        1052  1 !       NONE
:  138        1053  1 !
:  139        1054  1 ! ROUTINE VALUE:
:  140        1055  1 !
:  141        1056  1 !       An IOSTAT value.
:  142        1057  1 !
:  143        1058  1 ! SIDE EFFECTS:
:  144        1059  1 !
:  145        1060  1 !       SIGNAL_STOP's:
:  146        1061  1 !       FOR$_WRIREAFIL - Write to read-only file
:  147        1062  1 !       FOR$_NO_CURREC - No current record
:  148        1063  1 !       FOR$_DELERR    - Delete error
:  149        1064  1 !
:  150        1065  1 !--
:  151        1066  1
:  152        1067  2     BEGIN
:  153        1068  2
:  154        1069  2     GLOBAL REGISTER
:  155        1070  2         CCB = 11: REF BLOCK [, BYTE];
:  156        1071  2
:  157        1072  2     LOCAL
:  158        1073  2         L_UNWIND_ACTION : VOLATILE,
:  159        1074  2         L_ERR_EQL_PRES : VOLATILE,
:  160        1075  2         STATUS;
:  161        1076  2
:  162        1077  2     BUILTIN
:  163        1078  2         ACTUALCOUNT;
:  164        1079  2
:  165        1080  2     ENABLE
```

```
;  2        FOR$$IOSTAT_HND (L_UNWIND_ACTION, L_ERR_EQL_PRES);
;  2
;  2    !+
;  2    ! Determine if ERR_EQL is present.
;  2    !-
;  2
;  2    IF ACTUALCOUNT () GTR 1
;  2    THEN
;  2        L_ERR_EQL_PRES = .ERR_EQL
;  2    ELSE
;  2        L_ERR_EQL_PRES = 0;
;  2
;  2    !+
;  2    ! Unwind action is NO-OP (no LUB yet)
;  2    !-
;  2
;  2    L_UNWIND_ACTION= FOR$K_UNWINDNOP;
;  2
;  2    !+
;  2    ! Get a LUB for this unit.  On return, CCB points to the
;  2    ! current control block.
;  2    !-
;  2
;  2    FOR$$CB_PUSH (.UNIT, LUB$K_LUN_MIN);
;  2
;  2    !+
;  2    ! Unwind action is now to POP the CCB.
;  2    !-
;  2
;  2    L_UNWIND_ACTION = FOR$K_UNWINDPOP;
;  2
;  2    !+
;  2    ! If file is not indexed or relative organization, or is direct access,
;  2    ! signal error FOR$_DELERR.
;  2    !-
;  2
;  2    IF NOT .CCB [LUB$V_NOTSEQORG] OR .CCB [LUB$V_DIRECT]
;  2    THEN
;  2        FOR$$SIGNAL_STO (FOR$K_DELERR);
;  2
;  2    !+
;  2    ! If file is read-only, signal error FOR$_WRIREAFIL.
;  2    !-
;  2
;  2    IF .CCB [LUB$V_READ_ONLY]
;  2    THEN
;  2        FOR$$SIGNAL_STO (FOR$K_WRIREAFIL);
;  2
;  2    !+
;  2    ! Try to delete the current record.  If we get an error, signal it.
;  2    !-
;  2
;  3    IF NOT $DELETE (RAB=.CCB)
;  2    THEN
;  3        BEGIN
;  3        WHILE .CCB [RAB$L_STS] EQL RMS$_RSA DO
;  4            BEGIN
;  223          1138  4              $WAIT (RAB=.CCB);
;  224          1139  4              $DELETE (RAB=.CCB);
;  225          1140  3              END;
;  226          1141  3          IF NOT .CCB [RAB$L_STS]
;  227          1142  3          THEN
;  228          1143  3              FOR$$SIGNAL_STO (
;  229          1144  3                  SELECTONEU .CCB [RAB$L_STS] OF
;  230          1145  3                      SET
;  231          1146  3                      [RMS$_CUR, RMS$_RNL] : FOR$K_NO_CURREC;
;  232          1147  3                      [OTHERWISE] : FOR$K_DELERR;
;  233          1148  3                      TES);
;  234          1149  2          END;
;  235          1150  2
;  236          1151  2      !+
;  237          1152  2      ! Return I/O system to previous state
;  238          1153  2      !-
;  239          1154  2
;  240          1155  2      FOR$$CB_POP ();
;  241          1156  2
;  242          1157  2      RETURN 0;            ! Success IOSTAT value
;  243          1158  1      END;


