```
          ADDRESS   LENGTH              BINARY CONTROL CARDS.

               0    170                  IDENT     TRAVERS
             170                         END
```

ENTRY POINTS.

```
          TRAVERS  -      0    PAGEIN   -     71   FADDR    -    160
          TRAVRET  -     37    PAGEOUT  -    110   SWREAD   -    133
```

EXTERNAL SYMBOLS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RLINK2 | AP8 | ERRPACK | GETRESP | RELCLAM | M.TVRES | GF.IOTF | DAB |
| CELLS2 | TEMP0 | STKBUF | TR.DRIV | RELEASE | M.HELP | GF.IOTL | DA.LEN |
| RLINK3 | TEMP1 | SETPCNT | TR.LEVL | FRW | M.SWAB | GF.DDSF | DA.LOG |
| CELLS3 | TEMP2 | DISKENT | BLK.SIZ | MAKEMAP | M.ABFCH | GF.DDSL | DA.ABNO |
| RLINK5 | TEMP3 | DISKERR | BLK.DTY | LOADBUF | M.ABFIL | GF.DATF | DA.FILS |
| CELLS5 | TEMP4 | DISKINT | BLK.FLG | AUDIT | M.ACREQ | GF.DATL | DA.FREE |
| COMMROF | TEMP5 | FRWENT | SW.SW | NOQLOCK | M.ACRES | GF.APTF | DA.LOCK |
| COMMROL | TEMP6 | FRWERR | SW.DDS | PROBE | M.USRCC | GF.APTL | DA.HASH |
| COMMRWF | TEMP7 | FRWINT | PG.PG | RETCLK | M.FRWCC | GF.HSHF | DA.SUSP |
| COMMRWL | TEMP8 | ENTER | PG.DDS | SYSERR | M.TRMCC | FHRHASH | DA.SRES |
| HOLDBLK | TEMP9 | CLKBUF | PG.DTY | FRETURN | M.CLOCC | DARHASH | DA.SOCC |
| LOCTAR | TEMP10 | DSYSTIM | PTR.PTR | RETURN | M.ACTCC | GF.HSHL | DA.DRES |
| LOCTARF | TEMP11 | DSWPTIM | PTR.DDS | RETPAR | M.TRYCC | GF.TRVF | DA.DOCC |
| LOCTARL | TEMPA | DUSRTIM | PTR.CM | ERRPARM | M.DFILT | FHB | DA.SCHG |
| LFT | TEMPB | MYSCRF | PTR.DTY | ERRFILE | M.DOBJS | FB.LEN | DA.DCHG |
| FLDLEN | TEMPC | MYCODF | PTR.NUM | ERRALOC | NOBJS | FB.NAME | DA.TIME |
| USERRWF | TEMPD | MYSUBP | CREATE | ERRMAP | M.BFILE | FB.WD3 | DAR |
| USERRWL | TEMPE | MYEVCH | CREBLK | CALBEAD | M.DDREQ | FB.SHAP | LFTFREE |
| DATMAP | TEMPF | REAUCAP | DELBLK | REGS | M.DDRSP | FB.FUND | LFHADDR |
| TERMRWL | TEMPG | WRITCAP | OPEN | D.ENTRY | M.RBUFS | FHR | DARADDR |
| TERMROF | TEMPH | SAVEREG | ATTACH | D.FNAME | M.WBUFS | FR.LEN | PAGESW |
| TERMRWF | TEMPV | RESTREG | DETACH | DBUG1 | M.SLOTS | FR.NAME | MAPBUF |
| CLOSRWF | TEMPW | MAINCL | CONVERT | DSKLCK | M.LOCKS | FR.WD1 | SIZES |
| CLOSRWL | TEMPX | FILCL | SETUP | DBUG2 | NLOCKS | FR.WD2 | SIZE |
| CLOSROF | TEMPY | SLEEP | DECODE | M.AUTH | M.FHRL | FR.WD3 | NUMRESP |
| READRWF | TEMPZ | MYRESP | CRELFH | M.MKCAP | M.DARL | FR.SUSP | CREATER |
| READRWL | MYIDENT | RESP | OPENDAR | REDSHP | M.HASHL | FR.LOCK | CREBLKR |
| READONF | MYDAR | GFILE | PRVOPEN | GDSKHDR | M.ADDS | FR.DAR | DELBLKR |
| READONL | MYUNIT | HFILE | MKPTR | FDSKHDR | M.ASUSP | FR.OPEN | OPENR |
| HENTRY | MYSWOCC | FILECAP | DSPTR | GDSKPTR | M.ADISK | FR.CAPX | ATTACHR |
| DENTRY | DDSIPL | CTEMP | CLOSE | FDSKPTR | M.SDISK | FR.DBSZ | DETACHR |
| ORGADDR | IOTIPL | UDSKSCR | ECLOSE | GDSKDAT | M.FDISK | FR.ONEL | ZROMAPR |
| ORGCLST | HASHIPL | BFILE | DARSPA | FDSKDAT | M.FCLEV | FR.FROZ | CHMAPR |
| ORGMAP | SUSPIPL | DDRSP | ZEROMAP | GETDSK | M.UNAME | FR.WRIT | CHMAPB1 |
| INTDAT | DATIPL | RBUFS | CHMAP | FREEDSK | M.USCTR | FR.SIZE | SETUPR |
| AP0 | APTIPL | RETRY | CLODAR | BUSYDSK | M.OPCL | FR.SHAP | CREATB1 |
| AP1 | RETPARM | SLOTS | HASH | L.MNCL | M.IOCTR | FR.FUND | CLOSER |
| AP2 | RETERR | HBR | DELHASH | M.GFILE | M.TWAIT | FR.FLAG | MOVBLKR |
| AP3 | PASSERR | HBW | EXCLAIM | M.HFILE | M.CLTIM | FR.ROOT | CREPTRR |

```
        AP4        USRPACK    PBR      SHCLAIM    M.FILCL    M.10SEC    FR.CLAM    DORESPR
        AP5        IOTBUF     PBW      LOCK       M.EMPTY    GF.LEN     FR.MEMB    ERRNUM
        AP6        PROCADR    DBR      UNLOCK     M.RETRY    GF.SUSF    FHRADDR    ERRCLAS
        AP7        ERRADDR    DBW      UNLOCKW    M.CLOSE    GF.SUSL    FILEADR    TABADDR
```

```
                                        IDENT      TRAVERS
                                        ENTRY      TRAVERS,TRAVRET,PAGEIN,PAGEOUT,FADDR,SWREAD
         0                     PARAMS   XTEXT
         0                     MACROS   XTEXT
                               *
                               *
                               * FILE TREE TRAVERSAL DRIVING ROUTINE. TRAVERSES THE POINTER-BLOCK
                               *  TREE OF A FILE, VISITING EACH BLOCK AFTER TRAVERSING ITS
                               *  DESCENDENT SUBTREES (POSTORDER TRAVERSAL). FOR EACH BLOCK, THE
                               *  TRAVERSER JUMPS THROUGH A 16-WAY DRIVE SWITCH TO ONE OF 16
                               *  ROUTINES PROVIDED BY THE CALLER.
