```
FFFFFFFFFFFFFFF          111               111         XXX         XXX
FFFFFFFFFFFFFFF          111               111         XXX         XXX
FFFFFFFFFFFFFFF          111               111         XXX         XXX
FFF                   111111            111111         XXX         XXX
FFF                   111111            111111         XXX         XXX
FFF                   111111            111111         XXX         XXX
FFF                      111               111            XXX   XXX
FFF                      111               111            XXX   XXX
FFF                      111               111            XXX   XXX
FFFFFFFF.FFF             111               111               XXX
FFFFFFFFFFFF             111               111               XXX
FFFFFFFFFFFF             111               111               XXX
FFF                      111               111            XXX   XXX
FFF                      111               111            XXX   XXX
FFF                      111               111            XXX   XXX
FFF                      111               111         XXX         XXX
FFF                      111               111         XXX         XXX
FFF                      111               111         XXX         XXX
FFF                   111111111         111111111      XXX         XXX
FFF                   111111111         111111111      XXX         XXX
FFF                   111111111         111111111      XXX         XXX
```

```
_$25

Symb
----
IOC$
IO_C
IO_C
IO_D
IO_F
IO_S
KILL

KILL
KILL
LB_E
LB_D
LB_F
LB_H
LB_L
LOCA
LOCA
LOCK

LOCK
LOCK
LOCK
LOC_
LOC_
L_CO
L_CO
L_DA
L_DA
MAIN
MAKE
MAKE
MAKE
MAKE
MAKE
MAKE

MAKE
MAKE
MAP_
MAP_

MAP
MARK
MARK
MARK
MARK
MARK
```

```
TTTTTTTTTT  RRRRRRRR    UU      UU  NN      NN    CCCCCCCC
TTTTTTTTTT  RRRRRRRR    UU      UU  NN      NN    CCCCCCCC
    TT      RR      RR  UU      UU  NN      NN  CC
    TT      RR      RR  UU      UU  NN      NN  CC
    TT      RR      RR  UU      UU  NNNN    NN  CC
    TT      RR      RR  UU      UU  NNNN    NN  CC
    TT      RRRRRRRR    UU      UU  NN  NN  NN  CC
    TT      RRRRRRRR    UU      UU  NN  NN  NN  CC
    TT      RR  RR      UU      UU  NN    NNNN  CC
    TT      RR  RR      UU      UU  NN    NNNN  CC
    TT      RR    RR    UU      UU  NN      NN  CC              ....
    TT      RR    RR    UU      UU  NN      NN  CC              ....
    TT      RR      RR  UU      UU  NN      NN    CCCCCCCC      ....
    TT      RR      RR  UUUUUUUUUU  NN      NN    CCCCCCCC      ....


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 MODULE TRUNC (
;     2          0002  0                 LANGUAGE (BLISS32),
;     3          0003  0                 IDENT = 'V04-000'
;     4          0004  0                 ) =
;     5          0005  1 BEGIN
;     6          0006  1
;     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.                    *
;    12          0012  1 !*  ALL RIGHTS RESERVED.                                                      *
;    13          0013  1 !*                                                                           *
;    14          0014  1 !*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED     *
;    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     *
;    23          0023  1 !*  CORPORATION.                                                              *
;    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 !
;    33          0033  1 ! FACILITY:  F11ACP Structure Level 2
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !
;    37          0037  1 !       This routine truncates a file by deallocating the indicated blocks.
;    38          0038  1 !
;    39          0039  1 ! ENVIRONMENT:
;    40          0040  1 !
;    41          0041  1 !       STARLET operating system, including privileged system services
;    42          0042  1 !       and internal exec routines.
;    43          0043  1 !
;    44          0044  1 !--
;    45          0045  1 !
;    46          0046  1 !
;    47          0047  1 ! AUTHOR:  Andrew C. Goldstein,  CREATION DATE:  21-Mar-1977  10:41
;    48          0048  1 !
;    49          0049  1 ! MODIFIED BY:
;    50          0050  1 !
;    51          0051  1 !       V03-013 CDS0007         Christian D. Saether    14-Aug-1984
;    52          0052  1 !               Remove reference to update_filesize routine.
;    53          0053  1 !
;    54          0054  1 !       V03-012 CDS0006         Christian D. Saether    31-July-1984
;    55          0055  1 !               Remove local declaration of get_map_pointer linkage.
;    56          0056  1 !
;    57          0057  1 !       V03-011 CDS0005         Christian D. Saether     5-July-1984
```

```
;  58          0058  1 !               Do not call READ_HEADER with the file id argument
;  59          0059  1 !               when re-reading primary header at the end because
;  60          0060  1 !               we always have a primary_fcb now and when this
;  61          0061  1 !               routine is called from deaccess on a deferred
;  62          0062  1 !               truncate, the fid field is not filled in.
;  63          0063  1 !
;  64          0064  1 !       V03-010 CDS0004         Christian D. Saether    22-Apr-1984
;  65          0065  1 !               Change linkage L_TRUNC_CHECKS to L_JSB_2ARGS.
;  66          0066  1 !
;  67          0067  1 !       V03-009 CDS0003         Christian D. Saether    30-Dec-1983
;  68          0068  1 !               Use L_NORM linkage and BIND_COMMON macro.
;  69          0069  1 !
;  70          0070  1 !       V03-008 CDS0002         Christian D. Saether    25-Sep-1983
;  71          0071  1 !               Manually merge in code associated with STJ3097.
;  72          0072  1 !
;  73          0073  1 !       V03-007 STJ3097         Steven T. Jeffreys,     29-Apr-1983
;  74          0074  1 !               Refinement of STJ3072.  Only do the erase if the
;  75          0075  1 !               volume or file ERASE attribute is set.
;  76          0076  1 !
;  77          0077  1 !       V03-006 CDS0001         Christian D. Saether    21-Apr-1983
;  78          0078  1 !               Break out initial error checks into separate routine.
;  79          0079  1 !               Make the truncation vbn an input argument.
;  80          0080  1 !
;  81          0081  1 !       V03-005 STJ3072         Steven T. Jeffreys,     25-Mar-1983
;  82          0082  1 !               Erase blocks returned to the storage map.  Later this
;  83          0083  1 !               will be conditionalized.
;  84          0084  1 !
;  85          0085  1 !       V03-004 ACG0299         Andrew C. Goldstein,    12-Oct-1982  17:21
;  86          0086  1 !               Make truncate tolerant of bad map pointer use count
;  87          0087  1 !
;  88          0088  1 !       V03-003 ACG0296         Andrew C. Goldstein,    8-Jul-1982  21:32
;  89          0089  1 !               Fix truncation of placed allocation pointers
;  90          0090  1 !
;  91          0091  1 !       V03-002 ACG0287         Andrew C. Goldstein,    14-Apr-1982  17:16
;  92          0092  1 !               Check for index file in header rather than FCB
;  93          0093  1 !
;  94          0094  1 !       V03-001 LMP0023         L. Mark Pilant,         7-Apr-1982  16:45
;  95          0095  1 !               Give a privilege violation if attempting to truncate the
;  96          0096  1 !               index file (INDEXF.SYS).
;  97          0097  1 !
;  98          0098  1 !       V02-011 ACG35898        Andrew C. Goldstein,    10-Mar-1981  22:15
;  99          0099  1 !               Update HIBLK in the primary header
; 100          0100  1 !
; 101          0101  1 !       V02-010 ACG0170         Andrew C. Goldstein,    7-May-1980  18:27
; 102          0102  1 !               Fix handling of map pointer use count
; 103          0103  1 !