                                                    .TITLE  FOR$DELETE
                                                    .IDENT  \1-002\

                                                    .EXTRN  FOR$$IOSTAT_HND
                                                    .EXTRN  FOR$$SIGNAL_STO
                                                    .EXTRN  FOR$$SIG_NO_LUB
                                                    .EXTRN  FOR$$CB_PUSH, FOR$$CB_POP
                                                    .EXTRN  SYS$DELETE, SYS$WAIT

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

                             081C 00000             .ENTRY  FOR$DELETE, Save R2,R3,R4,R11                  ; 1024
              54 00000000G  00  9E 00002            MOVAB   SYS$DELETE, R4                                 ;
              53 00000000G  00  9E 00009            MOVAB   FOR$$SIGNAL_STO, R3                            ;
              5E            04  C2 00010            SUBL2   #4, SP                                         ;
                            7E  D4 00013            CLRL    L_ERR_EQL_PRES                                 ; 1067
                      04    AE  D4 00015            CLRL    L_UNWIND_ACTION                                ;
              6D      0088  CF  DE 00018            MOVAL   12$, (FP)                                      ;
              01            6C  91 0001D            CMPB    (AP), #1                                       ; 1087
                            06  1B 00020            BLEQU   1$                                             ;
              6E      08    AC  D0 00022            MOVL    ERR_EQL, L_ERR_EQL_PRES                        ; 1089
                            02  11 00026            BRB     2$                                             ;
                            6E  D4 00028 1$:        CLRL    L_ERR_EQL_PRES                                 ; 1091
         04   AE            01  D0 0002A 2$:        MOVL    #1, L_UNWIND_ACTION                            ; 1097
                            50  D4 0002E            CLRL    R0                                             ; 1104
              52      04    AC  D0 00030            MOVL    UNIT, R2                                       ;
                 00000000G  00  16 00034            JSB     FOR$$CB_PUSH                                   ;
                      04    AE  D4 0003A            CLRL    L_UNWIND_ACTION                                ; 1110
  05     A1   AB            03  E1 0003D            BBC     #3, -95(CCB), 3$                               ; 1117
  05     FC   AB            04  E1 00042            BBC     #4, -4(CCB), 4$                                ;
                            37  DD 00047 3$:        PUSHL   #55                                            ; 1119
              63            01  FB 00049            CALLS   #1, FOR$$SIGNAL_STO                            ;
  05     FC   AB            02  E1 0004C 4$:        BBC     #2, -4(CCB), 5$                                ; 1125
                            2F  DD 00051            PUSHL   #47                                            ; 1127
```

