```
RRRRRRRRRRR      UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF   FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF   FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF   FFFFFFFFFFFFFFF
RRR          RRR UUU          UUU  NNN         NNN  000          000 FFF               FFF
RRR          RRR UUU          UUU  NNN         NNN  000          000 FFF               FFF
RRR          RRR UUU          UUU  NNN         NNN  000          000 FFF               FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000          000 FFF               FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000          000 FFF               FFF
RRR          RRR UUU          UUU  NNNNNN      NNN  000          000 FFF               FFF
RRRRRRRRRRR      UUU          UUU  NNN   NNN   NNN  000          000 FFFFFFFFFFF       FFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN   NNN   NNN  000          000 FFFFFFFFFFF       FFFFFFFFFFF
RRRRRRRRRRRR     UUU          UUU  NNN   NNN   NNN  000          000 FFFFFFFFFFF       FFFFFFFFFFF
RRR   RRR        UUU          UUU  NNN       NNNNNN 000          000 FFF               FFF
RRR   RRR        UUU          UUU  NNN       NNNNNN 000          000 FFF               FFF
RRR   RRR        UUU          UUU  NNN       NNNNNN 000          000 FFF               FFF
RRR      RRR     UUU          UUU  NNN          NNN 000          000 FFF               FFF
RRR      RRR     UUU          UUU  NNN          NNN 000          000 FFF               FFF
RRR      RRR     UUU          UUU  NNN          NNN 000          000 FFF               FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN          NNN    000000000     FFF               FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN          NNN    000000000     FFF               FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN          NNN    000000000     FFF               FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN          NNN    000000000     FFF               FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN          NNN    000000000     FFF               FFF
```

```
_$2

Sym
---
NDX
NDX
NUM
NUM
OPE
OUT
PAC
PAC
PAC
PAC
PAC
PAC
PAC
PAD
PAG
PAG
PAG
PAG
PAG
PAG
PAG
PER
PUT
RCO
RIN

RLI
RNO
RNO
RTY
SAV
STR
STR
STR
STR
STR
STR

STR
STR
STR
STR
STR
STR
STR
STR
STR
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STR
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STR
STR
```

FILEID**FOOFIL

```
FFFFFFFFFF    000000      000000    FFFFFFFFFF    IIIIII    LL
FFFFFFFFFF    000000      000000    FFFFFFFFFF    IIIIII    LL
FF          00      00  00      00  FF              II      LL
FF          00      00  00      00  FF              II      LL
FF          00      00  00      00  FF              II      LL
FF          00      00  00      00  FF              II      LL
FFFFFFFF    00      00  00      00  FFFFFFFF        II      LL
FFFFFFFF    00      00  00      00  FFFFFFFF        II      LL
FF          00      00  00      00  FF              II      LL
FF          00      00  00      00  FF              II      LL
FF          00      00  00      00  FF              II      LL                .....
FF          00      00  00      00  FF              II      LL                .....
FF            000000      000000    FF            IIIIII    LLLLLLLLLL        .....
FF            000000      000000    FF            IIIIII    LLLLLLLLLL        .....

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
```

```
;  1          0001  0 %TITLE 'File operations for footnote processing'
;  2          0002  0 MODULE foofil ( IDENT = 'V04-000'
;  3        P 0003  0                 %BLISS32E, ADDRESSING_MODE (EXTERNAL    = LONG_RELATIVE,
;  4          0004  0                                             NONEXTERNAL = LONG_RELATIVE)]
;  5          0005  0                 ) =
;  6          0006  1 BEGIN
;  7          0007  1 !
;  8          0008  1 !*****************************************************************************
;  9          0009  1 !*                                                                           *
; 10          0010  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
; 11          0011  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
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; 15          0015  1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
; 16          0016  1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
; 17          0017  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
; 18          0018  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
; 19          0019  1 !*  TRANSFERRED.                                                             *
; 20          0020  1 !*                                                                           *
; 21          0021  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
; 22          0022  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
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; 24          0024  1 !*                                                                           *
; 25          0025  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
; 26          0026  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
; 27          0027  1 !*                                                                           *
; 28          0028  1 !*                                                                           *
; 29          0029  1 !*****************************************************************************
; 30          0030  1 !
; 31          0031  1 !++
; 32          0032  1 ! FACILITY:      DSR (Digital Standard RUNOFF) / DSRPLUS
; 33          0033  1 !
; 34          0034  1 ! ABSTRACT:
; 35          0035  1 !
; 36          0036  1 !       Handle all file operations for .FOOTNOTE and .END FOOTNOTE
; 37          0037  1 !       commands.
; 38          0038  1 !
; 39          0039  1 ! ENVIRONMENT:  Transportable
; 40          0040  1 !
; 41          0041  1 ! AUTHOR:       R.W.Friday       CREATION DATE: September, 1978
; 42          0042  1 !
; 43          0043  1
```

```
;    45          0044  1 %SBTTL 'Revision History'
;    46          0045  1 !
;    47          0046  1 ! MODIFIED BY:
;    48          0047  1 !
;    49          0048  1 !       009     RER00009        Ron Randall     07-Mar-1983
;    50          0049  1 !               Global edit of all modules. Updated module names, idents,
;    51          0050  1 !               copyright dates. Changed require files to BLISS library.
;    52          0051  1 !
;    53          0052  1 !--
;    54          0053  1
```

```
;    56          0054  1 %SBTTL 'Module Level Declarations'
;    57          0055  1
;    58          0056  1 !
;    59          0057  1 ! TABLE OF CONTENTS:
;    60          0058  1 !
;    61          0059  1 FORWARD ROUTINE
;    62          0060  1     FOOFIL;
;    63          0061  1
;    64          0062  1 !
;    65          0063  1 ! INCLUDE FILES:
;    66          0064  1 !
;    67          0065  1 LIBRARY 'NXPORT:XPORT';                 ! XPORT Library
;    68          0066  1 REQUIRE 'REQ:RNODEF';                   ! RUNOFF variant definitions
;    69          0197  1
;    70        U 0198  1 %IF DSRPLUS %THEN
;    71        U 0199  1 LIBRARY 'REQ:DPLLIB';                   ! DSRPLUS BLISS Library
;    72          0200  1 %ELSE
;    73          0201  1 LIBRARY 'REQ:DSRLIB';                   ! DSR BLISS Library
;    74          0202  1 %FI
;    75          0203  1
;    76          0204  1 !
;    77          0205  1 ! MACROS:
;    78          0206  1 !
;    79          0207  1 MACRO
;    80        M 0208  1     erm_t (rnfcode, str_descr) =
;    81        M 0209  1         BEGIN
;    82        M 0210  1         BIND
;    83        M 0211  1             temp = str_descr : $STR_DESCRIPTOR ();
;    84        M 0212  1
;    85        M 0213  1         erme (rnfcode, .temp [STR$A_POINTER], .temp [STR$H_LENGTH], .semcod)
;    86          0214  1         END     %;
;    87          0215  1
;    88          0216  1 !
;    89          0217  1 ! EXTERNAL REFERENCES:
;    90          0218  1 !
;    91          0219  1 EXTERNAL
;    92          0220  1     FNCT : FNCT_DEFINITION,             ! Overall footnote statistics.
;    93          0221  1     FNESIZ : FN_EXT_SIZE_DEFINITION,    ! Size of each pending footnote.
;    94          0222  1     FNISIZ : FN_INT_SIZE_DEFINITION,    ! Internal size of each pending
;    95          0223  1                                         !  footnote (number of TSF/MRA pairs)
;    96          0224  1     MRA : REF FIXED_STRING,
;    97          0225  1     TSF : TSF_DEFINITION;
;    98          0226  1
;    99          0227  1 EXTERNAL
;   100          0228  1     FO1IOB : $XPO_IOB (),               ! Only the address is looked at.
;   101          0229  1     FOOIOB : REF  $XPO_IOB (),          ! The primary footnote IOB.  Except for
;   102          0230  1                                         ! FOO_CLEAN, all footnote operations
;   103          0231  1                                         ! refer to this IOB.
;   104          0232  1     FOTIOB : REF  $XPO_IOB (),          ! Used as a work file for footnotes.
;   105          0233  1     FFNAME : $STR_DESCRIPTOR (CLASS = DYNAMIC), !Failure filename destination
;   106          0234  1     SEMCOD,                             ! Secondary error message code
;   107          0235  1     FOOREC : FOOREC_DEFINITION,         ! Work area for pass-thru records.
;   108          0236  1     FOOMRA : FIXED_STRING,              ! Substitute MRA.
;   109          0237  1     FOOTSF : VECTOR [TSF_SIZE];         ! Substitute TSF area
;   110          0238  1
;   111          0239  1 EXTERNAL LITERAL                                !Error messages
;   112          0240  1     RNFCOF,
```

```
;  113     0241  1     RNFCRF,
;  114     0242  1     RNFCWF,
;  115     0243  1     RNFILE;
;  116     0244  1
;  117     0245  1 EXTERNAL ROUTINE
;  118     0246  1     ERM,
;  119     0247  1     ERME,
;  120     0248  1     ERMS,
;  121     0249  1     GRAB_RESULTANT;
;  122     0250  1
```

```
;   124         0251  1 %SBTTL 'body of routine'
;   125         0252  1 GLOBAL ROUTINE foofil (operation) =
;   126         0253  1
;   127         0254  1 !++
;   128         0255  1 ! FUNCTIONAL DESCRIPTION:
;   129         0256  1 !