; 104          0104  1 !       V02-009 ACG0167         Andrew C. Goldstein,    16-Apr-1980  19:28
; 105          0105  1 !               Previous revision history moved to F11B.REV
; 106          0106  1 !**
; 107          0107  1
; 108          0108  1
; 109          0109  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
; 110          0110  1 REQUIRE 'SRC$:FCPDEF.B32';
; 111          1101  1
; 112          1102  1
; 113          1103  1 FORWARD ROUTINE
; 114          1104  1         TRUNCATE        : L_NORM NOVALUE, ! truncate file
```

```
;  115          1105  1          TRUNCATE_HEADER : L_NORM NOVALUE, ! truncate individual file header
;  116          1106  1          TRUNC_CHECKS    : L_JSB_2ARGS NOVALUE ; ! initial truncation error checks.
```

```
;  118          1107  1 GLOBAL ROUTINE TRUNCATE (FIB, FILEHEADER, TRNVBN) : L_NORM NOVALUE =
;  119          1108  1
;  120          1109  1 !++
;  121          1110  1 !
;  122          1111  1 ! FUNCTIONAL DESCRIPTION:
;  123          1112  1 !
;  124          1113  1 !       This routine truncates a file to the size indicated in the FIB by
;  125          1114  1 !       deallocating the necessary blocks. The erase flag controls whether
;  126          1115  1 !       the retrieval pointers are erased in the header. The deallocate flag
;  127          1116  1 !       controls whether or not the blocks are actually returned to the
;  128          1117  1 !       storage map.
;  129          1118  1 !
;  130          1119  1 ! CALLING SEQUENCE:
;  131          1120  1 !       TRUNCATE (ARG1, ARG2, ARG3)
;  132          1121  1 !
;  133          1122  1 ! INPUT PARAMETERS:
;  134          1123  1 !       ARG1: address of FIB for operation
;  135          1124  1 !       ARG2: address of file header
;  136          1125  1 !       ARG3: VBN to truncate from
;  137          1126  1 !
;  138          1127  1 ! IMPLICIT INPUTS:
;  139          1128  1 !       CURRENT_VCB: VCB of volume
;  140          1129  1 !
;  141          1130  1 ! OUTPUT PARAMETERS:
;  142          1131  1 !       NONE
;  143          1132  1 !
;  144          1133  1 ! IMPLICIT OUTPUTS:
;  145          1134  1 !       NONE
;  146          1135  1 !
;  147          1136  1 ! ROUTINE VALUE:
;  148          1137  1 !       NONE
;  149          1138  1 !
;  150          1139  1 ! SIDE EFFECTS:
;  151          1140  1 !       storage bitmap altered
;  152          1141  1 !       file header altered
;  153          1142  1 !
;  154          1143  1 !--
;  155          1144  1
;  156          1145  2 BEGIN
;  157          1146  2
;  158          1147  2 MAP
;  159          1148  2         FIB             : REF BBLOCK,   ! FIB for operation
;  160          1149  2         FILEHEADER      : REF BBLOCK;   ! file header
;  161          1150  2
;  162          1151  2 LINKAGE
;  163          1152  2         L_MAKE_POINTER  = CALL :
;  164          1153  2                           GLOBAL (PREV_POINTER = 9);
;  165          1154  2
;  166          1155  2 GLOBAL REGISTER
;  167          1156  2         COUNT           = 6,            ! count of blocks returned
;  168          1157  2         LBN             = 7,            ! LBN of map entry
;  169          1158  2         MAP_POINTER     = 8 : REF BBLOCK, ! pointer to scan map
;  170          1159  2         PREV_POINTER    = 9 : REF BBLOCK; ! pointer to build new map entry
;  171          1160  2
;  172          1161  2 LOCAL
;  173          1162  2         FCB             : REF BBLOCK,   ! FCB of current file header
;  174          1163  2         HEADER          : REF BBLOCK,   ! address of current file header
```

```
;  175          1164  2          ALT_HEADER      : REF BBLOCK,    ! address of header copy to free blocks
;  176          1165  2          NEW_HEADER      : REF BBLOCK,    ! address of extension file header
;  177          1166  2          TRUNC_POINTER,                   ! pointer to start of truncation
;  178          1167  2          MAP_END,                         ! pointer to end of map area
;  179          1168  2          VBN,                             ! relative VBN of operation
;  180          1169  2          HEADER_VBN,                      ! value of VBN at start of this header
;  181          1170  2          HEADER_SIZE,                     ! number of blocks mapped by header
;  182          1171  2          EXT_FID         : BBLOCK [FID$C_LENGTH], ! file ID of extension header
;  183          1172  2          EX_SEGNUM,                       ! segment number of ext header
;  184          1173  2          REREAD,                          ! flag to reread primary header
;  185          1174  2          REREAD2;                         ! flag to update primary header
;  186          1175  2
;  187          1176  2 LABEL
;  188          1177  2          DO_TRUNCATE,                     ! main body of truncate processing code
;  189          1178  2          VBN_LOOP;                        ! main loop to scan for starting VBN
;  190          1179  2
;  191          1180  2 BIND_COMMON;
;  192          1181  2
;  193          1182  2 EXTERNAL ROUTINE
;  194          1183  2          PMS_START_SUB   : L_NORM,        ! start subfunction metering
;  195          1184  2          PMS_END_SUB     : L_NORM,        ! end subfunction metering
;  196          1185  2          FILE_SIZE       : L_NORM,        ! compute size mapped by header
;  197          1186  2          SEARCH_FCB      : L_NORM,        ! search FCB list for FCB
;  198          1187  2          CHARGE_QUOTA    : L_NORM,        ! charge blocks to user's quota
;  199          1188  2          DEALLOCATE_BAD  : L_NORM ADDRESSING_MODE (GENERAL),
;  200          1189  2                                           ! mark blocks bad
;  201          1190  2          MARK_DIRTY      : L_NORM,        ! mark buffer for write-back
;  202          1191  2          CHECKSUM        : L_NORM,        ! checksum file header
;  203          1192  2          GET_MAP_POINTER : L_MAP_POINTER, ! get value of next map pointer
;  204          1193  2          MAKE_POINTER    : L_MAKE_POINTER, ! build a new map pointer
;  205          1194  2          NEXT_HEADER     : L_NORM,        ! read next extension header
;  206          1195  2          CREATE_BLOCK    : L_NORM,        ! allocate a block buffer
;  207          1196  2          INVALIDATE      : L_NORM,        ! invalidate a block buffer
;  208          1197  2          INIT_FCB2       : L_NORM,        ! initialize FCB
;  209          1198  2          WRITE_HEADER    : L_NORM,        ! write file header
;  210          1199  2          READ_HEADER     : L_NORM,        ! read file header
;  211          1200  2          DEL_EXTFCB      : L_NORM,        ! delete extension FCB's
;  212          1201  2          DELETE_FILE     : L_NORM;        ! delete remainder of file
;  213          1202  2
;  214          1203  2
;  215          1204  2 ! Start metering for this subfunction.
;  216          1205  2 !
;  217          1206  2
;  218          1207  2 PMS_START_SUB (PMS_ALLOC);
;  219          1208  2
;  220          1209  2 TRUNC_CHECKS (.FIB, .FILEHEADER);
;  221          1210  2
;  222          1211  2 ! Establish the basic pointers. Round up the starting VBN to the next cluster
;  223          1212  2 ! boundary and adjust it to a zero start.
;  224          1213  2 ! Round down the file size.
;  225          1214  2 !