                               *
                               *            ON ENTRY..FHR IN AND LOCKED
                               *                      B5 = DRIVE SWITCH ADDR
                               *
                               *            USES..A2/X2 THRU A7/X7,B1,B2,B4 THRU B7,TEMPG,TEMPH
                               *
                               *            CALLS DRIVEN ROUTINES WITH..
                               *                      B1 = LEVEL OF CURRENT POINTER.
                               *                          (-1 FOR ROOT PTR IN FHR,
                               *                             0 FOR PTR IN ROOT PTR BLOCK, ETC.)
                               *                      CURRENT POINTER IN PTR AREA!
                               *                          PTR.PTR = COPY OF POINTER
                               *                          PTR.DDS = DDS ADDRESS OF POINTER
                               *                          PTR.DTY = DIRTY FLAG (SET IF PTR.PTR IS CHANGED)
                               *
                               *            DRIVEN ROUTINES MAY USE ALL REGISTERS
                               *
                               *            DRIVEN ROUTINES RETURN TO LABEL TRAVRET
                               *
                               *
                               * START WITH ROOT POINTER IN FHR (LEVEL = -1)
                               *
         0                     TRAVERS  ROUTINE    2
                               *
             76650                      SX6        B5
    1    5160000000 X                   SA6        TR.DRIV                SAVE DRIVE SWITCH ADDR
             5140000000 X               SA4        FR.SHAP                FHR SHAPE WORD
    2    43712                          MX7        1
             11674                      BX6        X7*X4
             20612                      LX6        16                     POSITION S1
    3    5160000000 X                   SA6        BLK.SIZ
             43770                      MX7        60-4
    4    15647             TRAV1        BX6        -X7*X4
             0306000010 +              ZR         X6,TRAV2
             63460                      SB4        X6
    5    7160000001                     SX6        1
             22646                      LX6        B4,X6                  S(I) = 2 ** L(I)
    6    5066000001                     SA6        A6+1                   STORE NEXT SHAPE NUMBER
             21404                      AX4        4
    7    0200000004 +                   JP         TRAV1
   10    6110777776       TRAV2        SB1        -1
             7170000012 +               CALL       GETPTR
```

```
                               *
                               *  PROCESS POINTER
                               *
12  5140000000 X    TRAV10    SA4       PTR.PTR
          43604               MX6       4
              11646           BX6       X4*X6                  EXTRACT TYPE AND STATUS
13  20604                     LX6       4
       7276777765             SX7       X6-T.PTR-S.IN.FX
14  0307000016 +             ZR        X7,TRAV20             JUMP IF POINTER BLOCK THAT IS IN
          63465               SR4       X6+B5
                               *
              76610           SX6       B1                    SAVE LEVEL
15  5160000000 X              SA6       TR.LEVL
                               *
       0240000000            JP        B4                    DRIVE THROUGH SWITCH
                               *
                               *  PUSH NEXT LEVEL OF FILE TREE INTO STACK
                               *
16  7170000017 +    TRAV20    CALL      PAGEOUT               MOVE CURRENT PAGE OUT TO DDS
17  6111000001               SB1       B1+1                  INCR STACK LEVEL
       7170000021 +          CALL      SWFIND                FIND NEW PAGE SWITCH IN DDS
21  7170000022 +             CALL      SWREAD                READ NEW PAGE SWITCH FROM DDS
                               *
22  5150000000 X              SA5       SW.SW                 DDS ADDRESS OF 1ST PAGE
          10755               BX7       X5
23  5171000000 X              SA7       B1+PG.DDS
       7170000125 +          CALL      PAGEIN                MOVE NEW PAGE IN FROM DDS
                               *
25  13600                     BX6       X0-X0
       5161000000 X           SA6       B1+PTR.NUM            START WITH POINTER ZERO
