STORAGE ALLOCATION.

| ADDRESS | LENGTH | BINARY CONTROL CARDS. | |
|---|---|---|---|
| 0 | 702 | IDENT | COMMIO |
| 702 | | END | |

ENTRY POINTS.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ZAP | - | 0 | DBR | - | 227 | GETRESP | - | 600 | KLUDGE | - | 641 |
| PBR | - | 104 | DBW | - | 342 | BLDREQ | - | 621 | | | |

EXTERNAL SYMBOLS.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| IPLIST | M.TWAIT | GETDSK | GF.DDSF | UNLOCK | M.SLOTS | TEMPF | EC:GEVF |
| OPERCL | D.ENTRY | GDSKPTR | GF.DDSL | MAINCL | M.WBUFS | TEMPG | EC:SEV |
| DDSIPL | SYSERR | GDSKDAT | GF.IOTF | MYIDENT | TEMPA | EC:DBLK | EC:WRIT |
| IOTIPL | ERRPACK | FREEDSK | GF.IOTL | MYRESP | TEMPB | EC:TBLK | EC:READ |
| IOTBUF | FHRADDR | FR.DBSZ | LOADBUF | M.BFILE | TEMPC | EC:MBLK | EC:GEVH |
| DSKLCK | FILECAP | FR.MEMB | LOCK | M.HFILE | TEMPD | EC:RSTR | |
| M.IOCTR | WRITCAP | FR.NAME | MKPTR | M.DDREQ | TEMPE | EC:SAVE | |

```
                        IDENT   COMMIO
0                       PARAMS  XTEXT
0                       MACROS  XTEXT
0                       SYSCALL XTEXT
                        *
                        *
                        EXT     IPLIST,OPERCL
                        *
                        EXT     DDSIPL,IOTIPL,IOTBUF
                        EXT     DSKLCK,M,IOCTR,M,TWAIT
                        EXT     D,ENTRY,SYSERR
                        EXT     ERRPACK,FHRADDR,FILECAP,WRITCAP
                        EXT     GETDSK,GDSKPTR,GDSKDAT,FREEDSK
                        EXT     FR,DBSZ,FR,MEMB,FR,NAME
                        EXT     GF,DDSF,GF,DDSL,GF,IOTF,GF,IOTL
                        EXT     LOADBUF,LOCK,MKPTR,UNLOCK
                        EXT     MAINCL,MYIDENT,MYRESP
                        EXT     M,BFILE,M,HFILE,M,DDREQ,M,SLOTS,M,WBUFS
                        EXT     TEMPA,TEMPB,TEMPC,TEMPD,TEMPE,TEMPF,TEMPG
                        *
                        *
                        * ENTRY POINTS TO I/O PACKAGE
                        *
                        ENTRY   ZAP,PBR,DBR,DBW,GETRESP
                        *
                        * I/O PACKAGE INTERNAL ENTRY POINTS
                        *
                        ENTRY   BLDREQ,KLUDGE
                        *
                        MACSET  OPERCL,IPLIST,ECS
```

ext fetchptr

```
*
* MACRO FOR USE IN TEMPORARY KLUDGE TO COEXIST WITH DISK,S
*
LOCKOUT   MACRO
          LOCAL     RETURN
          SB6       RETURN
          JP        KLUDGE
RETURN    BSS       0
          ENDM
*
*
GETSLOT   MACRO     UNIT
          LOCAL     GOTSLOT,NONE,RET1,RET2
          GETEVF    (MAINCL,UNIT+M.SLOTS),NONE
          JP        GOTSLOT
NONE      SAVE      ERRPACK
          SB6       RET1
          JP        UNLOCK
RET1      GETEVH    (MAINCL,UNIT+M.SLOTS)
          SA7       ERRPACK+17B
          SA4       FHRADDR
          SB6       RET2
          JP        LOCK
RET2      RESTORE   ERRPACK
GOTSLOT   BSS       0
          ENDM
```

```
                                *
                                * ZAP..WIPE OUT FILE HEADER BLOCK ON DISK (WAITS FOR COMPLETION)
                                *
                                *       ON ENTRY..FHR IN AND LOCKED
                                *                 B7 = RETURN LINK
                                *
                                *       ON EXIT...X6 = 0 IF OK
                                *                    -1 IF I/O ERROR
                                *
0  7170000007                   ZAP     SX7     B.ZAP
             5170000000 X               SA7     IOTBUF          STORE IOT ENTRY WORD 1
1  13700                              BX7     X0-X0
        5170000001 X                    SA7     IOTBUF+1        STORE IOT ENTRY WORD 2
                                *
                                * SET UP FOR I/O
                                *
2  5130000000 X                         SA3     FR.NAME
             43644                      MX6     60-24
                  15236                 BX2     -X6*X3          DISK ADDRESS
3  43647                              MX6     60-21
        15636                           BX6     -X6*X3          DISK ADDR WITHOUT CHECKSUM
             21621                      AX6     17
                  63260                 SB2     X6              UNIT NUMBER
4  20602                              LX6     2
        63360                           SB3     X6              UNIT * 4
             43642                      MX6     60-24-2
                  15636                 BX6     -X6*X3
5  21630                              AX6     24              HDR BLK SIZE CODE
        63363                           SB3     B3+X6           UNIT * 4 + HDR BLK SIZE CODE
                                *
             6160000007 +               LOCKOUT
7  7160000000 X                         GETEVH  (MAINCL,B2+M.SLOTS)
15 10477                              BX4     X7              SLOT NUMBER
                                *
        7160000000 X                    GETEVH  (MAINCL,B3+M.WBUFS)
24 10377                              BX3     X7              BUFFER NUMBER
                                *
        7160000000 X                    READ    (MAINCL,B2+M.BFILE),X3,TEMPA,1,FRET
37 5110000000 X                       SA1     TEMPA           BUFFER POINTER
             13600                      BX6     X0-X0           ZERO 1ST WORD OF HEADER
40 5160000000 X                       SA6     TEMPB
             7160000000 X               WRITE   *,X1,TEMPB,1,FRET
                                *
                                * WRITE ENTRY INTO IOT
                                *
50 76720                              SX7     B2              COMPUTE