;  226          1215  2
;  227          1216  2 HEADER = .FILEHEADER;
;  228          1217  2 FCB = .PRIMARY_FCB;
;  229          1218  2 VBN = .TRNVBN - 1;
;  230          1219  2
;  231          1220  2 ! Init the user's return parameters.
```

```
;  232          1221  2 !
;  233          1222  2
;  234          1223  2 FIB[FIB$L_EXVBN] = 1;
;  235          1224  2
;  236          1225  2 REREAD = 0;
;  237          1226  2
;  238          1227  2 ! Now scan the file headers for the retrieval pointer containing the starting
;  239          1228  2 ! VBN. If the VBN is off the end of file, report the error; if it coincides,
;  240          1229  2 ! the operation is a noop.
;  241          1230  2 !
;  242          1231  2
;  243          1232  2 DO_TRUNCATE:
;  244          1233  3 BEGIN
;  245          1234  3
;  246          1235  3 VBN_LOOP:
;  247          1236  4 BEGIN
;  248          1237  4 WHILE 1 DO
;  249          1238  5     BEGIN
;  250          1239  5     MAP_POINTER = .HEADER + .HEADER[FH2$B_MPOFFSET]*2;
;  251          1240  5     MAP_END = .MAP_POINTER + .HEADER[FH2$B_MAP_INUSE]*2;
;  252          1241  5     PREV_POINTER = .MAP_POINTER;
;  253          1242  5     HEADER_VBN = .VBN;
;  254          1243  5
;  255          1244  5     UNTIL .MAP_POINTER GEQA .MAP_END DO
;  256          1245  6         BEGIN
;  257          1246  6         GET_MAP_POINTER ();
;  258          1247  6         IF .COUNT GEQU .VBN THEN LEAVE VBN_LOOP;
;  259          1248  6         VBN = .VBN - .COUNT;
;  260          1249  6         FIB[FIB$L_EXVBN] = .FIB[FIB$L_EXVBN] + .COUNT;
;  261          1250  6         IF .COUNT NEQ 0
;  262          1251  6         THEN PREV_POINTER = .MAP_POINTER;
;  263          1252  5         END;
;  264          1253  5
;  265          1254  5 ! We have scanned through an entire header. Chain to the next header if it
;  266          1255  5 ! exists. If we run out of headers, then the truncate point is beyond end
;  267          1256  5 ! of file.
;  268          1257  5 !
;  269          1258  5
;  270          1259  5     NEW_HEADER = NEXT_HEADER (.HEADER, .FCB);
;  271          1260  5     IF .NEW_HEADER EQL 0 THEN EXITLOOP;
;  272          1261  5     REREAD = 1;
;  273          1262  5     HEADER = .NEW_HEADER;
;  274          1263  5
;  275          1264  5     IF .FCB NEQ 0
;  276          1265  5     THEN FCB = .FCB[FCB$L_EXFCB];
;  277          1266  4     END;                                    ! end of header scan loop
;  278          1267  4
;  279          1268  4 IF .VBN NEQ 0
;  280          1269  5 THEN ERR_EXIT (SS$_ENDOFFILE)
;  281          1270  3 END;                                       ! end of VBN_LOOP
;  282          1271  3
;  283          1272  3 ! We are now pointing at the retrieval pointer in which the truncation starts.
;  284          1273  3 ! VBN contains the number of blocks to retain in that pointer. We must now
;  285          1274  3 ! round it down or up to the next cluster boundary, depending on whether or
;  286          1275  3 ! not the blocks are to be marked bad, respectively.
;  287          1276  3 !
;  288          1277  3
```

```
;  289          1278  3 USER_STATUS[1] = - .VBN;
;  290          1279  5 VBN = ((.VBN
;  291          1280  6         + (IF NOT .FIB[FIB$V_MARKBAD]
;  292          1281  6            THEN .CURRENT_VCB[VCB$W_CLUSTER] - 1
;  293          1282  6            ELSE 0)
;  294          1283  5           )
;  295          1284  3          / .CURRENT_VCB[VCB$W_CLUSTER]) * .CURRENT_VCB[VCB$W_CLUSTER];
;  296          1285  3 USER_STATUS[1] = .USER_STATUS[1] + .VBN;
;  297          1286  3 FIB[FIB$L_EXVBN] = .FIB[FIB$L_EXVBN] + .VBN;
;  298          1287  3 HEADER_VBN = .HEADER_VBN + .USER_STATUS[1];
;  299          1288  3
;  300          1289  3 ! See if rounding up is causing us to keep the entire map pointer. If so,
;  301          1290  3 ! bump to the next pointer. If that takes us to the end of the map area of
;  302          1291  3 ! a header with no extension, return with no action. (This case is common
;  303          1292  3 ! enough to be worth checking for.)
;  304          1293  3 !
;  305          1294  3
;  306          1295  3 IF .VBN EQL .COUNT
;  307          1296  3 THEN
;  308          1297  4     BEGIN
;  309          1298  4     VBN = 0;
;  310          1299  4     PREV_POINTER = .MAP_POINTER;
;  311          1300  4     IF .PREV_POINTER GEQA .MAP_END
;  312          1301  4     AND .HEADER[FH2$W_EX_FIDNUM] EQL 0
;  313          1302  4     AND .HEADER[FH2$W_EX_FIDRVN] EQL 0
;  314          1303  4     THEN  LEAVE DO_TRUNCATE;
;  315          1304  3     END;
;  316          1305  3
;  317          1306  3 ! If we are turning blocks over to the bad block file, check that
;  318          1307  3 ! (1) the pointer given is the last pointer in the header,
;  319          1308  3 ! (2) the header is the last one for the file, and (3) that the quantity
;  320          1309  3 ! being deallocated is exactly one cluster, this being the only condition
;  321          1310  3 ! we can correctly handle.
;  322          1311  3 !
;  323          1312  3
;  324          1313  3 IF .FIB[FIB$V_MARKBAD]
;  325          1314  3 THEN
;  326          1315  3     IF .MAP_POINTER NEQ .MAP_END
;  327          1316  3     OR .COUNT - .VBN NEQ .CURRENT_VCB[VCB$W_CLUSTER]
;  328          1317  3     OR .HEADER[FH2$W_EX_FIDNUM] NEQ 0
;  329          1318  3     OR .HEADER[FH2$W_EX_FIDSEQ] NEQ 0
;  330          1319  3     THEN ERR_EXIT (SS$_BADPARAM);
;  331          1320  3
;  332          1321  3 ! Do the real truncate. Set up cleanup status and get control blocks in shape.
;  333          1322  3 !
;  334          1323  3
;  335          1324  3 CLEANUP_FLAGS[CLF_FIXFCB] = 1;
;  336          1325  3 CLEANUP_FLAGS[CLF_INVWINDOW] = 1;
;  337          1326  3 PRIMARY_FCB [FCB$L_FILESIZE] = .FIB[FIB$L_EXVBN] - 1;
;  338          1327  3
;  339          1328  3 ! Update the HIBLK field in the record attributes to reflect the new file
;  340          1329  3 ! size, if this is the primary header..
;  341          1330  3 !
;  342          1331  3
;  343          1332  3 IF NOT .REREAD
;  344          1333  3 THEN BBLOCK [HEADER[FH2$W_RECATTR], FAT$L_HIBLK] = ROT (.FIB[FIB$L_EXVBN]-1, 16);
;  345          1334  3
```

```
;  346          1335  3 ! Make a copy of the file header with which to free the blocks. In the original,
;  347          1336  3 ! zero out the map pointers being freed and write the header back before
;  348          1337  3 ! deallocating the blocks, so that we do not get a file header mapping free
;  349          1338  3 ! blocks if the system crashes while this is going on.