26  5161000000 X              SA6       B1+BLK.DTY            MARK BLOCK CLEAN
       5161000000 X           SA6       B1+BLK.FLG            CLEAR FLAG WORD
27  7170000012 +             CALL      GETPTR,TRAV10         GET POINTER AND GO PROCESS IT
                               *
                               *  POP CURRENT LEVEL OUT OF STACK AND PROCESS THE POINTER TO IT
                               *
30  7170000031 +    TRAV40    CALL      PAGEOUT               MOVE PAGE OUT TO DDS
                               *
31  6111777776               SB1       B1-1                  DECR STACK PTR
                               *
       7170000033 +          CALL      SWREAD                READ PAGE SWITCH FROM DDS
33  7170000034 +             CALL      PAGEIN                MOVE IN NEW PAGE FROM DDS
34  7170000035 +             CALL      GETPTR                GET POINTER
                               *
35  76610                     SX6       B1                    SAVE LEVEL
       5160000000 X           SA6       TR.LEVL
                               *
36  0250000012               JP        B5+T.PTR+S.IN.FX      PROCESS PTR
```

```
                              *
                              * RETURN FROM TRAVERSER-DRIVEN ROUTINES
                              *
37  5140000000 X    TRAVRET   SA4       TR.LEVL              RESTORE STACK LEVEL
    5150000000 X              SA5       TR.DRIV              RESTORE DRIVE SWITCH ADDR
40  6314^                     SB1       X4
       6355^                  SB5       X5
                              *
       0610000043 ◇           PL        B1,TRAVR1            JUMP IF POINTER WAS NOT ROOT
41  5150000000 X              EXIT                           EXIT IF POINTER WAS ROOT
                              *
43  5140000000 X    TRAVR1    SA4       PTR.DTY              PICK UP DIRTY FLAG
       0304000047 ◇           ZR        X4,TRAVR2            JUMP IF CLEAN
44  5140000000 X              SA4       PTR.PTR
    5150000000 X              SA5       PTR.CM
45  1^644                     BX6       X4                   COPY POINTER
       5365^                  SA6       X5                      BACK TO PAGE
                              *
       7160000001             SX6       1
46  5161000000 X              SA6       B1+PG.DTY            MARK PAGE DIRTY
                              *
47  5121000000 X    TRAVR2    SA2       B1+PTR.NUM
       7262000001             SX6       X2+1                 INCR POINTER NUMBER
50  5462^                     SA6       A2
                              *
       5151000000 X           SA5       B1+BLK.SIZ           CHECK FOR END OF
          37556               IX5       X5-X6                   POINTER BLOCK
51  0305000030 ◇              ZR        X5,TRAV40
                              *
          1^366               BX3       X6
          43271               MX2       60-3
52  15132                     BX1       -X2*X3               DISP IN PAGE
                              *
       0311000057 ◇           NZ        X1,TRAVR3            JUMP IF NOT END OF PAGE
53  7170000054 ◇              CALL      PAGEOUT              MOVE PAGE OUT TO DDS
                              *
54  11423                     BX4       X2*X3                PAGE NUMBER
       214^3                  AX4       3                    POSITION PAGE NUMBER
    5254000000 X              SA5       SW.SW+X4             PICK UP PAGE ADDR
55  1^655                     BX6       X5
       5161000000 X           SA6       B1+PG.DDS            DDS ADDRESS OF PAGE
56  7170000057 ◇              CALL      PAGEIN               MOVE THE PAGE IN FROM DDS.
                              *
57  7170000012 ◇    TRAVR3    CALL      GETPTR,TRAV10        GET PTR AND GO PROCESS IT
```

```
                               *
                               * MOVE CURRENT PTR FROM STACK TO WORK AREA
                               *
 60                    GETPTR    ROUTINE   3
          0610000062 +           PL        B1,GETPTR1
 61  7160000000 X                SX6       FR.ROOT
          0200000066 +           JP        GETPTR2
                               *
 62  5151000000 X      GETPTR1   SA5       B1+PTR.NUM
            43671                MX6       60-3
             15556               BX5       -X6*X5              DISP IN PAGE
                               *
 63  5141000000 X                SA4       B1+PG.DDS           DDS ADDR OF PAGE