;   130         0257  1 !       Performs operations on the footnote file.
;   131         0258  1 !
;   132         0259  1 ! FORMAL PARAMETERS:
;   133         0260  1 !
;   134         0261  1 !       OPERATION indicates what should be done.  See the file FFDEFS.REQ.
;   135         0262  1 !
;   136         0263  1 ! IMPLICIT INPUTS:      None
;   137         0264  1 !
;   138         0265  1 ! IMPLICIT OUTPUTS:     None
;   139         0266  1 !
;   140         0267  1 ! ROUTINE VALUE:
;   141         0268  1 ! COMPLETION CODES:     None
;   142         0269  1 !
;   143         0270  1 ! SIDE EFFECTS:         None
;   144         0271  1 !--
;   145         0272  1
;   146         0273  2     BEGIN
;   147         0274  2     LOCAL
;   148         0275  2         STATUS;
;   149         0276  2
;   150         0277  2     CASE .OPERATION FROM 0 TO FFOO_OP OF
;   151         0278  2         SET
;   152         0279  2
;   153         0280  2         [FOO_INIT] :                    ! Initialize footnote file.
;   154         0281  3             BEGIN
;   155         0282  3             ! When initializing the IOB make sure the associated file name is
;   156         0283  3             ! correct.
;   157         0284  3             IF  .FOOIOB EQLA FO1IOB
;   158         0285  3             THEN
;   159       P 0286  3                 $XPO_IOB_INIT ( IOB = .FOOIOB,
;   160       P 0287  3                                 FILE_SPEC = ('001RNO.TMP'),
;   161         0288  4                                 ATTRIBUTES = BINARY)
;   162         0289  3             ELSE
;   163       P 0290  3                 $XPO_IOB_INIT ( IOB = .FOOIOB,
;   164       P 0291  3                                 FILE_SPEC = ('002RNO.TMP'),
;   165         0292  3                                 ATTRIBUTES = BINARY);
;   166         0293  3             RETURN FOO_NORMAL;
;   167         0294  2             END;
;   168         0295  2
;   169         0296  2         [FOO_OPIN] :                    ! Open footnote file for input.
;   170         0297  3             BEGIN
;   171         0298  3
;   172         0299  3             IF  .FOOIOB [IOB$V_OPEN]    ! Is the file open?
;   173         0300  3             THEN
;   174         0301  3                 IF  .FOOIOB [IOB$V_INPUT] ! Yes, but is it for input?
;   175         0302  3                 THEN
;   176         0303  3                     RETURN FOO_NORMAL   ! Yes again, so return.
;   177         0304  3                 ELSE
;   178         0305  3                     ! NO, it's open for output.  We can't have that!  We must
;   179         0306  3                     ! close it and reopen it for input.
;   180         0307  4                     BEGIN
```

```
;  181          0308  4                    foofil (foo_clos);          ! Always succeeds, so no status
;  182          0309  4                                                ! check needed.
;  183          0310  4
;  184        P 0311  4                    status = $XPO_OPEN ( IOB = .fooiob
;  185        P 0312  4                                        ,OPTIONS = INPUT
;  186        P 0313  4                                        ,FAILURE = grab_resultant
;  187          0314  4                                                );
;  188          0315  4
;  189          0316  4                    IF  .status
;  190          0317  4                    THEN
;  191          0318  4                        RETURN foo_normal
;  192          0319  4                    ELSE                                !Can't open footnote file for reading.
;  193          0320  5                        BEGIN
;  194          0321  5                        erm_t (rnfrof, ffname);
;  195          0322  5                        RETURN foo_bad;
;  196          0323  4                        END;
;  197          0324  4
;  198          0325  4                    END
;  199          0326  3                ELSE
;  200          0327  3                    ! The file is not open at all.  This indicates some serious
;  201          0328  3                    ! error, since the only reason the file could be closed is
;  202          0329  3                    ! either that the user has defined no footnotes, or all the
;  203          0330  3                    ! footnotes have already been output.  At any rate, output
;  204          0331  3                    ! an error message and return.
;  205          0332  4                    BEGIN
;  206          0333  4                    ERMS (RNFILS, CH$PTR (UPLIT ('FOO_OPIN')), 9);
;  207          0334  4                    RETURN FOO_BAD
;  208          0335  4                    END
;  209          0336  4
;  210          0337  2                END;
;  211          0338  2
;  212          0339  2            [FOO_RHDR] :
;  213          0340  2                ! Read a record header and copy the information into a safe place.
;  214          0341  3                BEGIN
;  215        P 0342  3                STATUS = $XPO_GET (IOB = .FOOIOB,
;  216        P 0343  3                                   FAILURE = XPO$IO_FAILURE,
;  217          0344  3                                   FULLWORDS = FOOREC_SIZE);
;  218          0345  3
;  219          0346  3                IF  NOT .STATUS     ! Make sure the read went ok
;  220          0347  3                THEN
;  221          0348  3
;  222          0349  3                    IF  .STATUS EQL XPO$_END_FILE
;  223          0350  3                    THEN            ! End of file is ok.  Just means there's
;  224          0351  3                        RETURN FOO_ENDFIL  ! nothing more to read.
;  225          0352  3                    ELSE            ! Couldn't read the record header.
;  226          0353  4                        BEGIN
;  227          0354  4                        ERM (RNFCRF, 0, 0);
;  228          0355  5                        RETURN (FOO_BAD)
;  229          0356  3                        END;
;  230          0357  3
;  231          0358  3                            ! The record header has been read ok.  Now copy
;  232          0359  4                BEGIN       ! the information where it will be safe.
;  233          0360  4                BIND
;  234          0361  4                    RECORD_HEADER = FOOIOB [IOB$A_DATA] : REF VECTOR [FOOREC_SIZE];
;  235          0362  4
;  236          0363  4                INCR I FROM 0 TO (FOOREC_SIZE - 1) DO
;  237          0364  4                    FOOREC [.I] = .RECORD_HEADER [.I];
```

```
;  238     0365  4
;  239     0366  3              END;
;  240     0367  3
;  241     0368  3              ! Signal successful completion to the user.
;  242     0369  3              RETURN FOO_NORMAL
;  243     0370  3
;  244     0371  2              END;
;  245     0372  2
;  246     0373  2          [FOO_OPOU] :
;  247     0374  2              ! Open footnote file for output.
;  248     0375  3              BEGIN
;  249     0376  3
;  250     0377  3              ! If the file is already opened for output just return.
;  251     0378  3              IF  .FOOIOB [IOB$V_OPEN]
;  252     0379  3              THEN        ! The file is at least open.
;  253     0380  3
;  254     0381  3                  IF  .FOOIOB [IOB$V_OUTPUT]      ! See if it's open for output.
;  255     0382  3                  THEN    ! The file is in exactly the state we want it in.
;  256     0383  3                      RETURN FOO_NORMAL
;  257     0384  3                  ELSE    ! The file is open for input, so we have to clean it up
;  258     0385  3                      RETURN FOOFIL (FOO_CLEAN);
;  259     0386  3
;  260     0387  3              ! The file is not open at all. So start anew.
;  261     0388  3              ! Initialize the footnote IOB.
;  262     0389  3              FOOFIL (FOO_INIT);
;  263     0390  3
;  264     0391  3              !Open file for output now.
;  265     0392  3
;  266   P 0393  3              status = $XPO_OPEN ( IOB = .fooiob
;  267   P 0394  3                                  ,OPTIONS = OUTPUT
;  268   P 0395  3                                  ,FAILURE = grab_resultant
;  269     0396  3                                          );
;  270     0397  3
;  271     0398  3              IF  .status
;  272     0399  3              THEN
;  273     0400  3                  RETURN foo_normal
;  274     0401  3              ELSE                        ! Can't open footnote file for output.
;  275     0402  4                  BEGIN
;  276     0403  4                  erm_t (rnfcof, ffname);
;  277     0404  4                  RETURN foo_bad;
;  278     0405  3                  END;
;  279     0406  3
;  280     0407  2              END;
;  281     0408  2
;  282     0409  2          [FOO_READ] :
;  283     0410  2              ! Read back a TSF/MRA pair.  A basic assumption is that the user
;  284     0411  2              ! has already done a FOO_RHDR and found out that that is indeed
;  285     0412  2              ! what's coming, and that FOOREC_RECORD_SIZE contains the length of
;  286     0413  2              ! the TSF (which was fetched automatically by the FOO_RHDR
;  287     0414  2              ! operation).  After the record header that was read, comes the
;  288     0415  2              ! actual TSF.  Then comes a record header for the MRA, and them
;  289     0416  2              ! comes the actual MRA.
;  290     0417  3              BEGIN
;  291     0418  3              !First, get the description of the text that has been saved.
;  292   P 0419  3              STATUS = $XPO_GET ( IOB = .FOOIOB,  !