        20711                           LX7     9                 ADDR OF
             12774                      BX7     X7+X4                IOT ENTRY
                  20701                 LX7     1
51 7160000000 X                       WRIOT   X7,IOTBUF
                                *
                                * BUILD DISK DRIVER REQUEST
                                *
```

ZAP FILE HEADER BLOCK ON DISK

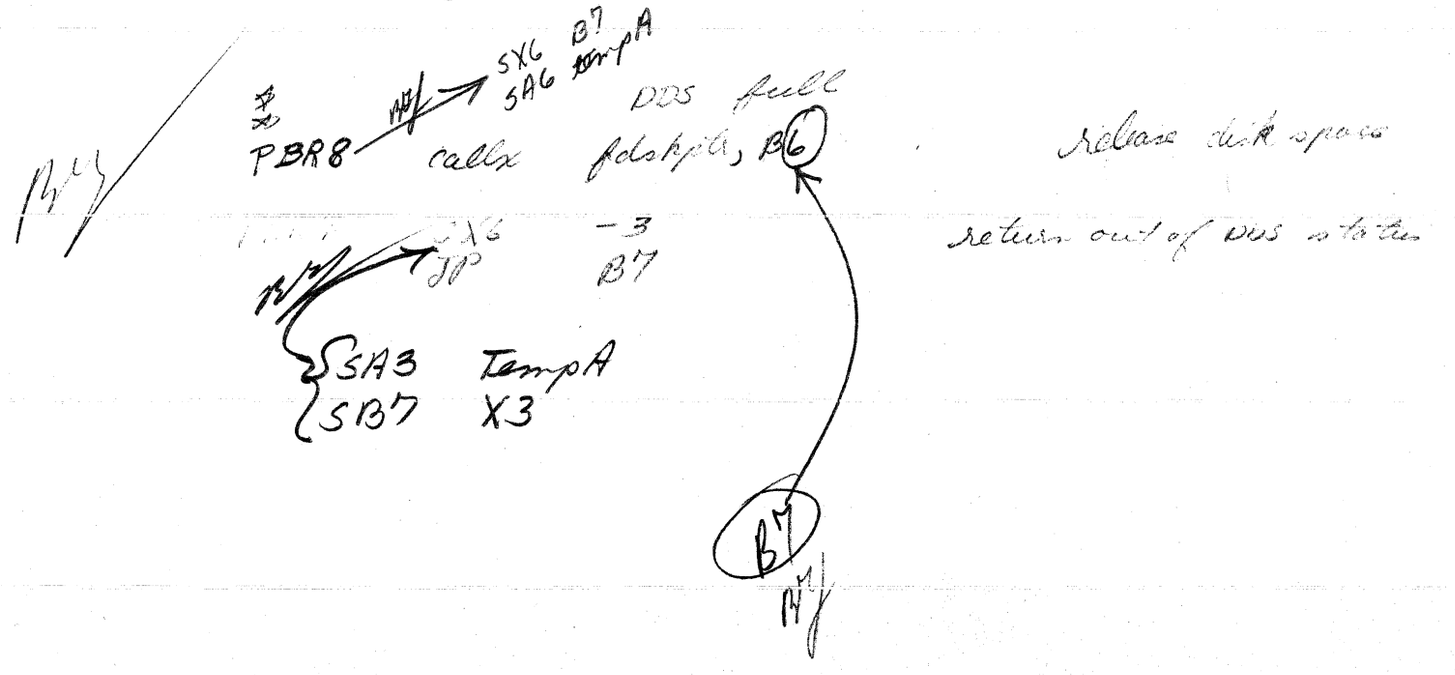
```
    63  6150000001                      SB5     1                   WAKEUP FLAG IS SET
                    6160000065 +        SB6     ZAP1
    64  0200000621 +                    JP      BLDREQ

                                *
                                * PERFORM DISK WRITE AND WAIT FOR COMPLETION
                                *
    65  7160000000 X            ZAP1    SENDEV  (MAINCL,B2+M.DDREQ),(,X4)
    76  7160000000 X                    GETEVM  MYRESP
   103  73670                           SX6     X7
             0270000000                 JP      B7
```

wait X5

```
                                    *
                                    * PBR..START POINTER BLOCK READ (POSSIBLE WAIT FOR COMPLETION)
                                    *
                                    *       ON ENTRY..FHR IN AND LOCKED
                                    *                 X4 = COPY OF FAULTED POINTER (STATUS = S.OUT)
                                    *                 X5 = DDS ADDRESS OF FAULTED POINTER
                                    *                 B4 = 0 TO WAIT FOR COMPLETION
                                    *                      1 TO RETURN IMMEDIATELY
                                    *                 B5 = SHAPE NUMBER (LOG2 OF NO. OF PTRS)
                                    *                 B7 = RETURN
                                    *
                                    *       ON EXIT..X6 = 0 IF OK
                                    *                     -1 IF I/O ERROR
                                    *                     -2 IF MEMBERSHIP MISMATCH
                                    *                     -3 if DDS error
                                    *
104  76670                  PBR     Sx6     B7
          5160000000 X               SA6     TEMPA       SAVE RETURN LINK
105  6170000106 +                    SB7     PBR1        RESERVE SWAPPED DISK SPACE
               0200000000 X          JP      GDSKPTR       FOR THE POINTER BLOCK RIGHT AWAY
106  5130000000 X           PBR1    SA3     TEMPA
               63730                SB7     X3          RESTORE RETURN LINK
                    10644           Bx6     X4
107  10755                          Bx7     X5
          5160000000 X               SA6     TEMPA               SAVE PTR
110  5170000000 X                    SA7     TEMPB               SAVE PTR ADDR
               76640                Sx6     B4
111  5160000000 X                    SA6     TEMPC               SAVE WAIT/RETURN FLAG
               7120000001           Sx2     1
112  22252                          Lx2     B5,X2
          63520                    SB5     X2                  NO. OF PTRS
               13200               Bx2     X0-X0               PATTERN = 0
113  6160000114 +                    SB6     PBR2
               0200000000 X          JP      MKPTR               CREATE EMPTY PTR BLOCK IN DDS
114  5140000000 X           PBR2    SA4     TEMPA               RESTORE PTR
               5150000000 X          SA5     TEMPB               RESTORE PTR ADDR
115  43344                          Mx3     60-24
          15343                    Bx3     -X3*X4              EXTRACT DISK ADDRESS
               12663               Bx6     X6+X3
                    20604          Lx6     4                   POSITION STATUS
116  43371                          Mx3     60-3
          11663                    Bx6     X6*X3               CLEAR OLD STATUS
               7130000006          Sx3     S.COM.FX            NEW STATUS = COMING
117  12663                          Bx6     X6+X3               INSERT NEW STATUS
          20670                    Lx6     60-4                RESTORE POSITION
               5160000000 X        SA6     TEMPA               UPDATE PTR IN CORE
120  7160000000 X                   WRDDS   X5,TEMPA,1          UPDATE PTR IN DDS
132  43347                          Mx3     60-21
          15343                    Bx3     -X3*X4              DISK ADDR = CHECKSUM
               21321               Ax3     17
                    63230          SB2     X3                  UNIT NUMBER
133  6160000134 +           LOCKOUT         ***TEMPORARY ***
134  7160000000 X           GETSLOT B2                          GET REQUEST SLOT
```

READ POINTER BLOCK

```
  163  10244                                  Bx2   X4              DISK ADDR
            10477                           Bx4   X7              SLOT INDEX
                 5130000000 X               SA3   FHRADDR
  164  20322                                 Lx3   18
            12635                           Bx6   X3+X5            FHR ADDR AND PTR ADDR
                 5160000001 X               SA6   IOTBUF+1         IOT ENTRY 2ND WORD
  165  7160000003                            Sx6   R.PBR           IOT REQUEST TYPE = POINTER BLOCK READ
                 5160000000 X               SA6   IOTBUF          IOT ENTRY 1ST WORD
  166  76720                                 Sx7   B2
            20711                           Lx7   9               IOT ADDR = (UNIT NUMBER * 2**9
                 12774                      Bx7   X7+X4                      + SLOT INDEX) * 2
                      20701                 Lx7   1