```
             63               01  FB 00053        CALLS   #1, FOR$$SIGNAL_STO                      ;
                              5B  DD 00056 5$:    PUSHL   CCB                                      ; 1133
             64               01  FB 00058        CALLS   #1, SYS$DELETE                           ;
             3D               50  E8 0005B        BLBS    R0, 11$                                  ;
000182DA     8F        08     AB  D1 0005E 6$:    CMPL    8(CCB), #99034                           ; 1136
                              10  12 00066        BNEQ    7$                                       ;
                              5B  DD 00068        PUSHL   CCB                                      ; 1138
00000000G    00               01  FB 0006A        CALLS   #1, SYS$WAIT                             ;
                              5B  DD 00071        PUSHL   CCB                                      ; 1139
             64               01  FB 00073        CALLS   #1, SYS$DELETE                           ;
                              E6  11 00076        BRB     6$                                       ; 1136
             1F        08     AB  E8 00078 7$:    BLBS    8(CCB), 11$                              ; 1141
             50        08     AB  D0 0007C        MOVL    8(CCB), R0                               ; 1144
000181A0     8F               50  D1 00080        CMPL    R0, #98720                               ; 1146
                              09  13 00087        BEQL    8$                                       ;
000184B4     8F               50  D1 00089        CMPL    R0, #99508                               ;
                              04  12 00090        BNEQ    9$                                       ;
                              35  DD 00092 8$:    PUSHL   #53                                      ;
                              02  11 00094        BRB     10$                                      ;
                              37  DD 00096 9$:    PUSHL   #55                                      ; 1147
             63               01  FB 00098 10$:   CALLS   #1, FOR$$SIGNAL_STO                      ; 1144
                  00000000G   00  16 0009B 11$:   JSB     FOR$$CB_POP                              ; 1155
                              50  D4 000A1        CLRL    R0                                       ; 1157
                                  04 000A3        RET                                              ; 1158
                                0000 000A4 12$:   .WORD   Save nothing                             ; 1067
             50        08     AC  D0 000A6        MOVL    8(AP), R0                                ;
             50        04     A0  D0 000AA        MOVL    4(R0), R0                                ;
                       F8     A0  9F 000AE        PUSHAB  L_ERR_EQL_PRES                           ;
                       FC     A0  9F 000B1        PUSHAB  L_UNWIND_ACTION                          ;
                              02  DD 000B4        PUSHL   #2                                       ;
                              5E  DD 000B6        PUSHL   SP                                       ;
             7E        04     AC  7D 000B8        MOVQ    4(AP), -(SP)                             ;
00000000G    00               03  FB 000BC        CALLS   #3, FOR$$IOSTAT_HND                      ;
                                  04 000C3        RET                                              ;

; Routine Size:  196 bytes,    Routine Base:  _FOR$CODE + 0000
```

```
1 GLOBAL ROUTINE FOR$DELETE_D (
1         UNIT,                          ! Unit to delete on
1         REC_NO,                        . Record number to delete
1         ERR_EQL                        ! 1 if ERR= or IOSTAT= specified
1         ) : CALL_CCB =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 ! Deletes the specified record on a relative organization file
1 ! opened for direct access.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       iostat.wl.v = FOR$DELETE_D (unit.rl.v, rec_no.rl.v [, err_eql.r;u.v])
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       unit                     - Unit number to delete on
1 !       rec_no                   - Record number to delete
1 !       err_eql                  - If present and 1, return IOSTAT
1 !                                  values for errors.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       CCB
1 !       LUB$L_LOG_RECNO
1 !       LUB$V_FIND_LAST          ! On if FIND was last operation
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       LUB$V_FIND_LAST          ! Cleared
1 !
1 ! ROUTINE VALUE:
1 !
1 !       An IOSTAT value.
1 !
1 ! SIDE EFFECTS:
1 !
1 !       SIGNAL_STOPs:
1 !       FOR$_OPEDEFREQ - Open or define file required for direct or keyed access
1 !       FOR$_WRIREAFIL - Write to read-only file
1 !       FOR$_RECNUMOUT - Record number out of range
1 !       FOR$_ATTACCNON - Attempt to access non-existent record
1 !       FOR$_SPERECLOC - Specified record locked
1 !       FOR$_DELERR    - Delete error
1 !
1 !--
1
2    BEGIN
2
2    GLOBAL REGISTER
2        CCB = 11: REF BLOCK [, BYTE];
2
2    LOCAL
2        L_UNWIND_ACTION : VOLATILE,
2        L_ERR_EQL_PRES : VOLATILE;
```

```

BUILTIN
    ACTUALCOUNT;

ENABLE
    FOR$$IOSTAT_HND (L_UNWIND_ACTION, L_ERR_EQL_PRES);

!+
! Determine if ERR_EQL is present.
!-

IF ACTUALCOUNT () GTR 2
THEN
    L_ERR_EQL_PRES = .ERR_EQL
ELSE
    L_ERR_EQL_PRES = 0;