;  293   P 0420  3                                  FAILURE = XPO$IO_FAILURE,
;  294     0421  3                                  FULLWORDS = .FOOREC_RECORD_SIZE);
```

```
;  295     0422  3
;  296     0423  3              IF  NOT .STATUS
;  297     0424  3              THEN
;  298     0425  3
;  299     0426  3                  IF  .STATUS EQL XPO$_END_FILE
;  300     0427  3                  THEN                    ! Reached the end of the footnote file.
;  301     0428  3                      RETURN FOO_ENDFIL
;  302     0429  3                  ELSE                    ! Couldn't read back footnote record.
;  303     0430  4                      BEGIN
;  304     0431  4                      ERM (RNFCRF, 0, 0);
;  305     0432  4                      RETURN FOO_BAD;
;  306     0433  3                      END;
;  307     0434  3
;  308     0435  3              ! The text descriptor (TSF) was read correctly.  Now move the
;  309     0436  3              ! results into a waiting TSF.  The move is done because the next
;  310     0437  3              ! read invalidates the current IOB pointers.
;  311     0438  4              BEGIN
;  312     0439  4
;  313     0440  4              BIND
;  314     0441  4                  FOOTSF = FOOIOB [IOB$A_DATA] : REF VECTOR;
;  315     0442  4
;  316     0443  4              ! Note that FOOREC_RECORD_SIZE amount of information is copied
;  317     0444  4              ! instead of TSF_SIZE amount of information.  That allows other
;  318     0445  4              ! routines to write only a part of a TSF, if desired.
;  319     0446  4              INCR I FROM 0 TO .FOOREC_RECORD_SIZE - 1 DO
;  320     0447  4                  TSF [.I] = .FOOTSF [.I];
;  321     0448  4
;  322     0449  3              END;
;  323     0450  3
;  324     0451  3              ! Get the record header for the MRA that must follow.
;  325     0452  3              ! Note that this might be a good place to put a consistancy check.
;  326     0453  3              FOOFIL (FOO_RHDR);
;  327     0454  3
;  328     0455  3              ! Now, get the actual saved text.  Note that FULLWORDS could be
;  329     0456  3              ! computed as CH$ALLOCATION (.TSF_INT_HL + .TSF_INT_VL + 1) but
;  330     0457  3              ! it's not, since that information is available in the record
;  331     0458  3              ! header.  Also, that allows other code to write more or less
;  332     0459  3              ! information, if desired.
;  333   P 0460  3              STATUS = $XPO_GET ( IOB = .FOOIOB,
;  334   P 0461  3                                  FAILURE = XPO$IO_FAILURE,
;  335     0462  3                                  FULLWORDS = .FOOREC_RECORD_SIZE);
;  336     0463  3
;  337     0464  3              ! Make sure the read went ok.
;  338     0465  3              IF  NOT .STATUS
;  339     0466  3              THEN                                ! Couldn't read back MRA.
;  340     0467  4                  BEGIN
;  341     0468  4                  ERM (RNFCRF, 0, 0);
;  342     0469  4                  RETURN FOO_BAD;
;  343     0470  3                  END;
;  344     0471  3
;  345     0472  3              ! Data was read, so make MRA look like a real FIXED string.
;  346     0473  3              FS_START (MRA) = CH$PTR (.FOOIOB [IOB$A_DATA]);
;  347     0474  3              FS_NEXT (MRA) = .FS_START (MRA);
;  348     0475  3              FS_MAXSIZE (MRA) = .TSF_INT_HL + .TSF_INT_VL;
;  349     0476  3              FS_LENGTH (MRA) = .TSF_INT_HL + .TSF_INT_VL;;
;  350     0477  3              RETURN FOO_NORMAL;
;  351     0478  2              END;
```

```
;  352          0479  2
;  353          0480  2          [FOO_PREAD] :
;  354          0481  2              ! Read a record that's by definition a "pass through" record.
;  355          0482  2              ! Implicit in this processing is that the user has already read the
;  356          0483  2              ! record header in FOOREC and determined that indeed, a "pass
;  357          0484  2              ! through" record is to be read.  The "pass through" record is not
;  358          0485  2              ! copied anywhere, but merely left in the buffer, where XPORT as
;  359          0486  2              ! put it.  The address is returned in FOOREC_ADDRESS.
;  360          0487  3              BEGIN
;  361        P 0488  3              STATUS = $XPO_GET (IOB = .FOOIOB,
;  362        P 0489  3                                 FAILURE = XPO$IO_FAILURE,
;  363          0490  3                                 FULLWORDS = .FOOREC_RECORD_SIZE);
;  364          0491  3
;  365          0492  3              ! Make sure the read went ok.
;  366          0493  3              IF  NOT .STATUS
;  367          0494  3              THEN
;  368          0495  4                  BEGIN
;  369          0496  4                  ERM (RNFCRF, 0, 0);
;  370          0497  4                  RETURN FOO_BAD
;  371          0498  3                  END;
;  372          0499  3
;  373          0500  3              ! The read went ok.  Let the user know where the data is.
;  374          0501  3              FOOREC_ADDRESS = .FOOIOB [IOB$A_DATA];
;  375          0502  3
;  376          0503  3              ! Tell the user everything went ok.
;  377          0504  3              RETURN FOO_NORMAL
;  378          0505  2              END;
;  379          0506  2
;  380          0507  2          [FOO_WRIT] :
;  381          0508  2              ! Write a footnote record.  A footnote record consists of a TSF
;  382          0509  2              ! record and an MRA record. record header preceeds each record.
;  383          0510  2              ! Note that this code leaves the minor record type (FOOREC_MINOR_CODE)
;  384          0511  2              ! alone, so that the user can put whatever he wants into it.
;  385          0512  3              BEGIN
;  386          0513  3
;  387          0514  3              ! First create the record header for the TSF
;  388          0515  3              FOOREC_MAJOR_TYPE = FOOREC_MAJ_TSF;          ! Major record type
;  389          0516  3              FOOREC_RECORD_SIZE = TSF_SIZE;               ! Length of the TSF
;  390          0517  3
;  391          0518  3              ! Now actually write out the record header
;  392        P 0519  3              STATUS = $XPO_PUT ( IOB = .FOOIOB,
;  393        P 0520  3                                  FAILURE = XPO$IO_FAILURE,
;  394          0521  3                                  BINARY_DATA = (FOOREC_SIZE, FOOREC));
;  395          0522  3
;  396          0523  3              IF  NOT .STATUS
;  397          0524  3              THEN                                         ! If we couldn't write the
;  398          0525  4                  BEGIN                                    ! record header, then
;  399          0526  4                  ERM (RNFCWF, .STATUS, 0);                !   report the error
;  400          0527  4                  RETURN FOO_BAD                           !   and exit
;  401          0528  3                  END;
;  402          0529  3
;  403        P 0530  3              STATUS = $XPO_PUT ( IOB = .FOOIOB,  ! Write the real TSF
;  404        P 0531  3                                  FAILURE = XPO$IO_FAILURE,
;  405          0532  3                                  BINARY_DATA = (TSF_SIZE, .TSF) );
;  406          0533  3
;  407          0534  3              IF  NOT .STATUS
;  408          0535  3              THEN                                         ! If we couldn't write the TSF,
```

```
;  409          0536  4                BEGIN                                   ! then
;  410          0537  4                ERM (RNFCWF, .STATUS, 0);               !  report the error
;  411          0538  4                RETURN FOO_BAD;                         !  and exit
;  412          0539  3                END;
;  413          0540  3
;  414          0541  3            ! Create the record header for the MRA
;  415          0542  3            FOOREC_MAJOR_TYPE = FOOREC_MAJ_MRA;
;  416          0543  3            FOOREC_RECORD_SIZE = CH$ALLOCATION ( .TSF_INT_HL +  ! The number
;  417          0544  3                                                 .TSF_INT_VL +  ! of fullwords
;  418          0545  3                                                 1  );         ! (at least 1)
;  419          0546  3
;  420          0547  3            ! And write it out.
;  421        P 0548  3            STATUS = $XPO_PUT ( IOB = .FOOIOB,
;  422        P 0549  3                                FAILURE = XPO$IO_FAILURE,
;  423          0550  3                                BINARY_DATA = (FOOREC_SIZE, FOOREC));
;  424          0551  3
;  425          0552  3            ! Make sure the write went ok.
;  426          0553  3            IF  NOT .STATUS
;  427          0554  3            THEN
;  428          0555  4                BEGIN
;  429          0556  4                ERM (RNFCWF, .STATUS, 0);
;  430          0557  4                RETURN FOO_BAD
;  431          0558  3                END;
;  432          0559  3
;  433          0560  3            ! Write the MRA.  Always write at least 1 word.
;  434        P 0561  3            STATUS = $XPO_PUT ( IOB = .FOOIOB,
;  435        P 0562  3                                FAILURE = XPO$IO_FAILURE,
;  436        P 0563  3                                BINARY_DATA = ( .FOOREC_RECORD_SIZE,
;  437          0564  3                                                MRA [5]) );
;  438          0565  3
;  439          0566  3            !Update current size of this footnote as it's being output.