;  350          1339  3 !
;  351          1340  3
;  352          1341  3 ALT_HEADER = CREATE_BLOCK (-1, 1, HEADER_TYPE);
;  353          1342  3 INVALIDATE (.ALT_HEADER);
;  354          1343  3 CH$MOVE (512, .HEADER, .ALT_HEADER);
;  355          1344  3 TRUNC_POINTER = .PREV_POINTER - .HEADER + .ALT_HEADER;
;  356          1345  3
;  357          1346  3 HEADER[FH2$B_MAP_INUSE] = (.PREV_POINTER - .HEADER) / 2 - .HEADER[FH2$B_MPOFFSET];
;  358          1347  3 IF .VBN NEQ 0
;  359          1348  3 THEN
;  360          1349  4     BEGIN
;  361          1350  4     MAP_POINTER = .PREV_POINTER;
;  362          1351  4     GET_MAP_POINTER ();
;  363          1352  4     MAKE_POINTER (.VBN, .LBN, .HEADER,
;  364          1353  5                   (IF .PREV_POINTER[FM2$V_FORMAT] EQL FM2$C_PLACEMENT
;  365          1354  5                    THEN .PREV_POINTER[FM2$W_WORD0]
;  366          1355  4                    ELSE 0));
;  367          1356  3     END;
;  368          1357  3 MAP_END = .HEADER + .HEADER[FH2$B_ACOFFSET]*2;
;  369          1358  3 IF .MAP_END - .PREV_POINTER GTR 0
;  370          1359  3 THEN CH$FILL (0, .MAP_END - .PREV_POINTER, .PREV_POINTER);
;  371          1360  3
;  372          1361  3 EX_SEGNUM = .HEADER[FH2$W_SEG_NUM] + 1;
;  373          1362  3 CH$MOVE (FID$C_LENGTH, HEADER[FH2$W_EXT_FID], EXT_FID);
;  374          1363  3 CH$FILL (0, FID$C_LENGTH, HEADER[FH2$W_EXT_FID]);
;  375          1364  3 CHECKSUM (.HEADER);
;  376          1365  3 WRITE_HEADER ();
;  377          1366  3
;  378          1367  3 IF .FCB NEQ 0 AND .FCB NEQ .PRIMARY_FCB
;  379          1368  3 THEN KERNEL_CALL (INIT_FCB2, .FCB, .HEADER);
;  380          1369  3
;  381          1370  3 ! Compute the number of blocks being deallocated and credit them to the
;  382          1371  3 ! file owner. We compute this by taking the total space mapped by the header,
;  383          1372  3 ! less the number of blocks passed over in the scan.
;  384          1373  3 !
;  385          1374  3
;  386          1375  3 IF NOT .CLEANUP_FLAGS[CLF_NOTCHARGED]
;  387          1376  3 THEN
;  388          1377  4     BEGIN
;  389          1378  4     HEADER_SIZE = FILE_SIZE (.ALT_HEADER);
;  390          1379  4     CHARGE_QUOTA (.HEADER[FH2$L_FILEOWNER], - (.HEADER_SIZE - .HEADER_VBN),
;  391          1380  4                   BITLIST (QUOTA_CHARGE));
;  392          1381  3     END;
;  393          1382  3
;  394          1383  3 ! Now we can free the blocks being truncated off. They are turned over
;  395          1384  3 ! either to the storage map, or to the bad block file.
;  396          1385  3 !
;  397          1386  3
;  398          1387  3 IF .FIB[FIB$V_MARKBAD]
;  399          1388  3 THEN
;  400          1389  3     DEALLOCATE_BAD (.FIB, .ALT_HEADER, .TRUNC_POINTER, .VBN)
;  401          1390  3 ELSE
;  402          1391  3     TRUNCATE_HEADER (.FIB, .ALT_HEADER, .TRUNC_POINTER, .VBN);
```

```
;  403          1392  3
;  404          1393  3 REREAD2 = .REREAD;
;  405          1394  3 IF .EXT_FID[FID$W_NUM] NEQ 0
;  406          1395  3 OR .EXT_FID[FID$W_RVN] NEQ 0
;  407          1396  3 THEN
;  408          1397  4     BEGIN
;  409          1398  4     REREAD = 1;
;  410          1399  4     HEADER = NEXT_HEADER (0, .FCB, EXT_FID, .EX_SEGNUM);
;  411          1400  4     KERNEL_CALL (DEL_EXTFCB, .FCB);
;  412          1401  4     DELETE_FILE (.FIB, .HEADER);
;  413          1402  3     END;
;  414          1403  3
;  415          1404  2 END;                                    ! end of block DO_TRUNCATE
;  416          1405  2
;  417          1406  2 ! If this was a truncate of a multi-header file, reread the primary header
;  418          1407  2 ! and update the HIBLK field in the record attributes to reflect the new file
;  419          1408  2 ! size.
;  420          1409  2 !
;  421          1410  2
;  422          1411  2 IF .REREAD
;  423          1412  2 THEN HEADER = READ_HEADER (0, .PRIMARY_FCB);
;  424          1413  2
;  425          1414  2 IF .REREAD2
;  426          1415  2 THEN
;  427          1416  3     BEGIN
;  428          1417  3     BBLOCK [HEADER[FH2$W_RECATTR], FAT$L_HIBLK] = ROT (.FIB[FIB$L_EXVBN]-1, 16);
;  429          1418  3     MARK_DIRTY (.HEADER);
;  430          1419  2     END;
;  431          1420  2
;  432          1421  2
;  433          1422  2 ! Stop metering of this subfunction
;  434          1423  2 !