            36645                IX6       X4+X5               ADD DISP IN PAGE
 64  5160000000 X                SA6       PTR.DDS             STORE DDS ADDR OF POINTER
                               *
            13600                BX6       X0-X0
 65  5160000000 X                SA6       PTR.DTY             MARK PTR CLEAN
                               *
        7265000000 X             SX6       PG.PG+X5            ADDR OF PAGE + DISP
 66  5160000000 X      GETPTR2   SA6       PTR.CM              STORE CM ADDR OF POINTER
            53460                SA4       X6                  PICK UP COPY OF POINTER
             13644               BX6       X4
 67  5160000000 X                SA6       PTR.PTR             STORE IN WORK AREA
                               *
        5150000000 X             EXIT
                               *
                               *
                               * MOVE CURRENT POINTER PAGE FROM DDS TO CM
                               *
 71                    PAGEIN    ROUTINE   5
          0710000106 +           NG        B1,PGIN1
 72  13600                       BX6       X0-X0
        5161000000 X             SA6       B1+PG.DTY           MARK PAGE CLEAN
 73  5141000000 X                SA4       B1+PG.DDS           DDS ADDR OF PAGE
        7160000000 X             REDDS     X4,PG.PG,8          READ PAGE
106  5150000000 X      PGIN1     EXIT
                               *
                               *
                               * MOVE CURRENT PAGE FROM CM TO DDS IF DIRTY
                               *
110                    PAGEOUT   ROUTINE   5
          0710000125 +           NG        B1,PGOUT1
111  5141000000 X                SA4       B1+PG.DTY           TEST IF PAGE DIRTY
          0304000125 +           ZR        X4,PGOUT1           IF CLEAN, NOTHING TO DO
                               *
112  5141000000 X                SA4       B1+PG.DDS           DDS ADDR OF PAGE
        7160000000 X             WRDDS     X4,PG.PG,8          WRITE PAGE
125  5150000000 X      PGOUT1    EXIT
```

```
                                     *
                                     * FIND CURRENT PAGE SWITCH IN DDS
                                     *
127                                  SWFIND      ROUTINE    3
            5140000000 X                         SA4        PTR.PTR
130  43722                                       MX7        60-18-24
          15747                                  BX7        -X7*X4
             21730                               AX7        24
131  5171000000 X                                SA7        B1+SW.DDS         STORE PAGE SWITCH ADDR
            5150000000 X                          EXIT
                                     *
                                     * READ CURRENT PAGE SWITCH FROM DDS TO CM, SWITCH IS UNPACKED INTO
                                     * 16 WORDS. ONE PAGE-POINTER PER WORD
                                     *
133                                  SWREAD      ROUTINE    5
            0710000156 +                         NG         B1,SWREAD2
134  5141000000 X                                SA4        B1+SW.DDS         DDS ADDRESS OF PAGE SWITCH
            7160000000 X                          REDDS      X4,SW.SW.8
147  5140000007 X                                SA4        SW.SW+7
          43536                                  MX5        30                MASK EXTRACTS ONE PAGE POINTER
             11754                               BX7        X5*X4
150  20736                                       LX7        30
          5170000017 X                            SA7        SW.SW+15
             15745                               BX7        -X5*X4
151  5077777776                                  SA7        A7-1
152  5044777776                      SWREAD1     SA4        A4-1
          11754                                  BX7        X5*X4
             20736                               LX7        30
153  5077777776                                  SA7        A7-1
          15745                                  BX7        -X5*X4
154  5077777776                                  SA7        A7-1
          64270                                  SB2        A7
             65242                               SB2        A4-B2
155  0520000152 +                                NZ         B2,SWREAD1
156  5150000000 X                    SWREAD2     EXIT
```

```
                                    *