;  440          0567  3            FNESIZ [.FNCT_COUNT] = .FNESIZ [.FNCT_COUNT] + .TSF_LINES;
;  441          0568  3
;  442          0569  3            IF  .STATUS
;  443          0570  3            THEN                    ! If the above write went OK, update the
;  444          0571  4                BEGIN               ! current internal size of this footnote
;  445          0572  4                                    ! (number of TSF/MRA pairs)
;  446          0573  4                FNISIZ [.FNCT_COUNT] = .FNISIZ [.FNCT_COUNT] + 1;
;  447          0574  4                RETURN FOO_NORMAL;      !  and exit
;  448          0575  4                END
;  449          0576  3            ELSE                        ! If we couldn't write the MRA.
;  450          0577  4                BEGIN
;  451          0578  4                ERM (RNFCWF, .STATUS, 0);! report the error
;  452          0579  4                RETURN FOO_BAD;          ! and exit
;  453          0580  3                END;
;  454          0581  3
;  455          0582  2            END;
;  456          0583  2
;  457          0584  2        [FOO_PWRIT] :   ! Write a "pass through" record to the footnote
;  458          0585  3            BEGIN       !  temporary file:
;  459          0586  3
;  460          0587  3            ! We assume that FOOREC_MINOR_TYPE has already been set,
;  461          0588  3            ! so we don't change it here.
;  462          0589  3
;  463          0590  3            FOOREC_MAJOR_TYPE = FOOREC_MAJ_PASS; ! Set the major record type.
;  464          0591  3
;  465        P 0592  3            STATUS = $XPO_PUT (IOB = .FOOIOB,   ! Write the record header.
```

```
;  466        P 0593  3                                FAILURE = XPO$IO_FAILURE,
;  467          0594  3                                BINARY_DATA = (FOOREC_SIZE, FOOREC));
;  468          0595  3
;  469          0596  3            IF  NOT .STATUS
;  470          0597  3            THEN                                    ! If we couldn't write the
;  471          0598  4                BEGIN                               ! record header, then
;  472          0599  4                ERM (RNFCWF, .STATUS, 0);           !    report the error
;  473          0600  4                RETURN FOO_BAD;                     !    and exit.
;  474          0601  3                END;
;  475          0602  3
;  476          0603  3            ! Now write the actual "pass through" record
;  477        P 0604  3            STATUS = $XPO_PUT  (IOB = .FOOIOB,
;  478        P 0605  3                                FAILURE = XPO$IO_FAILURE,
;  479          0606  3                                BINARY_DATA = (.FOOREC_RECORD_SIZE, .FOOREC_ADDRESS));
;  480          0607  3
;  481          0608  3            IF  NOT .STATUS
;  482          0609  3            THEN                                    ! If we Couldn't write the
;  483          0610  4                BEGIN                               ! "pass through" record,
;  484          0611  4                ERM (RNFCWF, .STATUS, 0);           !    then report the error
;  485          0612  4                RETURN FOO_BAD;                     !    and exit.
;  486          0613  3                END;
;  487          0614  3
;  488          0615  3            ! Update the record count for this footnote
;  489          0616  3            FNISIZ [.FNCT_COUNT] = .FNISIZ [.FNCT_COUNT] + 1;
;  490          0617  3
;  491          0618  3            ! Tell the user everything went ok.
;  492          0619  3            RETURN FOO_NORMAL
;  493          0620  2            END;
;  494          0621  2
;  495          0622  2        [FOO_CLOS] :
;  496          0623  3            BEGIN
;  497        P 0624  3            $XPO_CLOSE (IOB = .FOOIOB,              ! Close the footnote file, but
;  498          0625  3                        OPTIONS = REMEMBER);        ! remember file information,
;  499          0626  3                                                    ! so it can later be deleted.
;  500          0627  3            RETURN FOO_NORMAL;
;  501          0628  2            END;
;  502          0629  2
;  503          0630  2        [FOO_DELE] :
;  504          0631  2
;  505          0632  2            ! Delete the footnote file.
;  506          0633  3            BEGIN
;  507          0634  3            $XPO_DELETE (IOB = .FOOIOB, FAILURE = 0);
;  508          0635  3            RETURN FOO_NORMAL;
;  509          0636  2            END;
;  510          0637  2
;  511          0638  2        [FOO_CLEAN] :
;  512          0639  2            ! The footnote file is open for reading, but we want to put a new
;  513          0640  2            ! footnote at the end of it.  Therefore, copy the remainder of the
;  514          0641  2            ! footnote file into a new file, and leave it open for output, so
;  515          0642  2            ! that stuff can be written to the end of the file.
;  516          0643  3            BEGIN
;  517          0644  3            $XPO_IOB_INIT (IOB = .fotiob);
;  518          0645  3
;  519          0646  3            ! Open the work file.  Note that its name depends on which IOB
;  520          0647  3            ! FOTIOB refers to.
;  521          0648  3            IF  .FOTIOB EQLA FOIIOB
;  522          0649  3            THEN
```

```
;  523     P 0650  3                status = $XPO_OPEN ( IOB = .fotiob
;  524     P 0651  3                                   ,OPTIONS = OUTPUT
;  525     P 0652  3                                   ,ATTRIBUTES = BINARY
;  526     P 0653  3                                   ,FILE_SPEC = ('001RNO.TMP')
;  527     P 0654  3                                   ,FAILORE = grab_resultant
;  528     P 0655  4                                      )
;  529     P 0656  3            ELSE
;  530     P 0657  3                status = $XPO_OPEN ( IOB = .fotiob
;  531     P 0658  3                                   ,OPTIONS = OUTPUT
;  532     P 0659  3                                   ,ATTRIBUTES = BINARY
;  533     P 0660  3                                   ,FILE_SPEC = ('002RNO.TMP')
;  534     P 0661  3                                   ,FAILORE = grab_resultant
;  535     P 0662  3                                      );
;  536     P 0663  3
;  537     P 0664  3            ! Verify that this work file could be opened.
;  538     P 0665  3            IF  NOT .status
;  539     P 0666  3            THEN
;  540     P 0667  3                ! Something went wrong
;  541     P 0668  4                BEGIN
;  542     P 0669  4                erm_t (rnfcof, ffname);
;  543     P 0670  4                RETURN foo_bad
;  544     P 0671  3                END;
;  545     P 0672  3
;  546     P 0673  3            ! Now copy everything from the active footnote file into
;  547     P 0674  3            ! the footnote work file.
;  548     P 0675  3            STATUS = XPO$_NORMAL;
;  549     P 0676  3            WHILE .STATUS NEQ XPO$_END_FILE DO
;  550     P 0677  4                BEGIN
;  551     P 0678  4                ! First read the record header that describes each record
;  552     P 0679  4                STATUS = $XPO_GET (IOB = .FOOIOB,
;  553     P 0680  4                                   FAILURE = XPO$IO_FAILURE,
;  554     P 0681  4                                   FULLWORDS = FOOREC_SIZE);
;  555     P 0682  4
;  556     P 0683  4                IF  NOT .STATUS
;  557     P 0684  4                THEN
;  558     P 0685  4
;  559     P 0686  4                    ! Something's not quite right.  See what it is.
;  560     P 0687  4                    IF  .STATUS EQL XPO$_END_FILE
;  561     P 0688  4                    THEN
;  562     P 0689  4                        ! Get out of this copy loop if nothing more to read.
;  563     P 0690  4                        EXITLOOP
;  564     P 0691  4                    ELSE
;  565     P 0692  4                        ! Something serious.  Can't read back a footnote record.
;  566     P 0693  5                        BEGIN
;  567     P 0694  5                        ERM (RNFCRF, 0, 0);
;  568     P 0695  5                        RETURN FOO_BAD
;  569     P 0696  4                        END;
;  570     P 0697  4
;  571     P 0698  4                ! The read went correctly.  Now simply copy it to the work file.
;  572     P 0699  4                STATUS = $XPO_PUT (IOB = .FOTIOB, BINARY_DATA = FOOIOB [IOB$T_DATA]);
;  573     P 0700  4
;  574     P 0701  4                ! Check that it went ok.
;  575     P 0702  4                IF  NOT .STATUS
;  576     P 0703  4                THEN
;  577     P 0704  4                    ! Something happened.
;  578     P 0705  5                    BEGIN
;  579     P 0706  5                    ERM (RNFCWF, .STATUS, 0);
```

```
;  580     0707  5                    RETURN FOO_BAD
;  581     0708  4                    END;
;  582     0709  4
;  583     0710  4                ! Read the record that follows the record header.
;  584     0711  5                BEGIN
;  585     0712  5                BIND
;  586     0713  5                    FOOREC = FOOIOB [IOB$A_DATA] : REF FOOREC_DEFINITION;
;  587     0714  5
;  588     0715  5                ! Read precisely as much as the record header says was written.
;  589   P 0716  5                STATUS = $XPO_GET (IOB = .FOOIOB,
;  590   P 0717  5                                   FAILURE = XPO$IO_FAILURE,
;  591     0718  5                                   FULLWORDS = .FOOREC_RECORD_SIZE);
;  592     0719  5
;  593     0720  5                ! Make sure the read went ok.