;  435          1424  2
;  436          1425  2 PMS_END_SUB ();
;  437          1426  2
;  438          1427  1 END;                                    ! end of routine TRUNCATE


                                                .TITLE  TRUNC
                                                .IDENT  \V04-000\

                                                .EXTRN  PMS_START_SUB, PMS_END_SUB
                                                .EXTRN  FILE_SIZE, SEARCH_FCB
                                                .EXTRN  CHARGE_QUOTA, DEALLOCATE_BAD
                                                .EXTRN  MARK_DIRTY, CHECKSUM
                                                .EXTRN  GET_MAP_POINTER
                                                .EXTRN  MAKE_POINTER, NEXT_HEADER
                                                .EXTRN  CREATE_BLOCK, INVALIDATE
                                                .EXTRN  INIT_FCB2, WRITE_HEADER
                                                .EXTRN  READ_HEADER, DEL_EXTFCB
                                                .EXTRN  DELETE_FILE

                                                .PSECT  $CODE$,NOWRT,2

                                  0BFC 00000    .ENTRY  TRUNCATE, Save R2,R3,R4,R5,R6,R7,R8,R9,R11  ; 1107
                              5E        24  C2 00002    SUBL2   #36, SP                                    ;
                              52  80    AA  9E 00005    MOVAB   -128(BASE), R2                             ; 1178
```

```
                                08  DD 00009          PUSHL   #8                                      ; 1207
                         0000G  CF                    CALLS   #1, PMS_START_SUB
                                50      04  AC  7D 00010          MOVQ    FIB, R0                     ; 1209
                                      0000V 30 00014          BSBW    TRUNC_CHECKS
                                10  AE  08  AC  D0 00017          MOVL    FILEHEADER, HEADER          ; 1216
                                0C  AE  08  AA  D0 0001C          MOVL    8(BASE), FCB                ; 1217
                            08  AE  0C  AC  C3 00021          SUBL3   #1, TRNVBN, VBN                 ; 1218
                                50      04  AC  D0 00027          MOVL    FIB, R0                     ; 1223
                                1C  A0      01  D0 0002B          MOVL    #1, 28(R0)
                                        04  AE  D4 0002F          CLRL    REREAD                      ; 1225
                            51  10  AE      01  C1 00032 1$:      ADDL3   #1, HEADER, R1              ; 1239
                                50          61  9A 00037          MOVZBL  (R1), R0
                                58      10 BE40 3E 0003A          MOVAW   @HEADER[R0], MAP_POINTER
                            51  10  AE      3A  C1 0003F          ADDL3   #58, HEADER, R1             ; 1240
                                50          61  9A 00044          MOVZBL  (R1), R0
                                5B        6840  3E 00047          MOVAW   (MAP_POINTER)[R0], MAP_END
                                59          58  D0 0004B          MOVL    MAP_POINTER, PREV_POINTER   ; 1241
                                6E      08  AE  D0 0004E          MOVL    VBN, HEADER_VBN             ; 1242
                                5B          58  D1 00052 2$:      CMPL    MAP_POINTER, MAP_END        ; 1244
                                            1E  1E 00055          BGEQU   3$
                                      0000G 30 00057          BSBW    GET_MAP_POINTER             ; 1246
                                08  AE          56  D1 0005A          CMPL    COUNT, VBN              ; 1247
                                            47  1E 0005E          BGEQU   5$
                                08  AE          56  C2 00060          SUBL2   COUNT, VBN              ; 1248
                                50      04  AC  D0 00064          MOVL    FIB, R0                     ; 1249
                                1C  A0          56  C0 00068          ADDL2   COUNT, 28(R0)
                                            56  D5 0006C          TSTL    COUNT                       ; 1250
                                            E2  13 0006E          BEQL    2$
                                59          58  D0 00070          MOVL    MAP_POINTER, PREV_POINTER   ; 1251
                                            DD  11 00073          BRB     2$                          ; 1244
                                0C  AE      DD 00075 3$:          PUSHL   FCB                         ; 1259
                                14  AE      DD 00078              PUSHL   HEADER
                         0000G  CF          02  FB 0007B          CALLS   #2, NEXT_HEADER
                                53          50  D0 00080          MOVL    R0, NEW_HEADER
                                            18  13 00083          BEQL    4$                          ; 1260
                                04  AE      01  D0 00085          MOVL    #1, REREAD                  ; 1261
                                10  AE      53  D0 00089          MOVL    NEW_HEADER, HEADER          ; 1262
                                        0C  AE  D5 0008D          TSTL    FCB                         ; 1264
                                            A0  13 00090          BEQL    1$
                            50  0C  AE      0C  C1 00092          ADDL3   #12, FCB, R0                ; 1265
                                0C  AE          60  D0 00097          MOVL    (R0), FCB
                                            95  11 0009B          BRB     1$                          ; 1237
                                        08  AE  D5 0009D 4$:      TSTL    VBN                         ; 1268
                                            05  13 000A0          BEQL    5$
                                      0870  8F  BF 000A2          CHMU    #2160                       ; 1269
                                            04  000A6          RET
                                04  A2      08  AE  CE 000A7 5$:      MNEGL   VBN, 4(R2)              ; 1278
                                50      04  AC  D0 000AC          MOVL    FIB, R0                     ; 1280
                            0C  17  A0          02  E0 000B0          BBS     #2, 23(R0), 6$
                                50      98  AA  D0 000B5          MOVL    -104(BASE), R0              ; 1281
                                51      3C  A0  3C 000B9          MOVZWL  60(R0), R1
                                            51  D7 000BD          DECL    R1
                                            02  11 000BF          BRB     7$
                                            51  D4 000C1 6$:      CLRL    R1                          ; 1280
                                51      08  AE  C0 000C3 7$:      ADDL2   VBN, R1
                                50      98  AA  D0 000C7          MOVL    -104(BASE), R0              ; 1284
                                53      3C  A0  3C 000CB          MOVZWL  60(R0), R3
```

```
                        51          53  C6 000CF          DIVL2   R3, R1
                        54    3C    A0  3C 000D2          MOVZWL  60(R0), R4
                  08    AE          51  C5 000D6          MULL3   R4, R1, VBN
                              04    A2  08 AE  C0 000DB    ADDL2   VBN, 4(R2)                  ;1285
                        50          04  AC  D0 000E0      MOVL    FIB, R0                     ;1286
                              1C    A0  08 AE  C0 000E4    ADDL2   VBN, 28(R0)
                        6E          04  A2  C0 000E9      ADDL2   4(R2), HEADER_VBN           ;1287
                        56          08  AE  D1 000ED      CMPL    VBN, COUNT                  ;1295
                                    20  12 000F1          BNEQ    8$
                                    08  AE  D4 000F3      CLRL    VBN                         ;1298
                        59          58  D0 000F6          MOVL    MAP_POINTER, PREV_POINTER   ;1299
                        5B          59  D1 000F9          CMPL    PREV_POINTER, MAP_END       ;1300
                                    15  1F 000FC          BLSSU   8$
                  50          10    AE  0E C1 000FE      ADDL3   #14, HEADER, R0             ;1301
                                    60  B5 00103          TSTW    (R0)
                                    0C  12 00105          BNEQ    8$
                  50          10    AE  12 C1 00107      ADDL3   #18, HEADER, R0             ;1302
                                    60  B5 0010C          TSTW    (R0)
                                    03  12 0010E          BNEQ    8$
                                019E  31 00110          BRW     21$
                        50    04    AC  D0 00113  8$:     MOVL    FIB, R0                     ;1313
                  2B          17    A0  02 E1 00117       BBC     #2, 23(R0), 10$
                        5B          58  D1 0011C          CMPL    MAP_POINTER, MAP_END        ;1315
                                    23  12 0011F          BNEQ    9$
                  51          56    08  AE  C3 00121      SUBL3   VBN, COUNT, R1              ;1316
                        50    98    AA  D0 00126          MOVL    -104(BASE), R0
        51        3C    A0          10  00 ED 0012A       CMPZV   #0, #16, 60(R0), R1
                                    12  12 00130          BNEQ    9$
                  50          10    AE  0E C1 00132      ADDL3   #14, HEADER, R0             ;1317
                                    60  B5 00137          TSTW    (R0)
                                    09  12 00139          BNEQ    9$
                  50          10    AE  10 C1 0013B      ADDL3   #16, HEADER, R0             ;1318
                                    60  B5 00140          TSTW    (R0)
                                    03  13 00142          BEQL    10$
                                    14  BF 00144  9$:     CHMU    #20                         ;1319
                                        04 00146          RET
                        6A              12  88 00147  10$:   BISB2   #18, (BASE)             ;1325
                        50    08    AA  D0 0014A          MOVL    8(BASE), R0                 ;1326
                        51    04    AC  D0 0014E          MOVL    FIB, R1
        38    A0          1C    A1  01 C3 00152          SUBL3   #1, 28(R1), 56(R0)
                              12  04  AE  E8 00158        BLBS    REREAD, 11$                 ;1332
                              50  04  AC  D0 0015C        MOVL    FIB, R0                     ;1333
              50          1C    A0  01 C3 00160          SUBL3   #1, 28(R0), R0
              51          10    AE  18 C1 00165          ADDL3   #24, HEADER, R1
              61                50  10 9C 0016A          ROTL    #16, R0, (R1)
                                7E  01 7D 0016E  11$:     MOVQ    #1, -(SP)                   ;1341
                                7E  01 CE 00171          MNEGL   #1, -(SP)
                        0000G   CF      03 FB 00174      CALLS   #3, CREATE_BLOCK
                          14    AE      50 D0 00179      MOVL    R0, ALT_HEADER