  167  7160000000 X                         WRIOT X7,IOTBUF
  201  6150000001                            SB5   1               WAKUP FLAG IS SET
                 13500                      Bx5   X0-X0           INDICATE 64 WORD BLOCK
                      13300                 Bx3   X0-X0           INDICATE NO BUFFER (READ)
  202  6160000203 +                          SB6   PBR4
            0200000621 +                    JP    BLDREQ
  203  7160000000 X              PBR4       SENDEV (MAINCL*B2+M.DDREQ),(,X4)
  214  5130000000 X                         SA3   TEMPC           PICK UP WAIT/RETURN FLAG
                 0303000216 +               ZR    X3,PBR5         JUMP IF SUPPOSED TO WAIT FOR COMPLETION
  215  0270000000                            JP    B7              RETURN IMMEDIATELY
                                  *
                                  * WAIT FOR COMPLETION
                                  *
  216  6160000217 +              PBR5       SB6   PBR6
                 0200000000 X               JP    UNLOCK          UNLOCK FILE
  217  7160000000 X              PBR6       GETEVH MYRESP         WAIT FOR COMPLETION
  224  10377                                 BX3   X7              SAVE RESPONSE
            5140000000 X                     SA4   FHRADDR
  225  6160000226 +                          SB6   PBR7
                 0200000000 X               JP    LOCK            RELOCK FILE
  226  73630                     PBR7       SX6   X3              RESPONSE TO CALLER IN X6
            0270000000                       JP    B7
```



```
                                *
                                * DBR..START DATA BLOCK READ AND RETURN
                                *
                                *       ON ENTRY..FHR IN AND LOCKED
                                *                 X1 = FILE ADDRESS
                                *                 X4 = COPY OF FAULTED POINTER (STATUS = S.OUT)
                                *                 X5 = DDS ADDRESS OF FAULTED POINTER
                                *                 B5 = WAKEUP FLAG
                                *                 B7 = RETURN
                                *
                                *       USES..X1 THRU X7,B2 THRU B7
                                *             TEMPA THRU TEMPE
                                *
227  5120000000 X               DBR      SA2     FR.DBSZ
               20203                     Lx2     3
                    43772                Mx7     60-2
230  15727                               Bx7     -X7*X2
          63470                          SB4     X7                  BLOCK SIZE CODE
               5170000000 X              SA7     TEMPE               SAVE BLOCK SIZE CODE
231  20444                               Lx4     60-24               POSITION SWAPPED ADDR
          43244                          Mx2     60-24
               15242                     Bx2     -X2*X4              EXTRACT SWAPPED ADDR
                                *
                                * CONSTRUCT I/O TABLE ENTRY
                                *
               10611                     Bx6     X1
232  20622                               Lx6     18
          7170000005                     Sx7     R.DBR               IOT REQ TYPE = DATA BLOCK READ
                    12667                Bx6     X6+X7
233  5160000000 X                       SA6     IOTBUF              WORD 1 OF IOT ENTRY
               5130000000 X              SA3     FHRADDR
234  20322                               Lx3     18
          12653                          Bx6     X5+X3
               5160000001 X              SA6     IOTBUF+1            WORD 2 OF IOT ENTRY
                                *
                                * CHECK WHETHER BLOCK COMING FROM FIXED OR SWAPPED ADDRESS
                                *
235  7160000007                         Sx6     S.COM.SW            NEW STATUS = COMING FROM SWAPPED ADDR
               0312000244 +              Nz      X2,DBR2             JUMP IF COMING FROM SWAPPED
236  10244                               Bx2     X4                  REALLY COMING FROM FIXED ADDR
          76670                          Sx6     B7
               5160000000 X              SA6     TEMPD               SAVE RETURN LINK
237  5144000676 +                       SA4     B4+NSECTS           NUMBER OF SECTORS NEEDED
               6170000241 +              SB7     DBR1                RETURN LINK
240  0200000000 X                       JP      GDSKDAT             RESERVE SWAPPED BLOCK
                                *
241  43630                      DBR1     Mx6     24
          10422                          Bx4     X2
               11264                     Bx2     X6*X4               SAVE FIXED ADDR FOR I/O
                    20230                Lx2     24                  POSITION FIXED ADDR
242  7160000006                         Sx6     S.COM.FX            NEW STATUS = COMING FROM FIXED ADDRESS
               5110000000 X              SA1     TEMPD               PICK UP RETURN LINK
243  63710                              SB7     X1
```

```
  244  20434                        DBR2      LX4     60-24-8              POSITION STATUS
            43771
                 11447                         MX7     60-3
                      12746                    BX4     X4*X7                CLEAR OLD STATUS
                                               BX7     X4+X6                INSERT NEW STATUS
  245  20770                                   LX7     60-4                 RESTORE POSITION
            5170000000 X                       SA7     TEMPA                UPDATE POINTER IN CORE