                                    *  COMPUTE FILE ADDR OF CURRENT DATA BLOCK
                                    *
      160                           FADDR       ROUTINE    3
                 13300                           BX3        X0-X0
      161  5140000000 X                          SA4        FR.SHAP
                 5150000000 X                    SA5        PTR.NUM         INDEX IN ROOT PTR BLK
      162  43777                                 MX7        60-4
                 0200000165 +                    JP         FADDR2
                                    *
      163  36335                     FADDR1       IX3        X3+X5           INCR FILE ADDR
                 63760                            SB7        X6
                 22373                            LX3        B7+X3           MULT BY S(I)
      164  5055000001                            SA5        A5+1            INDEX IN NEXT PTR BLK
                 21404                            AX4        4
                                    *
      165  15647                     FADDR2       BX6        -X7*X4          NEXT L(I)
                 0316000163 +                    NZ         X6,FADDR1       IF NON-ZERO, LOOP BACK
      166  5150000000 X                          EXIT                       IF ZERO, ALL DONE
                                    *
                                    *
                                    *
      167                           SYMBOLS     XTEXT
                                    *
      170                                       END


                    37463       STORAGE USED              2203 STATEMENTS        437 SYMBOLS       000019 INVENTED SYMBOLS
                                6600 ASSEMBLY             11.488 SECONDS          162 REFERENCES
```

```
APTIPL         0      EXTERNAL*
AP0            0      EXTERNAL*
AP1            0      EXTERNAL*
AP2            0      EXTERNAL*
AP3            0      EXTERNAL*
AP4            0      EXTERNAL*
AP5            0      EXTERNAL*
AP6            0      EXTERNAL*
AP7            0      EXTERNAL*
AP8            0      EXTERNAL*
ATTACH         0      EXTERNAL*
ATTACHR        0      EXTERNAL*
AUDIT          0      EXTERNAL*
BFILE          0      EXTERNAL*
BLK.DTY        0      EXTERNAL*        4/31 S
BLK.FLG        0      EXTERNAL*        4/32 S
BLK.SIZ        0      EXTERNAL*        3/42 S      5/26
BUSYDSK        0      EXTERNAL*
CALBEAD        0      EXTERNAL*
CELLS2         0      EXTERNAL*
CELLS3         0      EXTERNAL*
CELLS5         0      EXTERNAL*
CELLX          0                      3/35 D      6/05 D      6/32 D      6/43 D      7/05 D      7/16 D      8/05 D
CHMAP          0      EXTERNAL*
CHMAPB1        0      EXTERNAL*
CHMAPR         0      EXTERNAL*
CLKBUF         0      EXTERNAL*
CLODAR         0      EXTERNAL*
CLOSE          0      EXTERNAL*
CLOSER         0      EXTERNAL*
CLOSROF        0      EXTERNAL*
CLOSRWF        0      EXTERNAL*
CLOSRWL        0      EXTERNAL*
COMMROF        0      EXTERNAL*
COMMROL        0      EXTERNAL*
COMMRWF        0      EXTERNAL*
COMMRWL        0      EXTERNAL*
CONVERT        0      EXTERNAL*
CREATB1        0      EXTERNAL*
CREATE         0      EXTERNAL*
CREATER        0      EXTERNAL*
CREBLK         0      EXTERNAL*
CREBLKR        0      EXTERNAL*
CRELFH         0      EXTERNAL*
CREPTRR        0      EXTERNAL*
CTEMP          0      EXTERNAL*
DAB            0      EXTERNAL*
DAP            0      EXTERNAL*
DARADDR        0      EXTERNAL*
DARHASH        0      EXTERNAL*
DARSPA         0      EXTERNAL*
DATIPL         0      EXTERNAL*
DATMAP         0      EXTERNAL*
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DA.ABNO | 0 | EXTERNAL* | | | | | | | | |
| DA.DCHG | 0 | EXTERNAL* | | | | | | | | |
| DA.DOCC | 0 | EXTERNAL* | | | | | | | | |
| DA.DRES | 0 | EXTERNAL* | | | | | | | | |
| DA.FILS | 0 | EXTERNAL* | | | | | | | | |
| DA.FREE | 0 | EXTERNAL* | | | | | | | | |
| DA.HASH | 0 | EXTERNAL* | | | | | | | | |
| DA.LEN | 0 | EXTERNAL* | | | | | | | | |
| DA.LOCK | 0 | EXTERNAL* | | | | | | | | |
| DA.LOG | 0 | EXTERNAL* | | | | | | | | |
| DA.SCHG | 0 | EXTERNAL* | | | | | | | | |
| DA.SOCC | 0 | EXTERNAL* | | | | | | | | |
| DA.SRES | 0 | EXTERNAL* | | | | | | | | |
| DA.SUSP | 0 | EXTERNAL* | | | | | | | | |
| DA.TIME | 0 | EXTERNAL* | | | | | | | | |
| DBP | 0 | EXTERNAL* | | | | | | | | |
| DBUG1 | 0 | EXTERNAL* | | | | | | | | |
| DBUG2 | 0 | EXTERNAL* | | | | | | | | |
| DBW | 0 | EXTERNAL* | | | | | | | | |