                                    14  AE  DD 0017D      PUSHL   ALT_HEADER                  ;1342
                        0000G   CF      01 FB 00180      CALLS   #1, INVALIDATE
        14    BE          10    BE  0200  8F 28 00185    MOVC3   #512, @HEADER, @ALT_HEADER  ;1343
              50                59  10  AE  C3 00189    SUBL3   HEADER, PREV_POINTER, R0    ;1344
                          18    AE  14 BE40  9E 00192    MOVAB   @ALT_HEADER[R0], TRUNC_POINTER
                                50      02 C6 00198      DIVL2   #2, R0                      ;1346
              51          10    AE      3A C1 0019B      ADDL3   #58, HEADER, R1
              52          10    AE      01 C1 001A0      ADDL3   #1, HEADER, R2
```

```
                61              50              62  83 001A5          SUBB3   (R2), R0, (R1)
                                          08    AE  D5 001A9          TSTL    VBN                                     ; 1347
                                                21  13 001AC          BEQL    14$
                                50              59  D0 001AE          MOVL    PREV_POINTER, MAP_POINTER               ; 1350
                                              0000G 30 001B1          BSBW    GET_MAP_POINTER                         ; 1351
                            C0  8F            01  A9 93 001B4          BITB    1(PREV_POINTER), #192                   ; 1353
                                                05  12 001B9          BNEQ    12$
                                7E              69  3C 001BB          MOVZWL  (PREV_POINTER), -(SP)                   ; 1354
                                                02  11 001BE          BRB     13$
                                                7E  D4 001C0 12$:      CLRL    -(SP)                                   ; 1353
                                          14    AE  DD 001C2 13$:      PUSHL   HEADER                                  ; 1352
                                                57  DD 001C5          PUSHL   LBN
                                          14    AE  DD 001C7          PUSHL   VBN
                            0000G       CF          04  FB 001CA          CALLS   #4, MAKE_POINTER
                51          10          AE          02  C1 001CF 14$:      ADDL3   #2, HEADER, R1                  ; 1357
                                                50  61  9A 001D4          MOVZBL  (R1), R0
                                                5B  10 BE40 3E 001D7          MOVAW   @HEADER[R0], MAP_END
                                                59  5B  D1 001DC          CMPL    MAP_END, PREV_POINTER           ; 1358
                                                    09  15 001DF          BLEQ    15$
                                                5B  59  C2 001E1          SUBL2   PREV_POINTER, R11               ; 1359
        5B      00                      6E          00  2C 001E4          MOVC5   #0, (SP), #0, R11, (PREV_POINTER)
                                                    69     001E9
                50          10          AE          04  C1 001EA 15$:      ADDL3   #4, HEADER, R0                  ; 1361
                                                56  60  3C 001EF          MOVZWL  (R0), EX_SEGNUM
                                                    56  D6 001F2          INCL    EX_SEGNUM
                57          10          AE          0E  C1 001F4          ADDL3   #14, HEADER, R7                 ; 1362
            1C  AE                      67          06  28 001F9          MOVC3   #6, (R7), EXT_FID
                57          10          AE          0E  C1 001FE          ADDL3   #14, HEADER, R7                 ; 1363
        06      00                      6E          00  2C 00203          MOVC5   #0, (SP), #0, #6, (R7)
                                                    67     00208
                                          10    AE  DD 00209          PUSHL   HEADER                                  ; 1364
                            0000G       CF          01  FB 0020C          CALLS   #1, CHECKSUM
                            0000G       CF          00  FB 00211          CALLS   #0, WRITE_HEADER                    ; 1365
                                          0C    AE  D5 00216          TSTL    FCB                                     ; 1367
                                                12  13 00219          BEQL    16$
                              08        AA          0C  AE  D1 0021B          CMPL    FCB, 8(BASE)
                                                    0B  13 00220          BEQL    16$
                                          10    AE  DD 00222          PUSHL   HEADER                                  ; 1368
                                          10    AE  DD 00225          PUSHL   FCB
                            0000G       CF          02  FB 00228          CALLS   #2, INIT_FCB2
            1B                          6A          1D  E0 0022D 16$:      BBS     #29, (BASE), 17$                ; 1375
                                          14    AE  DD 00231          PUSHL   ALT_HEADER                              ; 1378
                            0000G       CF          01  FB 00234          CALLS   #1, FILE_SIZE
                                                    02  DD 00239          PUSHL   #2                                  ; 1380
            7E      04      AE                      50  C3 0023B          SUBL3   HEADER_SIZE, HEADER_VBN, -(SP)      ; 1379
            52      18      AE                      3C  C1 00240          ADDL3   #60, HEADER, R2
                                                    62  DD 00245          PUSHL   (R2)
                            0000G       CF          03  FB 00247          CALLS   #3, CHARGE_QUOTA
                                                50  04  AC  D0 0024C 17$:      MOVL    FIB, R0                     ; 1387
            14      17      A0                      02  E1 00250          BBC     #2, 23(R0), 18$
                                          08    AE  DD 00255          PUSHL   VBN                                     ; 1389
                                          1C    AE  DD 00258          PUSHL   TRUNC_POINTER
                                          1C    AE  DD 0025B          PUSHL   ALT_HEADER
                                                50  DD 0025E          PUSHL   R0
                        000000000G      00          04  FB 00260          CALLS   #4, DEALLOCATE_BAD
                                                    10  11 00267          BRB     19$
                                          08    AE  DD 00269 18$:      PUSHL   VBN                                     ; 1391
```

```
                                1C   AE   DD 0026C           PUSHL   TRUNC_POINTER                                    ;
                                1C   AE   DD 0026F           PUSHL   ALT_HEADER                                      ;
                                     50   DD 00272           PUSHL   R0                                              ;
                          0000V CF        04   FB 00274           CALLS   #4, TRUNCATE_HEADER                             ;
                                52        04   AE   D0 00279 19$:    MOVL    REREAD, REREAD2                         ; 1393
                                1C   AE   B5 0027D           TSTW    EXT_FID                                         ; 1394
                                     05   12 00280           BNEQ    20$                                             ;
                                20   AE   B5 00282           TSTW    EXT_FID+4                                       ; 1395
                                     2A   13 00285           BEQL    21$                                             ;
                            04  AE        01   D0 00287 20$:    MOVL    #1, REREAD                                      ; 1398
                                     56   DD 0028B           PUSHL   EX_SEGNUM                                       ; 1399
                                20   AE   9F 0028D           PUSHAB  EXT_FID                                         ;
                                14   AE   DD 00290           PUSHL   FCB                                             ;
                                     7E   D4 00293           CLRL    -(SP)                                           ;
                          0000G CF        04   FB 00295           CALLS   #4, NEXT_HEADER                                 ;
                            10  AE        50   D0 0029A           MOVL    R0, HEADER                                      ;
                                0C   AE   DD 0029E           PUSHL   FCB                                             ; 1400
                          0000G CF        01   FB 002A1           CALLS   #1, DEL_EXTFCB                                  ;
                                10   AE   DD 002A6           PUSHL   HEADER                                          ; 1401
                                04   AC   DD 002A9           PUSHL   FIB                                             ;
                          0000G CF        02   FB 002AC           CALLS   #2, DELETE_FILE                                 ;
                                0E   04   AE   E9 002B1 21$:    BLBC    REREAD, 22$                                     ; 1411
                                08   AA   DD 002B5           PUSHL   8(BASE)                                         ; 1412
                                     7E   D4 002B8           CLRL    -(SP)                                           ;
                          0000G CF        02   FB 002BA           CALLS   #2, READ_HEADER                                 ;
                            10  AE        50   D0 002BF           MOVL    R0, HEADER                                      ;
                                1A        52   E9 002C3 22$:    BLBC    REREAD2, 23$                                    ; 1414
                                50   04   AC   D0 002C6           MOVL    FIB, R0                                         ; 1417
                      50        1C  A0        01   C3 002CA           SUBL3   #1, 28(R0), R0                                  ;
                      51        10  AE        18   C1 002CF           ADDL3   #24, HEADER, R1                                 ;
                      61             50        10   9C 002D4           ROTL    #16, R0, (R1)                                   ;
                                10   AE   DD 002D8           PUSHL   HEADER                                          ; 1418
                          0000G CF        01   FB 002DB           CALLS   #1, MARK_DIRTY                                  ;
                          0000G CF        00   FB 002E0 23$:    CALLS   #0, PMS_END_SUB                                 ; 1425
                                     04   002E5           RET                                                     ; 1427

; Routine Size:  742 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  440          1428  1 GLOBAL ROUTINE TRUNCATE_HEADER (FIB, HEADER, POINTER, LAST_COUNT) : L_NORM NOVALUE =
;  441          1429  1
;  442          1430  1 !++
;  443          1431  1 !