  246  7160000000 X                           WRDDS   X5,TEMPA,1           UPDATE PTR IN DDS
  260  20253                                   LX2     60-17                POSITION UNIT NUMBER
            43370                              MX3     60-4
                 15323                         BX3     -X3*X2
                      20221                    LX2     17                   RESTORE POSITION
  261  63230                                   SB2     X3                   UNIT NUMBER
            6160000263 +                       LOCKOUT                *** TEMPORARY ***
  263  7160000000 X                           GETSLOT B2                   GET REQUEST SLOT
  312  10477                                   BX4     X7                   SLOT INDEX
            20311                              LX3     9            IOT ADDR = (UNIT NUMBER * 2**9
                 12734                         BX7     X3+X4                  + SLOT INDEX) * 2
                      20701                    LX7     1
  313  7160000000 X                           WRIOT   X7,IOTBUF
  325  13300                                   BX3     X0-X0                BUFFER INDEX = 0 (READ)
            5150000000 X                       SA5     TEMPE                BLOCK SIZE CODE
  326  6160000327 +                           SB6     DBR3
                 0200000621 +                  JP      BLDREQ
  327  7160000000 X                DBR3      SENDEV  (MAINCL,B2+M.DDREQ),(,X4)
  340  5110000000 X                           SA1     IOTBUF
                 21122                         AX1     18                   RESTORE FILE ADDRESS
  341  0270000000                             JP      B7
```

```
                                *
                                * DBW..START DATA BLOCK WRITE AND RETURN
                                *
                                *       ON ENTRY..FHR IN AND LOCKED
                                *                 X1 = FILE ADDRESS
                                *                 X4 = COPY OF FAULTED POINTER (STATUS = S.IN.FX OR S.IN.SW)
                                *                 X5 = DDS ADDRESS OF FAULTED POINTER
                                *                 B7 = RETURN
                                *
                                *       USES..X1 THRU X7, B2 THRU B7
                                *             TEMPA THRU TEMPG
                                *
342  10611                      DBW      BX6     X1
           20622                        LX6     18
                 7170000006             SX7     R.DBW              IOT REQ TYPE = DATA BLOCK WRITE
343  12667                             BX6     X6+X7
           5160000000 X                 SA6     IOTBUF
344  5130000000 X                      SA3     FHRADDR
                 20322                  LX3     18
                       12653            BX6     X5+X3
345  5160000001 X                      SA6     IOTBUF+1
                 10644                  BX6     X4
346  5160000000 X                      SA6     TEMPA              SAVE POINTER
                 10655                  BX6     X5
347  5160000000 X                      SA6     TEMPB              SAVE PTR ADDR
                 76610                  SX6     B1
                       76770            SX7     B7
350  20722                             LX7     18
           12667                        BX6     X6+X7
                 5160000000 X           SA6     TEMPC              SAVE RETURN LINK AND B1
351  5130000000 X                      SA3     MYIDENT
                 5120000000 X           SA2     FR.DBSZ
352  20203                             LX2     3
           43772                        MX7     60-2
                 15727                  BX7     -X7*X2             DATA BLOCK SIZE CODE
353  5170000000 X                      SA7     TEMPD              SAVE SIZE CODE
                 0317000355 +           NZ      X7,DBW1    CONSISTENCY CHECK
354  0100000000 X                      RJ      SYSERR             64 WORD DATA BLOCK
355  63470                      DBW1     SB4     X7                 HOLDING ADDRESS =
           20306                        LX3     6                    PROCESS INDEX *
                 22343                  LX3     B4,X3                2 ** (DATA BLOCK SIZE CODE + 6)
                       10633            BX6     X3
356  5160000000 X                      SA6     TEMPE              SAVE HOLDING ADDR
                 7160000000 X           MVBLK   FILECAP,(,X1),(MAINCL,B4+M.HFILE-1),(,X3),FRET
371  7160000000 X                      TSTBLK  (MAINCL,B4+M.HFILE-1),(,X3)
400  0316000417 +                      NZ      X6,DBW2            JUMP IF BLOCK DIRTY
                                *
                                * PROCESS CLEAN FILE BLOCK
                                *
                 20404                  LX4     4                  POSITION STATUS
                       43671            MX6     60-3
401  11664                             BX6     X6*X4              CLEAR STATUS
           7170000000                   SX7     S.OUT              NEW STATUS = OUT
```

```
                    12667                   BX6     X6+X7           INSERT NEW STATUS
402  20670                                  LX6     60-4            RESTORE POINTER POSITION
          5160000000 X                      SA6     TEMPA           UPDATE PTR IN CORE
403  5110000000 X                           SA1     TEMPB
               7160000000 X                 WRDDS   X1,TEMPA,1
416  0200000564 +                           JP      DBW6

                                       *
                                       * PROCESS DIRTY FILE BLOCK