!+
! Unwind action is NO-OP (no LUB yet)
!-

L_UNWIND_ACTION= FOR$K_UNWINDNOP;

!+
! Get a LUB for this unit.  On return, CCB points to the
! current control block.
!-

FOR$$CB_PUSH (.UNIT, LUB$K_LUN_MIN);

!+
! Unwind action is now to POP the CCB.
!-

L_UNWIND_ACTION = FOR$K_UNWINDPOP;

!+
! If file is not relative organization, signal error FOR$_DELERR.
!-

IF .CCB [LUB$B_ORGAN] NEQU LUB$K_ORG_RELAT
THEN
    FOR$$SIGNAL_STO (FOR$K_DELERR);

!+
! If file is read-only, signal error FOR$_WRIREAFIL.
!-

IF .CCB [LUB$V_READ_ONLY]
THEN
    FOR$$SIGNAL_STO (FOR$K_WRIREAFIL);

!+
! If file is not direct access, signal error FOR$_OPEDEFREQ.
!-

IF NOT .CCB [LUB$V_DIRECT]
```

```
2    THEN
2        FOR$$SIGNAL_STO (FOR$K_OPEDEFREQ);
2
2    !+
2    ! If the record number passed is illegal, signal FOR$_RECNUMOUT.
2    !-
2
3    IF .REC_NO LEQ 0 OR (.CCB [LUB$L_REC_MAX] NEQ 0 AND .REC_NO GTRU .CCB [LUB$L_REC_MAX])
2    THEN
2        FOR$$SIGNAL_STO (FOR$K_RECNUMOUT);
2
2    !+
2    !  See if the requested record to be deleted may already be locked.
2    !  If it is, we want to avoid doing a $FIND which would unlock the
2    !  record.  To check, we compare REC_NO against (LUB$L_LOG_RECNO - 1)
2       (or LUB$L_LOG_RECNO if LUB$V_FIND_LAST is set).  If they are equal,
2    !  the last operation we did may have locked this record.  If it didn't,
2    !  then we don't have a record locked.  Trying to delete the record
2    !  will show if it's locked or not.  If not, we do a $FIND anyway.
2    !-
2
2    IF .REC_NO EQL
3        ( IF .CCB [LUB$V_FIND_LAST]
3        THEN
3            .CCB [LUB$L_LOG_RECNO]
3        ELSE
3            .CCB [LUB$L_LOG_RECNO] - 1)
2    THEN
3        BEGIN
3
3        CCB [LUB$V_FIND_LAST] = 0;                 ! Turn off bit
3
3        !+
3        ! We may have it locked.  Try to delete it.
3        !-
3
4        IF NOT $DELETE (RAB=.CCB)
3        THEN
3            WHILE .CCB [RAB$L_STS] EQL RMS$_RSA DO
4                BEGIN
4                $WAIT (RAB=.CCB);
4                $DELETE (RAB=.CCB);
3                END;
3
3        !+
3        ! If we succeeded, return.
3        !-
3
3        IF .CCB [RAB$L_STS]
3        THEN
4            BEGIN
4            FOR$$CB_POP ();     ! Return I/O to previous state