;  444          1432  1 ! FUNCTIONAL DESCRIPTION:
;  445          1433  1 !
;  446          1434  1 !       This routine returns the indicated retrieval pointers in the given
;  447          1435  1 !       file header to the storage map.
;  448          1436  1 !
;  449          1437  1 !
;  450          1438  1 ! CALLING SEQUENCE:
;  451          1439  1 !       TRUNCATE_HEADER (ARG1, ARG2, ARG3, ARG4)
;  452          1440  1 !
;  453          1441  1 ! INPUT PARAMETERS:
;  454          1442  1 !       ARG1: address of FIB of operation
;  455          1443  1 !       ARG2: address of file header
;  456          1444  1 !       ARG3: address of first retrieval pointer to process, if present
;  457          1445  1 !       ARG4: new count field of first pointer, if present
;  458          1446  1 !
;  459          1447  1 ! IMPLICIT INPUTS:
;  460          1448  1 !       NONE
;  461          1449  1 !
;  462          1450  1 ! OUTPUT PARAMETERS:
;  463          1451  1 !       NONE
;  464          1452  1 !
;  465          1453  1 ! IMPLICIT OUTPUTS:
;  466          1454  1 !       NONE
;  467          1455  1 !
;  468          1456  1 ! ROUTINE VALUE:
;  469          1457  1 !       NONE
;  470          1458  1 !
;  471          1459  1 ! SIDE EFFECTS:
;  472          1460  1 !       file header altered, storage map altered
;  473          1461  1 !
;  474          1462  1 !--
;  475          1463  1
;  476          1464  2 BEGIN
;  477          1465  2
;  478          1466  2 MAP
;  479          1467  2         FIB             : REF BBLOCK,   ! user FIB
;  480          1468  2         HEADER          : REF BBLOCK;   ! file header
;  481          1469  2
;  482          1470  2 GLOBAL REGISTER
;  483          1471  2         COUNT           = 6,            ! count of blocks returned
;  484          1472  2         LBN             = 7,            ! LBN of map entry
;  485          1473  2         MAP_POINTER     = 8 : REF BBLOCK; ! pointer to scan map
;  486          1474  2
;  487          1475  2 LOCAL
;  488          1476  2         MAP_END;                        ! address of end of map area
;  489          1477  2
;  490          1478  2 BIND_COMMON;
;  491          1479  2
;  492          1480  2 EXTERNAL ROUTINE
;  493          1481  2         GET_MAP_POINTER : L_MAP_POINTER, ! get value of next map entry
;  494          1482  2         RETURN_BLOCKS   : L_NORM ADDRESSING_MODE (GENERAL);
;  495          1483  2                                         ! return blocks to storage map
;  496          1484  2
```

```
;  497          1485  2
;  498          1486  2 LOCAL
;  499          1487  2         ERASE_FLAG;
;  500          1488  2
;  501          1489  2 ! Determine if blocks being returned should be erased.  Erase them if
;  502          1490  2 ! either the volume or file erase attribute is set.
;  503          1491  2 !
;  504          1492  2 ERASE_FLAG = 0;                          ! Assume no erase necessary
;  505          1493  2 IF .CURRENT_VCB[VCB$V_ERASE]             ! Check the volume attribute
;  506          1494  2 OR .HEADER[FH2$V_ERASE]                  ! Check the file attribute in the header
;  507          1495  2 THEN
;  508          1496  2     ERASE_FLAG = 1
;  509          1497  2 ELSE
;  510          1498  2     IF .PRIMARY_FCB NEQ 0               ! Check the file attribute in the FCB
;  511          1499  2     THEN
;  512          1500  2         IF .PRIMARY_FCB[FCB$V_ERASE]
;  513          1501  2         THEN
;  514          1502  2             ERASE_FLAG = 1;
;  515          1503  2
;  516          1504  2 !
;  517          1505  2 ! Establish pointers into the file header. If explicit args are supplied, use
;  518          1506  2 ! them; else default to releasing the entire file header.
;  519          1507  2 !
;  520          1508  2
;  521          1509  2 MAP_POINTER = .HEADER + .HEADER[FH2$B_MPOFFSET]*2;
;  522          1510  2 MAP_END = .MAP_POINTER + .HEADER[FH2$B_MAP_INUSE]*2;
;  523          1511  2
;  524          1512  2 IF ACTUALCOUNT GEQ 4
;  525          1513  2 THEN
;  526          1514  3     BEGIN
;  527          1515  3     MAP_POINTER = .POINTER;
;  528          1516  3     IF .LAST_COUNT NEQ 0
;  529          1517  3     THEN
;  530          1518  4         BEGIN
;  531          1519  4         GET_MAP_POINTER ();
;  532          1520  4         RETURN_BLOCKS (.LBN+.LAST_COUNT, .COUNT-.LAST_COUNT, .ERASE_FLAG);
;  533          1521  4         FIB[FIB$L_EXSZ] = .FIB[FIB$L_EXSZ] + .COUNT - .LAST_COUNT;
;  534          1522  3         END;
;  535          1523  2     END;
;  536          1524  2
;  537          1525  2 ! Now scan the map area, cleaning out pointers and releasing blocks.
;  538          1526  2 !