                                       *
417  5144000676 +                      DBW2 SA4     B4+NSECTS       NUMBER OF SECTORS
               6160000422 +                SB6     DBW3
420  0200000000 X                      CALLX JP      GETDSK,B6,DIRTYB1  GET NEW SWAPPED BLOCK
421  0100000000 X                           RJ      SYSERR          NO NEW BLOCK AVAILABLE
422  5140000000 X                       *   SA4     TEMPA           PICK UP PTR
                20444                  DBW3 LX4     60-24
                     43744            DIRTYB1 MX7    60-24
423  15547                                  BX5     -X7*X4          OLD SWAPPED ADDR
          11474                            BX4     X7*X4           CLEAR SWAPPED ADDR
               12646                       BX6     X4+X6           INSERT NEW SWAPPED ADDR
                    20630                  LX6     24              RESTORE POSITION
424  5160000000 X                           SA6     TEMPA           UPDATE IN CORE
               5120000000 X                 SA2     TEMPD           PICK UP BLOCKSIZE CODE
425  63420                                  SB4     X2
          5144000676 +                     SA4     B4+NSECTS       NUMBER OF SECTORS
426  0305000431 +                           ZR      X5,DBW4         JUMP IF NO OLD SWAPPED BLOCK
               6160000431 +                SB6     DBW4
427  0200000000 X                           JP      FREEDSK         RELEASE OLD SWAPPED BLOCK
                                       *
430  0100000000 X                      *    RJ      SYSERR          ERROR..ALREADY FREE
431  5140000000 X                      DBW4 SA4     TEMPA           PICK UP PTR
                20444                       LX4     60-24
                     43744                  MX7     60-24
432  15247                                  BX2     -X7*X4          SWAPPED ADDRESS
          20434                            LX4     60-24-8         POSITION STATUS
               43771                       MX7     60-3
                    11447                  BX4     X4*X7           CLEAR STATUS
433  7170000004                             SX7     S.GOING         NEW STATUS = GOING OUT TO DISK
               12747                       BX7     X4+X7           INSERT NEW STATUS
                    20770                  LX7     60-4
434  5170000000 X                           SA7     TEMPA           UPDATE PTR IN CORE
               5110000000 X                 SA1     TEMPB           PICK UP PTR ADDR
435  7160000000 X                           WRDDS   X1,TEMPA,1      UPDATE PTR IN DDS
447  20253                                  LX2     60-17
          43470                            MX4     60-4
               15424                       BX4     -X4*X2          EXTRACT UNIT NUMBER
                    20221                  LX2     17              RESTORE POSITION
450  63240                                  SB2     X4              UNIT NUMBER
          20402                            LX4     2               UNIT NUMBER * 4
               63344                       SB3     X4+B4             + BLOCK SIZE CODE
451  6160000452 +                           LOCKOUT                 *** TEMPORARY ***
452  7160000000 X                           GETSLOT B2              GET REQUEST SLOT
501  10477                                  BX4     X7              SAVE SLOT INDEX
          7160000000 X                      GETEVH  (MAINCL,B3+M.WBUFS)
```

1. 2. 3. 4. 5. Pass FHR ADDR from FRETRW. Read in FHR in USRIDS
6. TEMPE = Holding addr

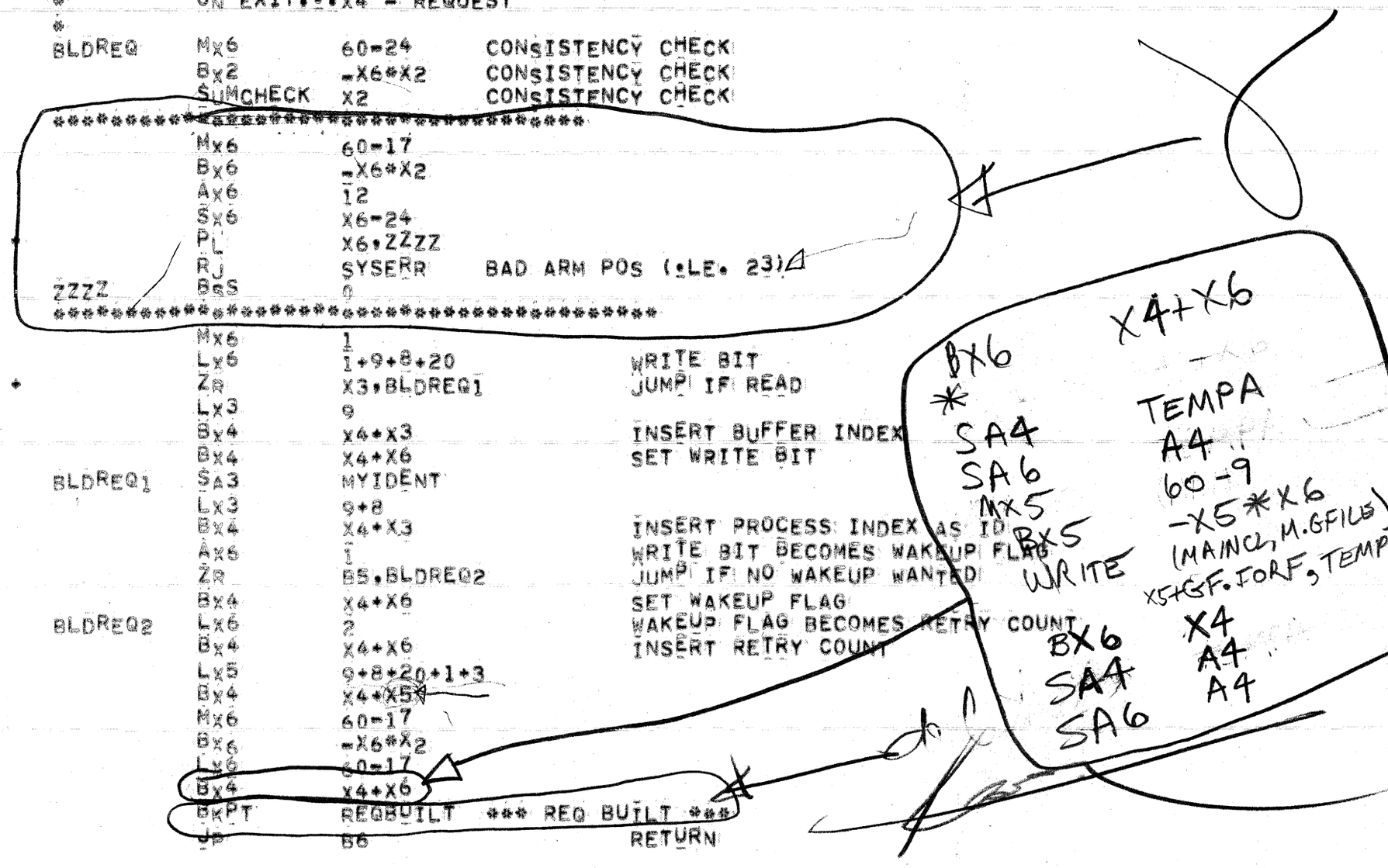
problem — get slot may unlock file must read in FHR

```
510  10377                                  BX3     X7                  SAVE BUFFER INDEX
          5170000000 X                      SA7     TEMPG
511  7160000000 X                           READ    (MAINCL,B2+M.BFILE),X3,TEMPF,1,FRET
523  5110000000 X                           SA1     TEMPF               PICK UP BUFFER POINTER
               7160000000 X                 WRITE   *,X1,FR.MEMB,1,FRET
533  5130000000 X                           SA3     TEMPE               HOLDING ADDRESS
               6160000535 +                 SB6     DBW4A
534  0200000000 X                           JP      LOADBUF             LOAD BLOCK INTO DISK BUFFER
535  76720                          DBW4A   SX7     B2
          20711                             LX7     9                   IOT ADDR = (UNIT NUMBER * 2**9
               12774                        BX7     X7+X4                          + SLOT INDEX) * 2
                    20701                   LX7     1
536  7160000000 X                           WRIOT   X7,IOTBUF           WRITE ENTRY IN IOT
                                    *
                                    * INITIATE DISK I/O
                                    *
550  5150000000 X                           SA5     TEMPD               PICK UP BLOCK SIZE CODE
               5130000000 X                 SA3     TEMPG               RECOVER BUFFER INDEX
551  66500                                  SB5     B0                  WAKEUP FLAG OFF
          6160000553 +                      SB6     DBW5                RETURN LINK
552  0200000621 +                           JP      RLDREQ
553  7160000000 X                   DBW5    SENDEV  (MAINCL,B2+M.DDREQ),(,X4)
                                    *
                                    * FINISH UP
                                    *
564  5110000000 X                   DBW6    SA1     TEMPE               PICK UP HOLDING ADDR
               7160000000 X                 DSBLK   (MAINCL,B4+M.HFILE-1),(,X1),FRET
575  5110000000 X                           SA1     TEMPC               PICK UP RETURN LINK AND B1