| DDRSP | 0 | EXTERNAL* | | | | | | | | |
| DDSIPL | 0 | EXTERNAL* | 6/37 S | 6/37 S | 6/37 | 6/49 S | 6/49 S | 7/19 S | 7/19 S | 7/19 |
| | | | 6/37 S | 6/37 S | 6/49 S | 6/49 S | 6/49 | 7/19 S | 7/19 S | |
| DECODE | 0 | EXTERNAL* | | | | | | | | |
| DELBLK | 0 | EXTERNAL* | | | | | | | | |
| DELBLKP | 0 | EXTERNAL* | | | | | | | | |
| DELHASH | 0 | EXTERNAL* | | | | | | | | |
| DENTRY | 0 | EXTERNAL* | | | | | | | | |
| DETACH | 0 | EXTERNAL* | | | | | | | | |
| DETACHR | 0 | EXTERNAL* | | | | | | | | |
| DISKENT | 0 | EXTERNAL* | | | | | | | | |
| DISKERR | 0 | EXTERNAL* | | | | | | | | |
| DISKINT | 0 | EXTERNAL* | | | | | | | | |
| DORESPR | 0 | EXTERNAL* | | | | | | | | |
| DSKLCK | 0 | EXTERNAL* | | | | | | | | |
| DSPTR | 0 | EXTERNAL* | | | | | | | | |
| DSWPTIM | 0 | EXTERNAL* | | | | | | | | |
| DSYSTIM | 0 | EXTERNAL* | | | | | | | | |
| DUSRTIM | 0 | EXTERNAL* | | | | | | | | |
| D.ENTRY | 0 | EXTERNAL* | | | | | | | | |
| D.FNAME | 0 | EXTERNAL* | | | | | | | | |
| ECLOSE | 0 | EXTERNAL* | | | | | | | | |
| ENTER | 0 | EXTERNAL* | | | | | | | | |
| ERRADDR | 0 | EXTERNAL* | | | | | | | | |
| ERRALOC | 0 | EXTERNAL* | | | | | | | | |
| ERRCLAS | 0 | EXTERNAL* | | | | | | | | |
| ERRFILE | 0 | EXTERNAL* | | | | | | | | |
| ERRMAP | 0 | EXTERNAL* | | | | | | | | |
| ERRNUM | 0 | EXTERNAL* | | | | | | | | |
| ERRPACK | 0 | EXTERNAL* | | | | | | | | |
| ERRPARM | 0 | EXTERNAL* | | | | | | | | |
| EXCLAIM | 0 | EXTERNAL* | | | | | | | | |
| FADDR | 160 | PROGRAM* | 3/02 E | 8/04 L | | | | | | |
| FADDR1 | 163 | PROGRAM* | 8/11 L | 8/18 | | | | | | |

| Symbol | Value | Type | | | | | |
|--------|-------|------|---|---|---|---|---|
| FADDR2 | 165 | PROGRAM# | 8/09 | 8/17 L | | | |
| FB.FUND | 0 | EXTERNAL# | | | | | |
| FB.LEN | 0 | EXTERNAL# | | | | | |
| FB.NAME | 0 | EXTERNAL# | | | | | |
| FB.SHAP | 0 | EXTERNAL# | | | | | |
| FB.WD3 | 0 | EXTERNAL# | | | | | |
| FDSKDAT | 0 | EXTERNAL# | | | | | |
| FDSKHDR | 0 | EXTERNAL# | | | | | |
| FDSKPTR | 0 | EXTERNAL# | | | | | |
| FHR | 0 | EXTERNAL# | | | | | |
| FHR | 0 | EXTERNAL# | | | | | |
| FHRADDR | 0 | EXTERNAL# | | | | | |
| FHRHASH | 0 | EXTERNAL# | | | | | |
| FILCL | 0 | EXTERNAL# | | | | | |
| FILEADR | 0 | EXTERNAL# | | | | | |
| FILECAP | 0 | EXTERNAL# | | | | | |
| FLDLEN | 0 | EXTERNAL# | | | | | |
| FREEDSK | 0 | EXTERNAL# | | | | | |
| FRETURN | 0 | EXTERNAL# | | | | | |
| FRW | 0 | EXTERNAL# | | | | | |
| FRWENT | 0 | EXTERNAL# | | | | | |
| FRWERR | 0 | EXTERNAL# | | | | | |
| FRWINT | 0 | EXTERNAL# | | | | | |
| FR.CAPK | 0 | EXTERNAL# | | | | | |
| FR.CLAM | 0 | EXTERNAL# | | | | | |
| FR.DAR | 0 | EXTERNAL# | | | | | |
| FR.DBSZ | 0 | EXTERNAL# | | | | | |
| FR.FLAG | 0 | EXTERNAL# | | | | | |
| FR.FROZ | 0 | EXTERNAL# | | | | | |
| FR.FUND | 0 | EXTERNAL# | | | | | |
| FR.LEN | 0 | EXTERNAL# | | | | | |
| FR.LOCK | 0 | EXTERNAL# | | | | | |
| FR.MFMR | 0 | EXTERNAL# | | | | | |
| FR.NAME | 0 | EXTERNAL# | | | | | |
| FR.ONEL | 0 | EXTERNAL# | | | | | |
| FR.OPEN | 0 | EXTERNAL# | | | | | |
| FR.ROOT | 0 | EXTERNAL# | 6/06 | | | | |
| FR.SHAP | 0 | EXTERNAL# | 3/38 | 8/06 | | | |
| FR.SIZE | 0 | EXTERNAL# | | | | | |
| FR.SUSP | 0 | EXTERNAL# | | | | | |
| FR.WD1 | 0 | EXTERNAL# | | | | | |
| FR.WD2 | 0 | EXTERNAL# | | | | | |
| FR.WD3 | 0 | EXTERNAL# | | | | | |
| FR.WRIT | 0 | EXTERNAL# | | | | | |
| GDSKDAT | 0 | EXTERNAL# | | | | | |
| GDSKHDR | 0 | EXTERNAL# | | | | | |
| GDSKPTR | 0 | EXTERNAL# | | | | | |
| GETDSK | 0 | EXTERNAL# | | | | | |
| GETPTR | 60 | PROGRAM# | 4/01 | 4/34 | 4/44 | 5/45 | 6/04 L |
| GETPTR1 | 62 | PROGRAM# | 6/05 | 6/09 L | | | |
| GETPTR2 | 66 | PROGRAM# | 6/07 | 6/21 L | | | |
| GETRESP | 0 | EXTERNAL# | | | | | |
| GFILE | 0 | EXTERNAL# | | | | | |

```
GF.APTF        0      EXTERNAL*
GF.APTL        0      EXTERNAL*
GF.DATF        0      EXTERNAL*
GF.DATL        0      EXTERNAL*
GF.DDSF        0      EXTERNAL*        6/37        6/49        7/19
GF.DDSL        0      EXTERNAL*        6/37        6/49        7/19
GF.HSHF        0      EXTERNAL*
GF.HSHL        0      EXTERNAL*
GF.IOTF        0      EXTERNAL*
GF.IOTL        0      EXTERNAL*
GF.LEN         0      EXTERNAL*
GF.SUSF        0      EXTERNAL*
GF.SUSL        0      EXTERNAL*
GF.TRVF        0      EXTERNAL*
HASH           0      EXTERNAL*
HASHIPL        0      EXTERNAL*
HRR            0      EXTERNAL*
HRW            0      EXTERNAL*
HENTRY         0      EXTERNAL*
HFILE          0      EXTERNAL*