;  539          1527  2
;  540          1528  2 UNTIL .MAP_POINTER GEQA .MAP_END DO
;  541          1529  3     BEGIN
;  542          1530  3     GET_MAP_POINTER ();
;  543          1531  3     RETURN_BLOCKS (.LBN, .COUNT, .ERASE_FLAG);
;  544          1532  3     FIB[FIB$L_EXSZ] = .FIB[FIB$L_EXSZ] + .COUNT;
;  545          1533  2     END;
;  546          1534  2
;  547          1535  1 END;                                     ! end of routine TRUNCATE_HEADER


                                                    .EXTRN  RETURN_BLOCKS
                                01DC 00000          .ENTRY  TRUNCATE_HEADER, Save R2,R3,R4,R6,R7,R8     ; 1428
```

```
                54 00000000G   00   9E 00002          MOVAB   RETURN_BLOCKS, R4                                ;
                               52   D4 00009          CLRL    ERASE_FLAG                                      ; 1492
                50        98   AA   D0 0000B          MOVL    -104(BASE), R0                                  ; 1493
          14    53        A0   03   E0 0000F          BBS     #3, 83(R0), 1$                                  ;
                50        08   AC   D0 00014          MOVL    HEADER, R0                                      ; 1494
          0B    36        A0   01   E0 00018          BBS     #1, 54(R0), 1$                                  ;
                50        08   AA   D0 0001D          MOVL    8(BASE), R0                                     ; 1498
                               08   13 00021          BEQL    2$                                              ;
          03    22        A0   06   E1 00023          BBC     #6, 34(R0), 2$                                  ; 1500
                52             01   D0 00028 1$:      MOVL    #1, ERASE_FLAG                                  ; 1502
                51        08   AC   D0 0002B 2$:      MOVL    HEADER, R1                                      ; 1509
                50        01   A1   9A 0002F          MOVZBL  1(R1), R0                                       ;
                58      6140   3E   00033            MOVAW   (R1)[R0], MAP_POINTER                           ;
                50        3A   A1   9A 00037          MOVZBL  58(R1), R0                                      ; 1510
                53      6840   3E   0003B            MOVAW   (MAP_POINTER)[R0], MAP_END                      ;
                04             6C   91 0003F          CMPB    (AP), #4                                        ; 1512
                               29   1F 00042          BLSSU   3$                                              ;
                58        0C   AC   D0 00044          MOVL    POINTER, MAP_POINTER                            ; 1515
                10        AC   D5 00048              TSTL    LAST_COUNT                                      ; 1516
                               20   13 0004B          BEQL    3$                                              ;
                          0000G 30   00004D           BSBW    GET_MAP_POINTER                                 ; 1519
                               52   DD 00050          PUSHL   ERASE_FLAG                                      ; 1520
          7E                   56   10 AC   C3 00052  SUBL3   LAST_COUNT, COUNT, -(SP)                        ;
                               10 BC47   9F 00057      PUSHAB  @LAST_COUNT[LBN]                                ;
                64             03   FB 0005B          CALLS   #3, RETURN_BLOCKS                               ;
                50        04   AC   D0 0005E          MOVL    FIB, R0                                         ; 1521
          51                   56   18 A0   C1 00062  ADDL3   24(R0), COUNT, R1                               ;
    18    A0                   51   10 AC   C3 00067  SUBL3   LAST_COUNT, R1, 24(R0)                          ;
                53             58   D1 0006D 3$:      CMPL    MAP_POINTER, MAP_END                            ; 1528
                               16   1E 00070          BGEQU   4$                                              ;
                          0000G 30   00072            BSBW    GET_MAP_POINTER                                 ; 1530
                               52   DD 00075          PUSHL   ERASE_FLAG                                      ; 1531
                               56   DD 00077          PUSHL   COUNT                                           ;
                               57   DD 00079          PUSHL   LBN                                             ;
                64             03   FB 0007B          CALLS   #3, RETURN_BLOCKS                               ;
                50        04   AC   D0 0007E          MOVL    FIB, R0                                         ; 1532
          18    A0             56   C0 00082          ADDL2   COUNT, 24(R0)                                   ;
                               E5   11 00086          BRB     3$                                              ; 1528
                                    04 00088 4$:      RET                                                     ; 1535

; Routine Size:  137 bytes,    Routine Base:  $CODE$ + 02E6

;  548          1536  1
```

```
;  550          1537  1 GLOBAL ROUTINE TRUNC_CHECKS (FIB, HEADER) : L_JSB_2ARGS NOVALUE =
;  551          1538  1
;  552          1539  1 !
;  553          1540  1 !
;  554          1541  1 !
;  555          1542  1
;  556          1543  2 BEGIN
;  557          1544  2
;  558          1545  2 MAP
;  559          1546  2         FIB     : REF BBLOCK,
;  560          1547  2         HEADER  : REF BBLOCK;
;  561          1548  2
;  562          1549  2 BIND_COMMON;
;  563          1550  2
;  564          1551  2 ! The block count must be zero (default).
;  565          1552  2 ! If the operation calls for the blocks to be turned over to the bad block
;  566          1553  2 ! file, the caller must be system.
;  567          1554  2 !
;  568          1555  2
;  569          1556  2 IF .FIB[FIB$V_MARKBAD]
;  570          1557  2 AND NOT .CLEANUP_FLAGS[CLF_SYSPRV]
;  571          1558  2 THEN ERR_EXIT (SS$_NOPRIV);
;  572          1559  2
;  573          1560  2 ! Check for the index file INDEXF.SYS
;  574          1561  2 !
;  575          1562  2
;  576          1563  2 IF  .HEADER[FH2$W_FID_NUM] EQL FID$C_INDEXF
;  577          1564  2 AND .HEADER[FH2$W_FID_SEQ] EQL FID$C_INDEXF
;  578          1565  2 AND .HEADER[FH2$B_FID_NMX] EQL 0
;  579          1566  2 THEN ERR_EXIT (SS$_NOPRIV);
;  580          1567  2
;  581          1568  2 IF .FIB[FIB$L_EXSZ] NEQ 0 THEN ERR_EXIT (SS$_BADPARAM);
;  582          1569  2
;  583          1570  2 ! Init the user's return parameters.
;  584          1571  2 !
;  585          1572  2
;  586          1573  2 FIB[FIB$L_EXSZ] = 0;
;  587          1574  2
;  588          1575  1 END;


                                 04     17  A0              02  E1 00000 TRUNC_CHECKS::
                                                                            BBC     #2, 23(FIB), 1$                 ; 1556
                                         11      01          AA  E9 00005                BLBC    1(BASE), 2$             ; 1557
                                         01      08          A1  B1 00009 1$:            CMPW    8(HEADER), #1           ; 1563
                                                             0E  12 0000D                BNEQ    3$                      ;
                                         01      0A          A1  B1 0000F                CMPW    10(HEADER), #1          ; 1564
                                                             08  12 00013                BNEQ    3$                      ;
                                                 0D          A1  95 00015                TSTB    13(HEADER)              ; 1565
                                                             03  12 00018                BNEQ    3$                      ;
                                                             24  BF 0001A 2$:             CHMU    #36                     ; 1566
                                                                 05 0001C                RSB                             ;
                                                 18          A0  D5 0001D 3$:            TSTL    24(FIB)                 ; 1568
                                                             03  13 00020                BEQL    4$                      ;
```

```
                                                14  BF 00022          CHMU    #20                                     ;
                                                    05 00024          RSB                                             ;
                                            18  A0  D4 00025 4$:      CLRL    24(FIB)                                 ; 1573
                                                    05 00028          RSB                                             ; 1575

; Routine Size:  41 bytes,    Routine Base:  $CODE$ + 036F

;  589          1576  1
;  590          1577  1 END
;  591          1578  0 ELUDOM




;                                       PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $CODE$                        920  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]LIB.L32;1             18619        49         0        1000          00:01.9




;                                       COMMAND QUALIFIERS

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

; Size:         920 code + 0 data bytes
; Run Time:        00:42.4
; Elapsed Time:    01:32.4
; Lines/CPU Min:    2230
; Lexemes/CPU-Min: 52730
; Memory Used:  353 pages
; Compilation Complete
```

SCHFCB
LIS

SNDSMB
LIS

SHFDIR
LIS

SNDERR
LIS

TRUNC
LIS

FAL

FAL
MAP

SELVOL
LIS

DAPDEF
MDL

SMALOC
LIS

SNDBAD
LIS

SWITVL
LIS

WITURN
LIS