;  594     0721  5                IF  NOT .STATUS
;  595     0722  5                THEN
;  596     0723  5                    ! Something went wrong.  End of file is not allowed here,
;  597     0724  6                    BEGIN                !      so it must be an error.
;  598     0725  6                    ERM (RNFCRF, 0, 0);
;  599     0726  7                    RETURN (FOO_BAD)
;  600     0727  5                    END;
;  601     0728  5
;  602     0729  5                ! Now write this information to the work file.
;  603   P 0730  5                STATUS = $XPO_PUT (IOB = .FOTIOB,
;  604     0731  5                                   BINARY_DATA = FOOIOB [IOB$T_DATA]);
;  605     0732  5
;  606     0733  5                ! Make sure the write went ok.
;  607     0734  5                IF  NOT .STATUS
;  608     0735  5                THEN
;  609     0736  5                    ! Something bad happened
;  610     0737  6                    BEGIN
;  611     0738  6                    ERM (RNFCWF, .STATUS, 0);
;  612     0739  6                    RETURN FOO_BAD
;  613     0740  5                    END;
;  614     0741  5
;  615     0742  4                END;
;  616     0743  4
;  617     0744  3                END;                     ! End of copying from FOOIOB to FOTIOB.
;  618     0745  3
;  619     0746  3            ! Get rid of the file that we just copied stuff from.
;  620   P 0747  3            $XPO_CLOSE (IOB = .FOOIOB,              ! Close the temp file, but
;  621     0748  3                        OPTIONS = REMEMBER);        ! remember its name.
;  622   P 0749  3            $XPO_DELETE (IOB = .FOOIOB,             ! Now, delete it, but don't
;  623     0750  3                         FAILURE = 0);              ! barf if it isn't there.
;  624     0751  3
;  625     0752  3            ! Now switch IOB pointers because all the other FOOFIL operations
;  626     0753  3            ! work only on FOOIOB.
;  627     0754  4            BEGIN
;  628     0755  4            LOCAL
;  629     0756  4                TEMP;
;  630     0757  4
;  631     0758  4            TEMP = .FOTIOB;
;  632     0759  4            FOTIOB = .FOOIOB;
;  633     0760  4            FOOIOB = .TEMP;
;  634     0761  3            END;
;  635     0762  3
;  636     0763  3            !Update the footnote counting information
```

```
;  637          0764  3              INCR I FROM 0 TO .FNCT_COUNT - 1 DO
;  638          0765  4                  BEGIN
;  639          0766  4                  FNESIZ [.I] = .FNESIZ [.I + .FNCT_OLD];
;  640          0767  4                  FNISIZ [.I] = .FNISIZ [.I + .FNCT_OLD];
;  641          0768  3                  END;
;  642          0769  3
;  643          0770  3              !And now forget there ever were any old footnotes.
;  644          0771  3              FNCT_OLD = 0;
;  645          0772  3
;  646          0773  3              RETURN FOO_NORMAL
;  647          0774  2              END;
;  648          0775  2
;  649          0776  2          TES;
;  650          0777  2
;  651          0778  1      END;                                    !End of FOOFIL


                                                        .TITLE  FOOFIL File operations for footnote processing
                                                        .IDENT  \V04-000\

                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

                50  4D  54  2E  4F  4E  52  31  30  30  00000 P.AAA:  .ASCII  \001RNO.TMP\                              ;
                50  4D  54  2E  4F  4E  52  32  30  30  0000A P.AAB:  .ASCII  \002RNO.TMP\                              ;
                        4E  49  50  4F  5F  4F  4F  46  00014 P.AAC:  .ASCII  \FOO_OPIN\                                ;
                50  4D  54  2E  4F  4E  52  31  30  30  0001C P.AAD:  .ASCII  \001RNO.TMP\                              ;
                50  4D  54  2E  4F  4E  52  32  30  30  00026 P.AAE:  .ASCII  \002RNO.TMP\                              ;

                                                        .PSECT  $OWN$,NOEXE,2

                    000A  00000 $IOB$FILE_SPEC:
                                                        .WORD   10                                                      ;
                  01  0E  00002                         .BYTE   14, 1                                                   ;
                00000000' 00004                         .ADDRESS P.AAA                                                  ;
                    000A  00008 $IOB$FILE_SPEC:
                                                        .WORD   10                                                      ;
                  01  0E  0000A                         .BYTE   14, 1                                                   ;
                00000000' 0000C                         .ADDRESS P.AAB                                                  ;
                    000A  00010 $IOB$FILE_SPEC:
                                                        .WORD   10                                                      ;
                  01  0E  00012                         .BYTE   14, 1                                                   ;
                00000000' 00014                         .ADDRESS P.AAD                                                  ;
                    000A  00018 $IOB$FILE_SPEC:
                                                        .WORD   10                                                      ;
                  01  0E  0001A                         .BYTE   14, 1                                                   ;
                00000000' 0001C                         .ADDRESS P.AAE                                                  ;

                                                        .EXTRN  FNCT, FNESIZ, FNISIZ
                                                        .EXTRN  MRA, TSF, FOTIOB
                                                        .EXTRN  FOOIOB, FOTIOB, FFNAME
                                                        .EXTRN  SEMCOD, FOOREC, FOOMRA
                                                        .EXTRN  FOOTSF, RNFCOF, RNFCRF
                                                        .EXTRN  RNFCWF, RNFILE, ERM
                                                        .EXTRN  ERME, ERMS, GRAB_RESULTANT
                                                        .EXTRN  XPO$OPEN, XPO$GET
                                                        .EXTRN  XPO$IO_FAILURE, XPO$PUT
                                                        .EXTRN  XPO$CLOSE, XPO$FAILURE
```

```
                                                        .EXTRN  XPO$DELETE

                                                        .PSECT  $CODE$,NOWRT,2

                                            0FFC 00000  .ENTRY  FOOFIL, Save R2,R3,R4,R5,R6,R7,R8,R9,R10,-  ; 0252
                                                                R11
                                      5B 00000000G   EF  9E 00002  MOVAB   XPO$GET, R11                       ;
                                      5A 00000000G   EF  9E 00009  MOVAB   XPO$PUT, R10                       ;
                                      59 00000000G   EF  9E 00010  MOVAB   XPO$IO_FAILURE, R9                 ;
                                      58 00000000G   EF  9E 00017  MOVAB   FOOREC+8, R8                       ;
                                      57 00000000G   EF  9E 0001E  MOVAB   FOOIOB, R7                         ;
                                         5E          08  C2 00025  SUBL2   #8, SP                            ;
                                   0A    00    04     AC  CF 00028  CASEL   OPERATION, #0, #10                ; 0643
                              0108 00E3     0062     0016  0002D 1$:  .WORD   2$-1$,-                        ;
                              0355 0340     0322     01D1  00035     .WORD   6$-1$,-                        ;
                                   02B9     019C     00B1  0003D     .WORD   12$-1$,-                       ;
                                                                     .WORD   14$-1$,-                       ;
                                                                     .WORD   24$-1$,-                       ;
                                                                     .WORD   29$-1$,-                       ;
                                                                     .WORD   30$-1$,-                       ;
                                                                     .WORD   32$-1$,-                       ;
                                                                     .WORD   9$-1$,-                        ;
                                                                     .WORD   20$-1$,-                       ;
                                                                     .WORD   27$-1$                         ;
                                         56          67  D0 00043 2$:  MOVL    FOOIOB, R6                    ; 0284
                                      50 00000000G   EF  9E 00046     MOVAB   FOIIOB, R0                    ;
                                         50          56  D1 0004D     CMPL    R6, R0                        ;
                                                     19  12 00050     BNEQ    3$                            ;
                              00F4 8F    00          6E  00  2C 00052     MOVC5   #0, (SP), #0, #244, (R6)      ; 0288
                                                         66  00059     .BLKB   #244                          ;
                                      66 0301003D    8F  D0 0005A     MOVL    #50397245, (R6)               ;
                                   04 A6 00000000'   EF  9E 00061     MOVAB   $IOB$FILE_SPEC, 4(R6)         ;
                                                     17  11 00069     BRB     4$                            ;
                              00F4 8F    00          6E  00  2C 0006B 3$:  MOVC5   #0, (SP), #0, #244, (R6)      ; 0292
                                                         66  00072     .BLKB   #244                          ;
                                      66 0301003D    8F  D0 00073     MOVL    #50397245, (R6)               ;
                                   04 A6 00000000'   EF  9E 0007A     MOVAB   $IOB$FILE_SPEC, 4(R6)         ;
                                   1E A6     020E    8F  B0 00082 4$:  MOVW    #526, 30(R6)                  ;
                                   30 A6             01  88 00088     BISB2   #1, 48(R6)                    ;
                                                 04AC  31  0008C 5$:  BRW     47$                           ; 0643
                                         50          67  D0 0008F 6$:  MOVL    FOOIOB, R0                    ; 0299
                                         30    32    A0  E9 00092     BLBC    50(R0), 8$                    ;
                                         F2    2E    A0  E8 00096     BLBS    46(R0), 5$                    ; 0301
                                                     05  DD 0009A     PUSHL   #5                            ; 0308
                                   FF5F  CF          01  FB 0009C     CALLS   #1, FOOFIL                    ;
                                         50          67  D0 000A1     MOVL    FOOIOB, R0                    ; 0314
                                   2E    A0          01  88 000A4     BISB2   #1, 46(R0)                    ;
                                   2C    A0          01  90 000A8 7$:  MOVB    #1, 44(R0)                    ;
                                      00000000G      EF  9F 000AC     PUSHAB  GRAB_RESULTANT                ;
                                                     7E  D4 000B2     CLRL    -(SP)                         ;
                                                     50  DD 000B4     PUSHL   R0                            ;
                                00000000G  EF          03  FB 000B6     CALLS   #3, XPO$OPEN                  ;
                                         52          50  D0 000BD     MOVL    R0, STATUS                    ;