4            RETURN 0;           ! Success IOSTAT value
3            END;
2        END;
2
2    !+
;  416          1330 2    !  We don't have it locked.  Do a $FIND then a $DELETE.
;  417          1331 2    !-
;  418          1332 2
;  419          1333 2    CCB [LUB$V_FIND_LAST] = 0;
;  420          1334 2
;  421          1335 2    CCB [LUB$L_LOG_RECNO] = .REC_NO;
;  422          1336 3    IF NOT $FIND (RAB=.CCB)
;  423          1337 2    THEN
;  424          1338 3        BEGIN
;  425          1339 3        WHILE .CCB[RAB$L_STS] EQL RMS$_RSA DO
;  426          1340 4            BEGIN
;  427          1341 4        $WAIT (RAB=.CCB);
;  428          1342 5        $FIND (RAB=.CCB)
;  429          1343 3        END;
;  430          1344 3        IF NOT .CCB [RAB$L_STS] THEN FOR$$SIGNAL_STO (
;  431          1345 3        SELECTONEU .CCB [RAB$L_STS] OF
;  432          1346 3            SET
;  433          1347 3            [RMS$_RLK] : FOR$K_SPERECLOC;
;  434          1348 3            [RMS$_RNF, RMS$_EOF] : FOR$K_ATTACCNON;
;  435          1349 3            [OTHERWISE] : FOR$K_DELERR;
;  436          1350 3            TES);
;  437          1351 2        END;
;  438          1352 2
;  439          1353 2    !+
;  440          1354 2    ! Try to delete the current record.  If we get an error, signal it.
;  441          1355 2    !-
;  442          1356 2
;  443          1357 3    IF NOT $DELETE (RAB=.CCB)
;  444          1358 2    THEN
;  445          1359 3        BEGIN
;  446          1360 3        WHILE  CCB [RAB$L_STS] EQL RMS$_RSA DO
;  447          1361 4            BEGIN
;  448          1362 4            $WAIT (RAB=.CCB);
;  449          1363 4            $DELETE (RAB=.CCB);
;  450          1364 3            END;
;  451          1365 3        IF NOT .CCB [RAB$L_STS]
;  452          1366 3        THEN
;  453          1367 3             FOR$$SIGNAL_STO (FOR$K_DELERR);
;  454          1368 2        END;
;  455          1369 2
;  456          1370 2    !+
;  457          1371 2    ! Return I/O system to previous state
;  458          1372 2    !-
;  459          1373 2
;  460          1374 2    FOR$$CB_POP ();
;  461          1375 2
;  462          1376 2    RETURN 0;             ! Success IOSTAT value
;  463          1377 1    END;