HOLDBLK        0      EXTERNAL*
INTDAT         0      EXTERNAL*
IOTBUF         0      EXTERNAL*
IOTIPL         0      EXTERNAL*
LFHADDR        0      EXTERNAL*
LFT            0      EXTERNAL*
LFTFREE        0      EXTERNAL*
LOADBUF        0      EXTERNAL*
LOCK           0      EXTERNAL*
LOCTAB         0      EXTERNAL*
LOCTABF        0      EXTERNAL*
LOCTABL        0      EXTERNAL*
L.MNCL         0      EXTERNAL*
MAINCL         0      EXTERNAL*
MAKEMAP        0      EXTERNAL*
MAPBUF         0      EXTERNAL*
MKPTR          0      EXTERNAL*
MOVBLKR        0      EXTERNAL*
MYCODF         0      EXTERNAL*
MYDAR          0      EXTERNAL*
MYEVCR         0      EXTERNAL*
MYIDENT        0      EXTERNAL*
MYRESP         0      EXTERNAL*
MYSCRF         0      EXTERNAL*
MYSURP         0      EXTERNAL*
MYSWOCC        0      EXTERNAL*
MYUNIT         0      EXTERNAL*
M.ABFCH        0      EXTERNAL*
M.ABFIL        0      EXTERNAL*
M.ACREQ        0      EXTERNAL*
M.ACRES        0      EXTERNAL*
M.ACTCC        0      EXTERNAL*
M.ADDS         0      EXTERNAL*
```

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| M.ADISK | 0 | EXTERNAL* | | | | | | |
| M.ASUSP | 0 | EXTERNAL* | | | | | | |
| M.AUTH | 0 | EXTERNAL* | | | | | | |
| M.BFILE | 0 | EXTERNAL* | | | | | | |
| M.CLOCC | 0 | EXTERNAL* | | | | | | |
| M.CLOSE | 0 | EXTERNAL* | | | | | | |
| M.CLTIM | 0 | EXTERNAL* | | | | | | |
| M.DARL | 0 | EXTERNAL* | | | | | | |
| M.DDREQ | 0 | EXTERNAL* | | | | | | |
| M.DDRSP | 0 | EXTERNAL* | | | | | | |
| M.DFILT | 0 | EXTERNAL* | | | | | | |
| M.DORJS | 0 | EXTERNAL* | | | | | | |
| M.EMPTY | 0 | EXTERNAL* | | | | | | |
| M.FCLEV | 0 | EXTERNAL* | | | | | | |
| M.FDISK | 0 | EXTERNAL* | | | | | | |
| M.FHRL | 0 | EXTERNAL* | | | | | | |
| M.FILCL | 0 | EXTERNAL* | | | | | | |
| M.FRWCC | 0 | EXTERNAL* | | | | | | |
| M.GFILE | 0 | EXTERNAL* | | | | | | |
| M.HASHL | 0 | EXTERNAL* | | | | | | |
| M.HELP | 0 | EXTERNAL* | | | | | | |
| M.HFILE | 0 | EXTERNAL* | | | | | | |
| M.IOCTR | 0 | EXTERNAL* | | | | | | |
| M.LOCKS | 0 | EXTERNAL* | | | | | | |
| M.MKCAP | 0 | EXTERNAL* | | | | | | |
| M.OPCL | 0 | EXTERNAL* | | | | | | |
| M.RBUFS | 0 | EXTERNAL* | | | | | | |
| M.RETRY | 0 | EXTERNAL* | | | | | | |
| M.SDISK | 0 | EXTERNAL* | | | | | | |
| M.SLOTS | 0 | EXTERNAL* | | | | | | |
| M.SWAB | 0 | EXTERNAL* | | | | | | |
| M.TRMCC | 0 | EXTERNAL* | | | | | | |
| M.TRYCC | 0 | EXTERNAL* | | | | | | |
| M.TVRES | 0 | EXTERNAL* | | | | | | |
| M.TWAIT | 0 | EXTERNAL* | | | | | | |
| M.UNAME | 0 | EXTERNAL* | | | | | | |
| M.USCTR | 0 | EXTERNAL* | | | | | | |
| M.USRCC | 0 | EXTERNAL* | | | | | | |
| M.WBUFS | 0 | EXTERNAL* | | | | | | |
| M.1OSEC | 0 | EXTERNAL* | | | | | | |
| NLOCKS | 0 | EXTERNAL* | | | | | | |
| NORJS | 0 | EXTERNAL* | | | | | | |
| NOQLOCK | 0 | EXTERNAL* | | | | | | |
| NUMRESP | 0 | EXTERNAL* | | | | | | |
| OPEN | 0 | EXTERNAL* | | | | | | |
| OPENDAR | 0 | EXTERNAL* | | | | | | |
| OPENR | 0 | EXTERNAL* | | | | | | |
| ORGADDR | 0 | EXTERNAL* | | | | | | |
| ORGCLST | 0 | EXTERNAL* | | | | | | |
| ORGMAP | 0 | EXTERNAL* | | | | | | |
| PAGEIN | 71 | PROGRAM* | 3/02 E | 4/28 | 4/43 | 5/43 | 6/31 L | |
| PAGEOUT | 110 | PROGRAM* | 3/02 E | 4/20 | 4/38 | 5/36 | 6/42 L | |
| PAGESW | 0 | EXTERNAL* | | | | | | |

| PASSERR | 0 | EXTERNAL* | | | | | | |
|---|---|---|---|---|---|---|---|---|
| PBR | 0 | EXTERNAL* | | | | | | |
| PBW | 0 | EXTERNAL* | | | | | | |
| PGIN1 | 106 | PROGRAM* | 6/32 | 6/37 L | | | | |
| PGOUT1 | 125 | PROGRAM* | 6/43 | 6/45 | 6/49 L | | | |
| PG.DDS | 0 | EXTERNAL* | 4/26 S | 5/41 S | 6/13 | 6/35 | 6/47 | |
| PG.DTY | 0 | EXTERNAL* | 5/20 S | 6/34 S | 6/44 | | | |
| PG.PG | 0 | EXTERNAL* | 6/20 | 6/37 | 6/49 | | | |
| PRORE | 0 | EXTERNAL* | | | | | | |
| PROCADR | 0 | EXTERNAL* | | | | | | |
| PRVOPEN | 0 | EXTERNAL* | | | | | | |
| PTR.CM | 0 | EXTERNAL* | 5/15 | 6/21 S | | | | |
| PTR.DDS | 0 | EXTERNAL* | 6/15 S | | | | | |
| PTR.DTY | 0 | EXTERNAL* | 5/12 | 6/18 S | | | | |
| PTR.NUM | 0 | EXTERNAL* | 4/30 S | 5/22 | 6/09 | 8/07 | | |
| PTR.PTR | 0 | EXTERNAL* | 4/04 | 5/14 | 6/24 S | 7/05 | | |
| RBUFS | 0 | EXTERNAL* | | | | | | |
| READCAP | 0 | EXTERNAL* | 6/36 | 7/18 | | | | |
| READONE | 0 | EXTERNAL* | | | | | | |
| READONL | 0 | EXTERNAL* | | | | | | |
| READRWE | 0 | EXTERNAL* | | | | | | |
| READRWL | 0 | EXTERNAL* | | | | | | |
| REDSHP | 0 | EXTERNAL* | | | | | | |
| REGS | 0 | EXTERNAL* | | | | | | |
| RELCLAM | 0 | EXTERNAL* | | | | | | |