                                         C9          52  E8 000C0     BLBS    STATUS, 5$                    ; 0316
                                                 0319  31  000C3     BRW     35$                           ; 0321
                                                     09  DD 000C6 8$:  PUSHL   #9                            ; 0333
                                      00000000'      EF  9F 000C8     PUSHAB  P.AAC                         ;
```

```
                                00000000G  8F   DD 000CE          PUSHL   #RNFILE                                          ;
                    00000000G   EF             03 FB 000D4       CALLS   #3, ERMS                                         ;
                                         03E5  31 000DB          BRW     43$                                              ; 0334
                          50                67 D0 000DE 9$:       MOVL    FOOIOB, R0                                       ; 0344
                       34 A0                10 B0 000E1          MOVW    #16, 52(R0)                                      ;
                       36 A0                02 90 000E5          MOVB    #2, 54(R0)                                       ;
                       2C A0                06 90 000E9          MOVB    #6, 44(R0)                                       ;
                                            59 DD 000ED          PUSHL   R9                                               ;
                                            7E D4 000EF          CLRL    -(SP)                                            ;
                                            50 DD 000F1          PUSHL   R0                                               ;
                          6B                03 FB 000F3          CALLS   #3, XPO$GET                                      ;
                          52                50 D0 000F6          MOVL    R0, STATUS                                       ;
                          58                52 E9 000F9          BLBC    STATUS, 15$                                      ; 0346
                    51    67                38 C1 000FC          ADDL3   #56, FOOIOB, R1                                  ; 0361
                                            50 D4 00100          CLRL    I                                                ; 0363
                       F8 A840        00 B140 D0 00102 10$:      MOVL    @0(R1)[I], FOOREC[I]                             ; 0364
                    F5    50                03 F3 00109          AOBLEQ  #3, I, 10$                                       ;
                                         042B  31 0010D 11$:      BRW     47$                                              ; 0643
                          50                67 D0 00110 12$:      MOVL    FOOIOB, R0                                       ; 0378
                          0D        32      A0 E9 00113          BLBC    50(R0), 13$                                      ;
                    F1       2E     A0       01 E0 00117          BBS     #1, 46(R0), 11$                                  ; 0381
                                            07 DD 0011C          PUSHL   #7                                               ; 0385
                          FEDD      CF       01 FB 0011E          CALLS   #1, FOOFIL                                       ;
                                            04 00123             RET                                                      ;
                                            7E D4 00124 13$:     CLRL    -(SP)                                            ; 0389
                          FED5      CF       01 FB 00126          CALLS   #1, FOOFIL                                       ;
                          50                67 D0 0012B          MOVL    FOOIOB, R0                                       ; 0396
                          2E     A0         02 88 0012E          BISB2   #2, 46(R0)                                       ;
                                         FF73  31 00132          BRW     7$                                               ;
                          50                67 D0 00135 14$:     MOVL    FOOIOB, R0                                       ; 0421
                34 A0                       68 04 A5 00138       MULW3   #4, FOOREC+8, 52(R0)                             ;
                          36 A0             02 90 0013D          MOVB    #2, 54(R0)                                       ;
                          2C A0             06 90 00141          MOVB    #6, 44(R0)                                       ;
                                            59 DD 00145          PUSHL   R9                                               ;
                                            7E D4 00147          CLRL    -(SP)                                            ;
                                            50 DD 00149          PUSHL   R0                                               ;
                          6B                03 FB 0014B          CALLS   #3, XPO$GET                                      ;
                          52                50 D0 0014E          MOVL    R0, STATUS                                       ;
                          10                52 E8 00151          BLBS    STATUS, 17$                                      ; 0423
                    00209000   8F           52 D1 00154 15$:     CMPL    STATUS, #2134016                                 ; 0426
                                            03 13 0015B          BEQL    16$                                              ;
                                         0088  31 0015D          BRW     21$                                              ;
                          50                02 D0 00160 16$:     MOVL    #2, R0                                           ; 0430
                                            04 00163             RET                                                      ;
                    51    67                38 C1 00164 17$:     ADDL3   #56, FOOIOB, R1                                  ; 0441
                          50                01 CE 00168          MNEGL   #1, I                                            ; 0447
                                            0A 11 0016B          BRB     19$                                              ;
                    00000000GFF40       00 B140 D0 0016D 18$:    MOVL    @0(R1)[I], @TSF[I]                               ;
                    F2    50                68 F2 00177 19$:     AOBLSS  FOOREC+8, I, 18$                                 ;
                                            08 DD 0017B          PUSHL   #8                                               ; 0453
                          FE7E      CF       01 FB 0017D          CALLS   #1, FOOFIL                                       ;
                          50                67 D0 00182          MOVL    FOOIOB, R0                                       ; 0462
                34 A0                       68 04 A5 00185       MULW3   #4, FOOREC+8, 52(R0)                             ;
                          36 A0             02 90 0018A          MOVB    #2, 54(R0)                                       ;
                          2C A0             06 90 0018E          MOVB    #6, 44(R0)                                       ;
                                            59 DD 00192          PUSHL   R9                                               ;
                                            7E D4 00194          CLRL    -(SP)                                            ;
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                                                50   DD 00196          PUSHL   R0
                                            6B      03   FB 00198          CALLS   #3, XPO$GET
                                            52      50   D0 0019B          MOVL    R0, STATUS
                                            47      52   E9 0019E          BLBC    STATUS, 21$                                 0465
                                     00000000G      EF   D0 001A1          MOVL    MRA, R0                                     0473
                                            51      67   D0 001A8          MOVL    FOOIOB, R1
                                            60      38   A1   D0 001AB     MOVL    56(R1), (R0)
                                        04  A0          60   D0 001AF     MOVL    (R0), 4(R0)                                 0474
                                            51 00000000G EF   D0 001B3     MOVL    TSF, R1                                     0475
                                        51  61      18   A1   C1 001BA     ADDL3   24(R1), (R1), R1
                                        08  A0          51   D0 001BF     MOVL    R1, 8(R0)
                                        0C  A0          51   D0 001C3     MOVL    R1, 12(R0)                                  0476
                                                    32   11   001C7     BRB     23$                                         0643
                                            50          67   D0 001C9 20$: MOVL    FOOIOB, R0                                  0490
                                    34  A0  68          04   A5 001CC     MULW3   #4, FOOREC+8, 52(R0)
                                        36  A0          02   90 001D1     MOVB    #2, 54(R0)
                                        2C  A0          06   90 001D5     MOVB    #6, 44(R0)
                                                    59   DD 001D9     PUSHL   R9
                                                    7E   D4 001DB     CLRL    -(SP)
                                                    50   DD 001DD     PUSHL   R0
                                            6B          03   FB 001DF     CALLS   #3, XPO$GET
                                            52          50   D0 001E2     MOVL    R0, STATUS
                                            0B          52   E8 001E5     BLBS    STATUS, 22$                                 0493
                                                    7E   7C 001E8 21$: CLRQ    -(SP)                                       0496
                                         00000000G  8F   DD 001EA         PUSHL   #RNFCRF
                                                02C9    31   001F0     BRW     42$
                                            50          67   D0 001F3 22$: MOVL    FOOIOB, R0                                  0501
                                        08  A8      38  A0   D0 001F6     MOVL    56(R0), FOOREC+16
                                                0333    31   001FB 23$: BRW     47$                                         0643
                                                F8  A8  D4   001FE 24$: CLRL    FOOREC                                      0315
                                            68          28   D0 00201     MOVL    #40, FOOREC+8                               0316
                                            50          67   D0 00204     MOVL    FOOIOB, R0                                  0321
                                            6E          10   B0 00207     MOVW    #16, $IOB$OUTPUT
                                        02  AE          02   90 0020A     MOVB    #2, $IOB$OUTPUT+2
                                        03  AE          01   90 0020E     MOVB    #1, $IOB$OUTPUT+3
                                        04  AE      F8  A8   9E 00212     MOVAB   FOOREC, $IOB$OUTPUT+4
                                        44  A0          6E   9E 00217     MOVAB   $IOB$OUTPUT, 68(R0)
                                        2C  A0          07   90 0021B     MOVB    #7, 44(R0)
                                                    59   DD 0021F     PUSHL   R9
                                                    7E   D4 00221     CLRL    -(SP)
                                                    50   DD 00223     PUSHL   R0
                                            6A          03   FB 00225     CALLS   #3, XPO$PUT
                                            52          50   D0 00228     MOVL    R0, STATUS