                                                          .EXTRN  SYS$FIND

                                     087C 00000           .ENTRY  FOR$DELETE_D, Save R2,R3,R4,R5,R6,R11      ; 1159
                     56 00000000G  00   9E 00002          MOVAB   SYS$FIND, R6                                ;
                     55 00000000G  00   9E 00009          MOVAB   SYS$WAIT, R5                                ;
                     54 00000000G  00   9E 00010          MOVAB   SYS$DELETE, R4                              ;
```

```
                    53 00000000G  00  9E 00017          MOVAB   FOR$$SIGNAL_STO, R3                 ;
                    5E            04  C2 0001E          SUBL2   #4, SP                              ;
                                  7E  D4 00021          CLRL    L_ERR_EQL_PRES                      ; 1208
                              04  AE  D4 00023          CLRL    L_UNWIND_ACTION                     ;
                    6D      0117  CF  DE 00026          MOVAL   23$, (FP)                           ;
                    02            6C  91 0002B          CMPB    (AP), #2                            ; 1227
                                  06  1B 0002E          BLEQU   1$                                  ;
                    6E        0C  AC  D0 00030          MOVL    ERR_EQL, L_ERR_EQL_PRES             ; 1229
                                  02  11 00034          BRB     2$                                  ;
                                  6E  D4 00036 1$:      CLRL    L_ERR_EQL_PRES                      ; 1231
                04  AE            01  D0 00038 2$:      MOVL    #1, L_UNWIND_ACTION                 ; 1237
                                  50  D4 0003C          CLRL    R0                                  ; 1244
                    52        04  AC  D0 0003E          MOVL    UNIT, R2                            ;
                       00000000G  00  16 00042          JSB     FOR$$CB_PUSH                        ;
                              04  AE  D4 00048          CLRL    L_UNWIND_ACTION                     ; 1250
                    02        C4  AB  91 0004B          CMPB    -60(CCB), #2                        ; 1256
                                  05  13 0004F          BEQL    3$                                  ;
                                  37  DD 00051          PUSHL   #55                                 ; 1258
                    63            01  FB 00053          CALLS   #1, FOR$$SIGNAL_STO                 ;
05              FC  AB            02  E1 00056 3$:      BBC     #2, -4(CCB), 4$                     ; 1264
                                  2F  DD 0005B          PUSHL   #47                                 ; 1266
                    63            01  FB 0005D          CALLS   #1, FOR$$SIGNAL_STO                 ;
05              FC  AB            04  E0 00060 4$:      BBS     #4, -4(CCB), 5$                     ; 1272
                                  1A  DD 00065          PUSHL   #26                                 ; 1274
                    63            01  FB 00067          CALLS   #1, FOR$$SIGNAL_STO                 ;
                    52        08  AC  D0 0006A 5$:      MOVL    REC_NO, R2                          ; 1280
                                  0B  15 0006E          BLEQ    6$                                  ;
                              E4  AB  D5 00070          TSTL    -28(CCB)                            ;
                                  0B  13 00073          BEQL    7$                                  ;
                E4  AB            52  D1 00075          CMPL    R2, -28(CCB)                        ;
                                  05  1B 00079          BLEQU   7$                                  ;
                                  19  DD 0007B 6$:      PUSHL   #25                                 ; 1282
                    63            01  FB 0007D          CALLS   #1, FOR$$SIGNAL_STO                 ;
06              A0  AB            03  E1 00080 7$:      BBC     #3, -96(CCB), 8$                    ; 1295
                    50        E0  AB  D0 00085          MOVL    -32(CCB), R0                        ; 1297
                                  05  11 00089          BRB     9$                                  ;
50              E0  AB            01  C3 0008B 8$:      SUBL3   #1, -32(CCB), R0                    ; 1299
                    50            52  D1 00090 9$:      CMPL    R2, R0                              ; 1295
                                  26  12 00093          BNEQ    12$                                 ;
                A0  AB            08  8A 00095          BICB2   #8, -96(CCB)                        ; 1303
                                  5B  DD 00099          PUSHL   CCB                                 ; 1309
                    64            01  FB 0009B          CALLS   #1, SYS$DELETE                      ;
                    16            50  E8 0009E          BLBS    R0, 11$                             ;
          000182DA  8F        08  AB  D1 000A1 10$:     CMPL    8(CCB), #99034                      ; 1311
                                  0C  12 000A9          BNEQ    11$                                 ;
                                  5B  DD 000AB          PUSHL   CCB                                 ; 1313
                    65            01  FB 000AD          CALLS   #1, SYS$WAIT                        ;
                                  5B  DD 000B0          PUSHL   CCB                                 ; 1314
                    64            01  FB 000B2          CALLS   #1, SYS$DELETE                      ;
                                  EA  11 000B5          BRB     10$                                 ; 1311
                    7D        08  AB  E8 000B7 11$:     BLBS    8(CCB), 22$                         ; 1321
                A0  AB            08  8A 000BB 12$:     BICB2   #8, -96(CCB)                        ; 1333
                E0  AB            52  D0 000BF          MOVL    R2, -32(CCB)                        ; 1335
                                  5B  DD 000C3          PUSHL   CCB                                 ; 1336
                    66            01  FB 000C5          CALLS   #1, SYS$FIND                        ;
                    46            50  E8 000C8          BLBS    R0, 19$                             ;
          000182DA  8F        08  AB  D1 000CB 13$:     CMPL    8(CCB), #99034                      ; 1339
```