               63110                        SB1     X1
                    21122                   AX1     18
576  63710                                  SB7     X1
          5110000000 X                      SA1     IOTBUF              RESTORE X1
                    21122                   AX1     18
577  0270000000                             JP      B7                  RETURN
```

insert body of LOADBUF

```
                                *
                                * GETRESP..WAIT FOR COMPLETION OF NEXT I/O REQUEST
                                *
                                *       ON ENTRY..FILE IS LOCKED
                                *                 B7 = RETURN LINK
                                *
                                *       ON EXIT...X6 = DDS POINTER ADDR IF OK
                                *                      -1 IF I/O ERROR
                                *                      -2 IF MEMBERSHIP MISMATCH
                                *                 X7 = FILE ADDRESS OF BLOCK
                                *
                                *       USES.. B6, X3, X4, A5/X5, A6/X6, A7/X7
                                *       CALLS...↑LOCK↑, ↑UNLOCK↑
                                *
600  7160000000 X               GETRESP  GETEVF  MYRESP,GETRESP0     CHECK FOR RESPONSE WAITING
606  73670                               SX6     X7                  GOT RESPONSE
          21722                          AX7     18                  FILE ADDR
               0270000000                JP      B7
                                *
                                *                 RESPONSE NOT WAITING
607  6160000610 +               GETRESP0 SB6     GETRESP1            UNLOCK FILE
               0200000000 X               JP      UNLOCK
610  7160000000 X               GETRESP1 GETEVH   MYRESP              SLEEP UNTIL RESPONSE
615  10377                               BX3     X7                  SAVE EVENT FROM ↑LOCK↑
          5140000000 X                   SA4     FHRADDR
616  6160000617 +                        SB6     GETRESP2
               0200000000 X               JP      LOCK
617  73630                     GETRESP2  SX6     X3                  POINTER ADDR
          10733                          BX7     X3
               21722                     AX7     18                  FILE ADDR
620  0270000000                         JP      B7
```

```
                                *
                                * BLDREQ..BUILD A DISK DRIVER REQUEST IN X4
                                *
                                *       ON ENTRY..X2 = DISK ADDRESS
                                *                 X3 = BUFFER INDEX (0 IFF READ)
                                *                 X4 = SLOT INDEX
                                *                 X5 = BLOCK SIZE CODE
                                *                 B5 = WAKEUP FLAG
                                *                 B6 = RETURN LINK
                                *
                                *       ON EXIT...X4 = REQUEST
                                *
621  43644                      BLDREQ   MX6       60-24       CONSISTENCY CHECK
           15226                       BX2       -X6*X2      CONSISTENCY CHECK
                43647                  SUMCHECK  X2          CONSISTENCY CHECK
                                ********************************
625  43653                              MX6       60-17
           15626                       BX6       -X6*X2
                21614                  AX6       12
626  7266777747                         SX6       X6-24
                0326000630 +           PL        X6,ZZZZ
627  0100000000 X                       RJ        SYSERR      BAD ARM POS (.LE. 23)
630                             ZZZZ    BSS       0
                                ********************************
630  43601                              MX6       1
           20646                       LX6       1+9+8+20            WRITE BIT
                0303000632 +           ZR        X3,BLDREQ1          JUMP IF READ
631  20311                              LX3       9
           12443                       BX4       X4+X3               INSERT BUFFER INDEX
                12446                  BX4       X4+X6               SET WRITE BIT
632  5130000000 X              BLDREQ1  SA3       MYIDENT
                20321                  LX3       9+8
                     12443             BX4       X4+X3               INSERT PROCESS INDEX AS ID
633  21601                              AX6       1                   WRITE BIT BECOMES WAKEUP FLAG
           0450000634 +                ZR        B5,BLDREQ2          JUMP IF NO WAKEUP WANTED
                     12446             BX4       X4+X6               SET WAKEUP FLAG
634  20602                     BLDREQ2  LX6       2                   WAKEUP FLAG BECOMES RETRY COUNT
           12446                       BX4       X4+X6               INSERT RETRY COUNT
                20551                  LX5       9+8+20+1+3
                     12445             BX4       X4+X5
635  43653                              MX6       60-17
           15626                       BX6       -X6*X2
                20653                  LX6       60-17
                     12446             BX4       X4+X6
636  0100000000 X                       BKPT      REQBUILT    *** REQ BUILT ***
640  0260000000                         JP        B6                  RETURN
```



```
                                    *
                                    * KLUDGE TO ALLOW CO-EXISTENCE WITH DISK,S. SEE ALSO TERMA.