                                            6C          52   E9 0022B     BLBC    STATUS, 25$                                 0523
                                            50          67   D0 0022E     MOVL    FOOIOB, R0                                  0532
                                            6E      A0  8F   9B 00231     MOVZBW  #160, $IOB$OUTPUT
                                        02  AE          02   90 00235     MOVB    #2, $IOB$OUTPUT+2
                                        03  AE          01   90 00239     MOVB    #1, $IOB$OUTPUT+3
                                        04  AE 00000000G  EF   D0 0023D     MOVL    TSF, $IOB$OUTPUT+4
                                        44  A0          6E   9E 00245     MOVAB   $IOB$OUTPUT, 68(R0)
                                        2C  A0          07   90 00249     MOVB    #7, 44(R0)
                                                    59   DD 0024D     PUSHL   R9
                                                    7E   D4 0024F     CLRL    -(SP)
                                                    50   DD 00251     PUSHL   R0
                                            6A          03   FB 00253     CALLS   #3, XPO$PUT
                                            52          50   D0 00256     MOVL    R0, STATUS
                                            3E          52   E9 00259     BLBC    STATUS, 25$                                 0534
```

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                        F8   A8                 01  D0 0025C           MOVL    #1, FOOREC                                  ; 0542
                             50 00000000G       EF  D0 00260           MOVL    TSF, R0                                     ; 0543
                50                   60     18  A0  C1 00267           ADDL3   24(R0), (R0), R0                            ; 0544
                                     50         04  C0 0026C           ADDL2   #4, R0                                      ; 0545
                68                   50         04  C7 0026F           DIVL3   #4, R0, FOOREC+8
                                     50         67  D0 00273           MOVL    FOOIOB, R0                                  ; 0550
                                     6E         10  B0 00276           MOVW    #16, $IOB$OUTPUT
                             02      AE         02  90 00279           MOVB    #2, $IOB$OUTPUT+2
                             03      AE         01  90 0027D           MOVB    #1, $IOB$OUTPUT+3
                             04      AE   F8    A8  9E 00281           MOVAB   FOOREC, $IOB$OUTPUT+4
                             44      A0         6E  9E 00286           MOVAB   $IOB$OUTPUT, 68(R0)
                             2C      A0         07  90 0028A           MOVB    #7, 44(R0)
                                                59  DD 0028E           PUSHL   R9
                                                7E  D4 00290           CLRL    -(SP)
                                                50  DD 00292           PUSHL   R0
                                     6A         03  FB 00294           CALLS   #3, XPO$PUT
                                     52         50  D0 00297           MOVL    R0, STATUS
                                     46         52  E9 0029A 25$:      BLBC    STATUS, 26$                                 ; 0553
                                     50         67  D0 0029D           MOVL    FOOIOB, R0                                  ; 0564
                6E                   68         04  A5 002A0           MULW3   #4, FOOREC+8, $IOB$OUTPUT
                             02      AE         02  90 002A4           MOVB    #2, $IOB$OUTPUT+2
                             03      AE         01  90 002A8           MOVB    #1, $IOB$OUTPUT+3
                04      AE 00000000G       EF  10  C1 002AC           ADDL3   #16, MRA, $IOB$OUTPUT+4
                             44      A0         6E  9E 002B5           MOVAB   $IOB$OUTPUT, 68(R0)
                             2C      A0         07  90 002B9           MOVB    #7, 44(R0)
                                                59  DD 002BD           PUSHL   R9
                                                7E  D4 002BF           CLRL    -(SP)
                                                50  DD 002C1           PUSHL   R0
                                     6A         03  FB 002C3           CALLS   #3, XPO$PUT
                                     52         50  D0 002C6           MOVL    R0, STATUS
                                     50 00000000G   EF  D0 002C9           MOVL    FNCT, R0                                ; 0567
                                     51 00000000G   EF  D0 002D0           MOVL    TSF, R1
                00000000GEF40                34     A1  C0 002D7           ADDL2   52(R1), FNESIZ[R0]
                                     63         52  E8 002E0           BLBS    STATUS, 28$                                 ; 0569
                                           01CC  31  002E3 26$:      BRW     41$                                         ; 0578
                        F8   A8                 02  D0 002E6 27$:      MOVL    #2, FOOREC                                  ; 0590
                                     50         67  D0 002EA           MOVL    FOOIOB, R0                                  ; 0594
                                     6E         10  B0 002ED           MOVW    #16, $IOB$OUTPUT
                             02      AE         02  90 002F0           MOVB    #2, $IOB$OUTPUT+2
                             03      AE         01  90 002F4           MOVB    #1, $IOB$OUTPUT+3
                             04      AE   F8    A8  9E 002F8           MOVAB   FOOREC, $IOB$OUTPUT+4
                             44      A0         6E  9E 002FD           MOVAB   $IOB$OUTPUT, 68(R0)
                             2C      A0         07  90 00301           MOVB    #7, 44(R0)
                                                59  DD 00305           PUSHL   R9
                                                7E  D4 00307           CLRL    -(SP)
                                                50  DD 00309           PUSHL   R0
                                     6A         03  FB 0030B           CALLS   #3, XPO$PUT
                                     52         50  D0 0030E           MOVL    R0, STATUS
                                     CF         52  E9 00311           BLBC    STATUS, 26$                                 ; 0596
                                     50         67  D0 00314           MOVL    FOOIOB, R0                                  ; 0606
                6E                   68         04  A5 00317           MULW3   #4, FOOREC+8, $IOB$OUTPUT
                             02      AE         02  90 0031B           MOVB    #2, $IOB$OUTPUT+2
                             03      AE         01  90 0031F           MOVB    #1, $IOB$OUTPUT+3
                             04      AE   08    A8  D0 00323           MOVL    FOOREC+16, $IOB$OUTPUT+4
                             44      A0         6E  9E 00328           MOVAB   $IOB$OUTPUT, 68(R0)
                             2C      A0         07  90 0032C           MOVB    #7, 44(R0)
                                                59  DD 00330           PUSHL   R9
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                                                 7E  D4 00332          CLRL    -(SP)                                                   ;
                                                 50  DD 00334          PUSHL   R0                                                      ;
                                              6A                 03  FB 00336          CALLS   #3, XPO$PUT                                     ;
                                              52                 50  D0 00339          MOVL    R0, STATUS                                      ;
                                              A4                 52  E9 0033C          BLBC    STATUS, 26$                             ;0608
                                              50 000000000G      EF  D0 0033F          MOVL    FNCT, R0                                ;0616
                                                 00000000GEF     40  D6 00346 28$:     INCL    FNISIZ[R0]                              ;
                                                                 30  11 0034D          BRB     31$                                     ;0643
                                              50                 67  D0 0034F 29$:     MOVL    FOOIOB, R0                              ;0625
                                           2E A0                 10  88 00352          BISB2   #16, 46(R0)                             ;
                                           2C A0                 02  90 00356          MOVB    #2, 44(R0)                              ;
                                                 00000000G       EF  9F 0035A          PUSHAB  XPO$FAILURE                             ;
                                                                 7E  D4 00360          CLRL    -(SP)                                   ;
                                                                 50  DD 00362          PUSHL   R0                                      ;
                                     00000000G   EF              03  FB 00364          CALLS   #3, XPO$CLOSE                           ;
                                                                 12  11 0036B          BRB     31$                                     ;0643
                                              50                 67  D0 0036D 30$:     MOVL    FOOIOB, R0                              ;0634
                                           2C A0                 03  90 00370          MOVB    #3, 44(R0)                              ;
                                                                 7E  7C 00374          CLRQ    -(SP)                                   ;
                                                                 50  DD 00376          PUSHL   R0                                      ;
                                     00000000G   EF              03  FB 00378          CALLS   #3, XPO$DELETE                          ;
                                                          01B9   31  00037F 31$:     BRW     47$                                     ;0643
                                              56 000000000G      EF  D0 00382 32$:     MOVL    FOTIOB, R6                              ;0644
00F4  8F                  00                  6E                 00  2C 00389          MOVC5   #0, (SP), #0, #244, (R6)                ;
                                                                 66      00390                                                          ;
                                              66 0301003D        8F  D0 00391          MOVL    #50397245, (R6)                         ;
                                           1E A6      020E       8F  B0 00398          MOVW    #526, 30(R6)                            ;
                                              50 000000000G      EF  9E 0039E          MOVAB   FOTIOB, R0                              ;0648
                                              50                 56  D1 003A5          CMPL    R6, R0                                  ;
                                                                 0A  12 003A8          BNEQ    33$                                     ;
                                        04    A6 00000000'       EF  9E 003AA          MOVAB   $IOB$FILE_SPEC, 4(R6)                   ;0655
                                                                 08  11 003B2          BRB     34$                                     ;
                                        04    A6 00000000'       EF  9E 003B4 33$:     MOVAB   $IOB$FILE_SPEC, 4(R6)                   ;0662
                                        2E    A6 0C010002        8F  C8 003BC 34$:     BISL2   #65538, 46(R6)                          ;
                                        2C    A6                 01  90 003C4          MOVB    #1, 44(R6)                              ;