| RELEASE | 0 | EXTERNAL* | | | | | | |
| RESP | 0 | EXTERNAL* | | | | | | |
| RESTREG | 0 | EXTERNAL* | | | | | | |
| RETCLK | 0 | EXTERNAL* | | | | | | |
| RETERR | 0 | EXTERNAL* | | | | | | |
| RETPAR | 0 | EXTERNAL* | | | | | | |
| RETPARM | 0 | EXTERNAL* | | | | | | |
| RETRY | 0 | EXTERNAL* | | | | | | |
| RETURN | 0 | EXTERNAL* | | | | | | |
| RLINK2 | 0 | EXTERNAL* | 3/39 S | 5/10 | | | | |
| RLINK3 | 0 | EXTERNAL* | 6/05 S | 6/26 | 7/05 S | 7/10 | 8/05 S | 8/19 |
| RLINK5 | 0 | EXTERNAL* | 6/32 S | 6/37 | 6/43 S | 6/49 | 7/18 S | 7/35 |
| SAVEREG | 0 | EXTERNAL* | | | | | | |
| SETPCNT | 0 | EXTERNAL* | | | | | | |
| SETUP | 0 | EXTERNAL* | | | | | | |
| SETUPR | 0 | EXTERNAL* | | | | | | |
| SHCLAIM | 0 | EXTERNAL* | | | | | | |
| SIZE | 0 | EXTERNAL* | | | | | | |
| SIZES | 0 | EXTERNAL* | | | | | | |
| SLEEP | 0 | EXTERNAL* | | | | | | |
| SLOTS | 0 | EXTERNAL* | | | | | | |
| STKBUF | 0 | EXTERNAL* | | | | | | |
| SUSPIPL | 0 | EXTERNAL* | | | | | | |
| SWFIND | 127 | PROGRAM* | 4/22 | 7/04 L | | | | |
| SWREAD | 133 | PROGRAM* | 3/02 E | 4/23 | 4/42 | 7/15 L | | |
| SWREAD1 | 152 | PROGRAM* | 7/26 L | 7/34 | | | | |
| SWREAD2 | 156 | PROGRAM* | 7/16 | 7/35 L | | | | |
| SW.DDS | 0 | EXTERNAL* | 7/09 S | 7/17 | | | | |

| Symbol | Value | Type | | | | | |
|---|---|---|---|---|---|---|---|
| SW.SW | 0 | EXTERNAL# | 4/24 | 5/39 | 7/19 | 7/19 | 7/23 S |
| SYSERR | 0 | EXTERNAL# | 6/37 | 6/37 | 6/49 | 7/19 | 7/19 |
| | | | 6/37 | 6/49 | 6/49 | 7/19 | |
| S.IN.FX | 2 | | 4/08 | 4/48 | | | |
| TABADDR | 0 | EXTERNAL# | | | | | |
| TEMPA | 0 | EXTERNAL# | | | | | |
| TEMPB | 0 | EXTERNAL# | | | | | |
| TEMPC | 0 | EXTERNAL# | | | | | |
| TEMPD | 0 | EXTERNAL# | | | | | |
| TEMPE | 0 | EXTERNAL# | | | | | |
| TEMPF | 0 | EXTERNAL# | | | | | |
| TEMPG | 0 | EXTERNAL# | | | | | |
| TEMPH | 0 | EXTERNAL# | | | | | |
| TEMPV | 0 | EXTERNAL# | | | | | |
| TEMPW | 0 | EXTERNAL# | | | | | |
| TEMPX | 0 | EXTERNAL# | | | | | |
| TEMPY | 0 | EXTERNAL# | | | | | |
| TEMPZ | 0 | EXTERNAL# | | | | | |
| TEMP0 | 0 | EXTERNAL# | | | | | |
| TEMP1 | 0 | EXTERNAL# | | | | | |
| TEMP10 | 0 | EXTERNAL# | | | | | |
| TEMP11 | 0 | EXTERNAL# | | | | | |
| TEMP2 | 0 | EXTERNAL# | | | | | |
| TEMP3 | 0 | EXTERNAL# | | | | | |
| TEMP4 | 0 | EXTERNAL# | | | | | |
| TEMP5 | 0 | EXTERNAL# | | | | | |
| TEMP6 | 0 | EXTERNAL# | | | | | |
| TEMP7 | 0 | EXTERNAL# | | | | | |
| TEMP8 | 0 | EXTERNAL# | | | | | |
| TEMP9 | 0 | EXTERNAL# | | | | | |
| TERMROF | 0 | EXTERNAL# | | | | | |
| TERMRWF | 0 | EXTERNAL# | | | | | |
| TERMRWL | 0 | EXTERNAL# | | | | | |
| TRAVERS | 0 | PROGRAM# | 3/02 E | 3/34 L | | | |
| TRAVRET | 37 | PROGRAM# | 3/02 E | 5/04 L | | | |
| TRAVR1 | 43 | PROGRAM# | 5/09 | 5/12 L | | | |
| TRAVR2 | 47 | PROGRAM# | 5/13 | 5/22 L | | | |
| TRAVR3 | 57 | PROGRAM# | 5/34 | 5/44 L | | | |
| TRAV1 | 4 | PROGRAM# | 3/44 L | 3/51 | | | |
| TRAV10 | 12 | PROGRAM# | 4/04 L | 4/33 | 5/44 | | |
| TRAV2 | 10 | PROGRAM# | 3/45 | 3/52 L | | | |
| TRAV20 | 16 | PROGRAM# | 4/09 | 4/19 L | | | |
| TRAV40 | 30 | PROGRAM# | 4/37 L | 5/28 | | | |
| TR.DRIV | 0 | EXTERNAL# | 3/37 S | 5/05 | | | |
| TR.LEVL | 0 | EXTERNAL# | 4/13 S | 4/46 S | 5/04 | | |
| T.PTR | 10 | | 4/08 | 4/48 | | | |
| UDSKSCR | 0 | EXTERNAL# | | | | | |
| UNLOCK | 0 | EXTERNAL# | | | | | |
| UNLOCKW | 0 | EXTERNAL# | | | | | |
| USERRWF | 0 | EXTERNAL# | | | | | |
| USERRWL | 0 | EXTERNAL# | | | | | |
| USRPACK | 0 | EXTERNAL# | | | | | |
| WRITCAP | 0 | EXTERNAL# | 6/48 | | | | |

ZEROMAP            ∩       EXTERNAL*
ZROMAPR            ∩       EXTERNAL*

```
16.10.27. 02/15/71 TSS SCOPE 3.0
16.10.29.CPU = 000 SEC : CM =  050000
16.10.37.GET,XTEXT,DISKSYS
16.10.41.FILE,XTEXT
16.10.41.RFL,50000
16.10.41.TEXT.OUTPUT
16.10.41.GET,SYSSUBP,MACROS,,RO
16.10.41.GET,MACROS,DISKSYS,,RO
16.10.41.GET,SYMBOLS,DISKSYS,,RO
16.10.42.GET,PARAMS,DISKSYS,,RO
16.10.42.GET,DSKOPS,OPERS,,RO
16.10.42.GET,STACKS,DISKSYS,,RO
16.10.42.GET,ORBITS,DISKSYS,,RO
16.10.42.GET,TYPES,DISKSYS,,RO
16.10.42.GET,ERRORS,DISKSYS,,RO
16.10.42.GET,DSKOPR,DISKSYS,,RO
16.10.43.GET,ACTNUMS,DISKSYS,,RO
16.10.43.GET,SYSCALL,MACROS,,RO
16.10.54.GET,TRAVERS,DISKSYS
16.11.00.NOMPASS,I=TRAVERS,S=0
16.11.00.ASSEMBLING TRAVERS
16.11.20.ASSEMBLING TRAVERS
16.11.27. ASSEMBLY COMPLETE.
16.11.29.END
16.11.31.FIN
16.11.31.CPU TIME:     013.251 SECONDS
16.11.31.SYS TIME:     004.665 SECONDS
16.11.31.SYSTEXT :         763 LINES
```

END OF FILE

```
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
TRAVERS.DISKSYS
```