                                    *
641   7160000000 X                  KLUDGE    GETEVH    (MAINCL,M.IOCTR)
647   10077                                   BX0       X7
            7160000000 X                      SENDEV    *,X0*1
656   0310000674 *                            NZ        X0,KLUDGE2
                  7160000000 X                GETEVH    DSKLCK              STEAL HOWARDS LOCK
663   7160000000 X                            SENDEV    (MAINCL,M.TWAIT),0    WAKE UP TERMINATOR
674   0260000000                    KLUDGE2   JP        B6
```

```
   675  0100000000 X              FRET     RJ       SYSERR
                                  *
   676  0000000000000000001       NSECTS   DATA     1,2,4,7
                                  *
   702                            END

                    42036  STORAGE USED          1715 STATEMENTS     172 SYMBOLS     000039 INVENTED SYMBOLS
                           6600 ASSEMBLY         13.920 SECONDS       510 REFERENCES
```

SYMBOLIC REFERENCE TABLE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BLDREQ | 621 | PROGRAM* | 2/28 E | 5/03 | 7/18 | 9/23 | 12/21 | 14/13 L | | |
| BLDREQ1 | 632 | PROGRAM* | 14/27 | 14/31 L | | | | | | |
| BLDREQ2 | 634 | PROGRAM* | 14/35 | 14/37 L | | | | | | |
| DBR | 227 | PROGRAM* | 2/24 E | 8/14 L | | | | | | |
| DBR1 | 241 | PROGRAM* | 8/44 | 8/47 L | | | | | | |
| DBR2 | 244 | PROGRAM* | 8/39 | 9/01 L | | | | | | |
| DBR3 | 327 | PROGRAM* | 9/22 | 9/24 L | | | | | | |
| DBW | 342 | PROGRAM* | 2/24 E | 10/13 L | | | | | | |
| DBW1 | 355 | PROGRAM* | 10/37 | 10/39 L | | | | | | |
| DBW2 | 417 | PROGRAM* | 10/46 | 11/10 L | | | | | | |
| DBW3 | 422 | PROGRAM* | 11/11 | 11/14 L | | | | | | |
| DBW4 | 431 | PROGRAM* | 11/25 | 11/26 | 11/30 L | | | | | |
| DBW4A | 535 | PROGRAM* | 12/07 | 12/09 L | | | | | | |
| DBW5 | 553 | PROGRAM* | 12/20 | 12/22 L | | | | | | |
| DBW6 | 564 | PROGRAM* | 11/06 | 12/26 L | | | | | | |
| DDSIPL | 0 | EXTERNAL* | 6/48 S | 6/48 S | 9/08 S | 9/08 | 11/06 S | 11/43 S | 11/43 S | |
| | | | 6/48 S | 6/48 | 9/08 S | 11/06 S | 11/06 S | 11/43 S | 11/43 | |
| | | | 6/48 S | 9/08 S | 9/08 S | 11/06 S | 11/06 | 11/43 S | | |
| DSKLCK | 0 | EXTERNAL* | 15/09 | | | | | | | |
| D.ENTRY | 0 | EXTERNAL* | 14/45 | | | | | | | |
| EC:DBLK | 0 | EXTERNAL* | 12/28 | | | | | | | |
| EC:GEVF | 0 | EXTERNAL* | 7/01 | 9/15 | 11/52 | 13/16 | | | | |
| EC:GEVH | 0 | EXTERNAL* | 4/33 | 5/09 | 7/29 | 11/52 | 13/24 | 15/09 | | |
| | | | 4/36 | 7/01 | 9/15 | 12/01 | 15/05 | | | |
| EC:MBLK | 0 | EXTERNAL* | 10/45 | | | | | | | |
| EC:READ | 0 | EXTERNAL* | 4/39 | 12/04 | | | | | | |
| EC:RSTR | 0 | EXTERNAL* | 7/01 | 9/15 | 11/52 | | | | | |
| EC:SAVE | 0 | EXTERNAL* | 7/01 | 9/15 | 11/52 | | | | | |
| EC:SEV | 0 | EXTERNAL* | 5/08 | 7/20 | 9/25 | 12/23 | 15/07 | 15/10 | | |
| EC:TBLK | 0 | EXTERNAL* | 10/46 | | | | | | | |
| EC:WRIT | 0 | EXTERNAL* | 4/43 | 12/06 | | | | | | |
| ERRPACK | 0 | EXTERNAL* | 7/01 | 7/01 | 9/15 S | 11/52 | 11/52 | | | |
| | | | 7/01 S | 9/15 | 9/15 | 11/52 S | | | | |
| FHRADDR | 0 | EXTERNAL* | 7/01 | 7/03 | 7/30 | 8/31 | 9/15 | 10/18 | 11/52 | 13/25 |
| FILECAP | 0 | EXTERNAL* | 10/45 | | | | | | | |
| FREEDSK | 0 | EXTERNAL* | 11/27 | | | | | | | |
| FRET | 675 | PROGRAM* | 4/39 | 4/43 | 10/45 | 12/04 | 12/06 | 12/28 | 16/01 L | |
| FR.DBSZ | 0 | EXTERNAL* | 8/14 | 10/32 | | | | | | |
| FR.MEMB | 0 | EXTERNAL* | 12/06 | | | | | | | |
| FR.NAME | 0 | EXTERNAL* | 4/17 | | | | | | | |
| GDSKDAT | 0 | EXTERNAL* | 8/45 | | | | | | | |
| GDSKPTR | 0 | EXTERNAL* | 6/20 | | | | | | | |
| GETDSK | 0 | EXTERNAL* | 11/12 | | | | | | | |
| GETRESP | 600 | PROGRAM* | 2/24 E | 13/15 L | | | | | | |
| GETRESP0 | 607 | PROGRAM* | 13/16 | 13/21 L | | | | | | |
| GETRESP1 | 610 | PROGRAM* | 13/21 | 13/23 L | | | | | | |
| GETRESP2 | 617 | PROGRAM* | 13/26 | 13/28 L | | | | | | |
| GF.DDSF | 0 | EXTERNAL* | 6/48 | 9/08 | 11/06 | 11/43 | | | | |
| GF.DDSL | 0 | EXTERNAL* | 6/48 | 9/08 | 11/06 | 11/43 | | | | |
| GF.IOTF | 0 | EXTERNAL* | 4/51 | 4/51 | 7/14 | 7/14 | 9/20 | 9/20 | 12/14 | 12/14 |
| GF.IOTL | 0 | EXTERNAL* | 4/51 | 7/14 | 9/20 | 12/14 | | | | |