```
                               0C   12 000D3          BNEQ    14$                      ;
                               5B   DD 000D5          PUSHL   CCB                      ; 1341
                65             01   FB 000D7          CALLS   #1, SYS$WAIT             ;
                               5B   DD 000DA          PUSHL   CCB                      ; 1342
                66             01   FB 000DC          CALLS   #1, SYS$FIND             ;
                               EA   11 000DF          BRB     13$                      ;
                2C       08    AB   E8 000E1 14$:     BLBS    8(CCB), 19$              ; 1344
                50       08    AB   D0 000E5          MOVL    8(CCB), R0               ; 1345
      000182AA  8F             50   D1 000E9          CMPL    R0, #98986               ; 1347
                               04   12 000F0          BNEQ    15$                      ;
                               34   DD 000F2          PUSHL   #52                      ;
                               18   11 000F4          BRB     18$                      ;
      0001827A  8F             50   D1 000F6 15$:     CMPL    R0, #98938               ; 1348
                               09   13 000FD          BEQL    16$                      ;
      000182B2  8F             50   D1 000FF          CMPL    R0, #98994               ;
                               04   12 00106          BNEQ    17$                      ;
                               24   DD 00108 16$:     PUSHL   #36                      ;
                               02   11 0010A          BRB     18$                      ;
                               37   DD 0010C 17$:     PUSHL   #55                      ; 1349
                63             01   FB 0010E 18$:     CALLS   #1, FOR$$SIGNAL_STO      ; 1345
                               5B   DD 00111 19$:     PUSHL   CCB                      ; 1357
                64             01   FB 00113          CALLS   #1, SYS$DELETE           ;
                1F             50   E8 00116          BLBS    R0, 22$                  ;
      000182DA  8F       08    AB   D1 00119 20$:     CMPL    8(CCB), #99034           ; 1360
                               0C   12 00121          BNEQ    21$                      ;
                               5B   DD 00123          PUSHL   CCB                      ; 1362
                65             01   FB 00125          CALLS   #1, SYS$WAIT             ;
                               5B   DD 00128          PUSHL   CCB                      ; 1363
                64             01   FB 0012A          CALLS   #1, SYS$DELETE           ;
                               EA   11 0012D          BRB     20$                      ; 1360
                05       08    AB   E8 0012F 21$:     BLBS    8(CCB), 22$              ; 1365
                               37   DD 00133          PUSHL   #55                      ; 1367
                63             01   FB 00135          CALLS   #1, FOR$$SIGNAL_STO      ;
                   00000000G   00   16 00138 22$:     JSB     FOR$$CB_POP              ; 1374
                               50   D4 0013E          CLRL    R0                       ; 1377
                                    04 00140          RET                              ;
                                  0000 00141 23$:     .WORD   Save nothing             ; 1208
                50       08    AC   D0 00143          MOVL    8(AP), R0                ;
                50       04    A0   D0 00147          MOVL    4(R0), R0                ;
                         F8    A0   9F 0014B          PUSHAB  L_ERR_EQL_PRES           ;
                         FC    A0   9F 0014E          PUSHAB  L_UNWIND_ACTION          ;
                               02   DD 00151          PUSHL   #2                       ;
                               5E   DD 00153          PUSHL   SP                       ;
                7E       04    AC   7D 00155          MOVQ    4(AP), -(SP)             ;
      00000000G 00             03   FB 00159          CALLS   #3, FOR$$IOSTAT_HND      ;
                                    04 00160          RET                              ;
```

; Routine Size: 353 bytes,   Routine Base: _FOR$CODE + 00C4

```
;  465          1378  1 END                           .End of module
;  466          1379  0 ELUDOM




;                                    PSECT SUMMARY
;
;      Name                        Bytes                      Attributes
;
;  _FOR$CODE                             549  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       13         0        581          00:01.1





;                                     COMMAND QUALIFIERS

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

; Size:          549 code + 0 data bytes
; Run Time:         00:16.4
; Elapsed Time:     00:55.0
; Lines/CPU Min:     5045
; Lexemes/CPU-Min: 33318
; Memory Used:  185 pages
; Compilation Complete
```

0179 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY

COMR50WD
LIS

FORDATEDS
LIS

FORDECOMO
LIS

FORCB
LIS

COMSETST
LIS

FORASSOC
LIS

FORCLOSEF
LIS

FORDATE
LIS

FORCLOSE
LIS

FORDECOMP
LIS

FORDELETE
LIS

COMRAD50
LIS

COMUSEREX
LIS

FORBITOPS
LIS

FORDEFINE
LIS

FORBACKSP
LIS

FORDISPAT
LIS

FORCVTRT
LIS