                                                 00000000G       EF  9F 003C8          PUSHAB  GRAB_RESULTANT                          ;
                                                                 7E  D4 003CE          CLRL    -(SP)                                   ;
                                                                 56  DD 003D0          PUSHL   R6                                      ;
                                  00000000G      EF              03  FB 003D2          CALLS   #3, XPO$OPEN                            ;
                                                 52              50  D0 003D9          MOVL    R0, STATUS                              ;
                                                 23              52  E8 003DC          BLBS    STATUS, 36$                             ;0665
                                                    00000000G    EF  DD 003DF 35$:     PUSHL   SEMCOD                                  ;0669
                                                 7E 00000000G    EF  3C 003E5          MOVZWL  TEMP, -(SP)                             ;
                                                    00000000G    EF  DD 003EC          PUSHL   TEMP+4                                  ;
                                                    00000000G    8F  DD 003F2          PUSHL   #RNFCOF                                 ;
                                  00000000G      EF              04  FB 003F8          CALLS   #4, ERME                                ;
                                                          00C1   31  003FF          BRW     43$                                     ;0670
                                                 52 00208001      8F  D0 00402 36$:     MOVL    #2129921, STATUS                        ;0675
                                  00209000       8F              52  D1 00409 37$:     CMPL    STATUS, #2134016                        ;0676
                                                                 25  13 00410          BEQL    38$                                     ;
                                                 50              67  D0 00412          MOVL    FOOIOB, R0                              ;0681
                                           34    A0              10  B0 00415          MOVW    #16, 52(R0)                             ;
                                           36    A0              02  90 00419          MOVB    #2, 54(R0)                              ;
                                           2C    A0              06  90 0041D          MOVB    #6, 44(R0)                              ;
                                                                 59  DD 00421          PUSHL   R9                                      ;
                                                                 7E  D4 00423          CLRL    -(SP)                                   ;
                                                                 50  DD 00425          PUSHL   R0                                      ;
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                        6B              03  FB 00427          CALLS   #3, XPO$GET                     ;
                        52              50  D0 0042A          MOVL    R0, STATUS                      ;
                        0F              52  E8 0042D          BLBS    STATUS, 40$                     ; 0683
                00209000    8F          52  D1 00430          CMPL    STATUS, #2134016                ; 0687
                                        03  12 00437 38$:     BNEQ    39$                             ;
                                    008B    31 00439          BRW     44$                             ;
                                    FDA9    31 0043C 39$:     BRW     21$                             ; 0694
                        50  00000000G   EF  D0 0043F 40$:     MOVL    FOTIOB, R0                      ; 0699
                51              67      34  C1 00446          ADDL3   #52, FOOIOB, R1                 ;
                            44  A0          51  D0 0044A          MOVL    R1, 68(R0)                      ;
                            2C  A0          07  90 0044E          MOVB    #7, 44(R0)                      ;
                                00000000G   EF  9F 00452          PUSHAB  XPO$FAILURE                     ;
                                            7E  D4 00458          CLRL    -(SP)                           ;
                                            50  DD 0045A          PUSHL   R0                              ;
                        6A                  03  FB 0045C          CALLS   #3, XPO$PUT                     ;
                        52                  50  D0 0045F          MOVL    R0, STATUS                      ;
                        4D                  52  E9 00462          BLBC    STATUS, 41$                     ; 0702
                        50                  67  D0 00465          MOVL    FOOIOB, R0                      ; 0713
                        51          38      A0  D0 00468          MOVL    56(R0), R1                      ; 0718
            34  A0          08      A1      04  A5 0046C          MULW3   #4, 8(R1), 52(R0)               ;
                            36  A0          02  90 00472          MOVB    #2, 54(R0)                      ;
                            2C  A0          06  90 00476          MOVB    #6, 44(R0)                      ;
                                            59  DD 0047A          PUSHL   R9                              ;
                                            7E  D4 0047C          CLRL    -(SP)                           ;
                                            50  DD 0047E          PUSHL   R0                              ;
                        6B                  03  FB 00480          CALLS   #3, XPO$GET                     ;
                        52                  50  D0 00483          MOVL    R0, STATUS                      ;
                        B3                  52  E9 00486          BLBC    STATUS, 39$                     ; 0721
                        50  00000000G       EF  D0 00489          MOVL    FOTIOB, R0                      ; 0731
                51              67          34  C1 00490          ADDL3   #52, FOOIOB, R1                 ;
                            44  A0          51  D0 00494          MOVL    R1, 68(R0)                      ;
                            2C  A0          07  90 00498          MOVB    #7, 44(R0)                      ;
                                00000000G   EF  9F 0049C          PUSHAB  XPO$FAILURE                     ;
                                            7F  D4 004A2          CLRL    -(SP)                           ;
                                            50  DD 004A4          PUSHL   R0                              ;
                        6A                  03  FB 004A6          CALLS   #3, XPO$PUT                     ;
                        52                  50  D0 004A9          MOVL    R0, STATUS                      ;
                        03                  52  E9 004AC          BLBC    STATUS, 41$                     ; 0734
                                        FF57    31 004AF          BRW     37$                             ;
                                            7E  D4 004B2 41$:     CLRL    -(SP)                           ; 0738
                                            52  DD 004B4          PUSHL   STATUS                          ;
                                00000000G   8F  DD 004B6          PUSHL   #RNFCWF                         ;
00000000G                       EF          03  FB 004BC 42$:     CALLS   #3, ERM                         ;
                        50                  03  D0 004C3 43$:     MOVL    #3, R0                          ; 0739
                                            04  004C6          RET                                     ;
                        50                  67  D0 004C7 44$:     MOVL    FOOIOB, R0                      ; 0748
                    2E  A0                  10  88 004CA          BISB2   #16, 46(R0)                     ;
                    2C  A0                  02  90 004CE          MOVB    #2, 44(R0)                      ;
                                00000000G   EF  9F 004D2          PUSHAB  XPO$FAILURE                     ;
                                            7E  D4 004D8          CLRL    -(SP)                           ;
                                            50  DD 004DA          PUSHL   R0                              ;
00000000G                       EF          03  FB 004DC          CALLS   #3, XPO$CLOSE                   ;
                        50                  67  D0 004E3          MOVL    FOOIOB, R0                      ; 0750
                    2C  A0                  03  90 004E6          MOVB    #3, 44(R0)                      ;
                                            7E  7C 004EA          CLRQ    -(SP)                           ;
                                            50  DD 004EC          PUSHL   R0                              ;
00000000G                       EF          03  FB 004EE          CALLS   #3, XPO$DELETE                  ;
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                    50 00000000G   EF  D0 004F5          MOVL    FOTIOB, TEMP                                    ; 0758
         00000000G  EF             67  D0 004FC          MOVL    FOOIOB, FOTIOB                                  ; 0759
                    67             50  D0 00503          MOVL    TEMP, FOOIOB                                    ; 0760
                    50             01  CE 00506          MNEGL   #1, I                                           ; 0766
                                   22  11 00509          BRB     46$                                             ;
                 51 50 00000000G   EF  C1 0050B 45$:     ADDL3   FNCT+12, I, R1                                  ;
    00000000GEF40 00000000GEF41    D0  00513            MOVL    FNESIZ[R1], FNESIZ[I]                           ;
    00000000GEF40 00000000GEF41    D0  00520            MOVL    FNISIZ[R1], FNISIZ[I]                           ; 0767
                 D6 50 00000000G   EF  F2 0052D 46$:     AOBLSS  FNCT, I, 45$                                    ; 0764
                    00000000G      EF  D4 00535         CLRL    FNCT+12                                         ; 0771
                    50             01  D0 0053B 47$:     MOVL    #1, R0                                          ; 0773
                                       04 0053E         RET                                                     ; 0778

; Routine Size:  1343 bytes,    Routine Base:  $CODE$ + 0000

;  652          0779  1
;  653          0780  1 END                                     !End of module
;  654          0781  0 ELUDOM




;                                   PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $PLIT$                         48  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $OWN$                          32  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                       1343  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)



;                               Library Statistics
;
;                                        -------- Symbols --------      Pages       Processing
;       File                             Total    Loaded   Percent      Mapped      Time
;
;  _$255$DUA28:[SYSLIB]XPORT.L32;1         590       126        21         252        00:00.1
;  _$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1   1248        44         3          86        00:00.3



;                                   COMMAND QUALIFIERS

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

; Size:         1343 code + 80 data bytes
; Run Time:       00:43.9
; Elapsed Time:   02:00.8
```

```
; Lines/CPU Min:    1067
; Lexemes/CPU-Min: 53375
; Memory Used:  486 pages
; Compilation Complete
```

FIND
LIS

ENDWRD
LIS

ERROR
LIS

FIGURE
LIS

FLGSEM
LIS

FOOFIL
LIS

GCODE
LIS

FCIMRA
LIS

FNONLY
LIS

FUNFNU
LIS

FOOBOT
LIS

GBLDCL
LIS

FNDFLG
LIS

FOOOUT
LIS

FORMAT
LIS