| IOTBUF | 0 | EXTERNAL* | 4/11 S | 4/51 | 7/08 S | 8/30 S | 9/20 | 10/17 S | 12/14 | |
| | | | 4/13 S | 7/06 S | 7/14 | 8/34 S | 9/25 | 10/21 S | 12/32 | |

SYMBOLIC REFERENCE TABLE.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IOTIPL | 0 | EXTERNAL* | 4/51 S | 4/51 S | 7/14 S | 7/14 S | 9/20 S | 9/20 S | 12/14 S | 12/14 S | | | |
| | | | 4/51 S | 4/51 | 7/14 S | 7/14 | 9/20 S | 9/20 | 12/14 S | 12/14 | | | |
| IPLIST | 0 | EXTERNAL* | 2/30 | | | | | | | | | | |
| IP::LIST | 0 | EXTERNAL* | 2/30 D | 4/43 S | 7/01 S | 9/15 S | 10/46 S | 12/04 S | 12/28 S | 15/09 S | | | |
| | | | 4/33 S | 4/43 S | 7/01 S | 9/15 | 10/46 | 12/04 S | 12/28 | 15/09 S | | | |
| | | | 4/33 S | 4/43 S | 7/01 | 9/25 S | 11/52 S | 12/04 | 13/16 S | 15/09 | | | |
| | | | 4/33 | 4/43 | 7/20 S | 9/25 S | 11/52 S | 12/06 S | 13/16 S | 15/10 S | | | |
| | | | 4/36 S | 5/08 S | 7/20 S | 9/25 S | 11/52 | 12/06 S | 13/16 | 15/10 S | | | |
| | | | 4/36 S | 5/08 S | 7/20 S | 9/25 | 11/52 S | 12/06 S | 13/24 S | 15/10 S | | | |
| | | | 4/36 | 5/08 S | 7/20 | 10/45 S | 11/52 S | 12/06 S | 13/24 S | 15/10 | | | |
| | | | 4/39 S | 5/08 | 7/29 S | 10/45 S | 11/52 | 12/06 | 13/24 | | | | |
| | | | 4/39 S | 5/09 S | 7/29 S | 10/45 S | 12/01 S | 12/23 S | 15/05 S | | | | |
| | | | 4/39 S | 5/09 S | 7/29 | 10/45 S | 12/01 S | 12/23 S | 15/05 S | | | | |
| | | | 4/39 S | 5/09 | 9/15 S | 10/45 S | 12/01 | 12/23 S | 15/05 | | | | |
| | | | 4/39 S | 7/01 S | 9/15 S | 10/45 | 12/04 S | 12/23 | 15/07 S | | | | |
| | | | 4/39 | 7/01 S | 9/15 | 10/46 S | 12/04 S | 12/28 S | 15/07 S | | | | |
| | | | 4/43 S | 7/01 | 9/15 S | 10/46 S | 12/04 S | 12/28 S | 15/07 | | | | |
| KLUDGE | 641 | PROGRAM* | 2/28 E | 4/32 | 6/53 | 9/14 | 11/51 | 15/04 L | | | | | |
| KLUDGE2 | 674 | PROGRAM* | 15/07 | 15/10 L | | | | | | | | | |
| LOADBUF | 0 | EXTERNAL* | 12/08 | | | | | | | | | | |
| LOCK | 0 | EXTERNAL* | 7/01 | 7/32 | 9/15 | 11/52 | 13/27 | | | | | | |
| MAINCL | 0 | EXTERNAL* | 4/33 | 5/08 | 7/20 | 9/25 | 11/52 | 12/04 | 15/05 | | | | |
| | | | 4/36 | 7/01 | 9/15 | 10/45 | 11/52 | 12/23 | 15/10 | | | | |
| | | | 4/39 | 7/01 | 9/15 | 10/46 | 12/01 | 12/28 | | | | | |
| MKPTR | 0 | EXTERNAL* | 6/34 | | | | | | | | | | |
| MYIDENT | 0 | EXTERNAL* | 10/31 | 14/31 | | | | | | | | | |
| MYRESP | 0 | EXTERNAL* | 5/09 | 7/29 | 13/16 | 13/24 | | | | | | | |
| M.BFILE | 0 | EXTERNAL* | 4/39 | 12/04 | | | | | | | | | |
| M.DDREQ | 0 | EXTERNAL* | 5/08 | 7/20 | 9/25 | 12/23 | | | | | | | |
| M.HFILE | 0 | EXTERNAL* | 10/45 | 10/46 | 12/28 | | | | | | | | |
| M.IOCTR | 0 | EXTERNAL* | 15/05 | | | | | | | | | | |
| M.SLOTS | 0 | EXTERNAL* | 4/33 | 7/01 | 7/01 | 9/15 | 9/15 | 11/52 | 11/52 | | | | |
| M.TWAIT | 0 | EXTERNAL* | 15/10 | | | | | | | | | | |
| M.WBUFS | 0 | EXTERNAL* | 4/36 | 12/01 | | | | | | | | | |
| NSECTS | 676 | PROGRAM* | 8/43 | 11/10 | 11/24 | 16/03 L | | | | | | | |
| OPERCL | 0 | EXTERNAL* | 2/30 | | | | | | | | | | |
| OP::::CL | 0 | EXTERNAL* | 2/30 D | 5/07 | 7/01 | 9/15 | 11/51 | 12/03 | 13/23 | | | | |
| | | | 4/32 | 5/08 | 7/19 | 9/15 | 11/52 | 12/05 | 15/04 | | | | |
| | | | 4/35 | 6/53 | 7/28 | 9/24 | 11/52 | 12/22 | 15/06 | | | | |
| | | | 4/38 | 7/01 | 9/14 | 10/44 | 11/52 | 12/27 | 15/08 | | | | |
| | | | 4/42 | 7/01 | 9/15 | 10/45 | 11/53 | 13/15 | 15/09 | | | | |
| PBR | 104 | PROGRAM* | 2/24 E | 6/17 L | | | | | | | | | |
| PBR1 | 106 | PROGRAM* | 6/19 | 6/21 L | | | | | | | | | |
| PBR2 | 114 | PROGRAM* | 6/33 | 6/35 L | | | | | | | | | |
| PBR4 | 203 | PROGRAM* | 7/17 | 7/19 L | | | | | | | | | |
| PBR5 | 216 | PROGRAM* | 7/21 | 7/26 L | | | | | | | | | |
| PBR6 | 217 | PROGRAM* | 7/26 | 7/28 L | | | | | | | | | |
| PBR7 | 226 | PROGRAM* | 7/31 | 7/33 L | | | | | | | | | |
| R.DBR | 5 | | 8/28 | | | | | | | | | | |
| R.DBW | 6 | | 10/15 | | | | | | | | | | |
| R.PBR | 3 | | 7/07 | | | | | | | | | | |
| R.ZAP | 7 | | 4/10 | | | | | | | | | | |

SYMBOLIC REFERENCE TABLE.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SYSERR | 0 | EXTERNAL* | 4/51 | 6/48 | 7/20 | 9/20 | 11/06 | 11/43 | 12/23 | 16/01 |
| | | | 4/51 | 6/48 | 9/08 | 9/20 | 11/06 | 11/43 | 14/16 | |
| | | | 4/51 | 7/14 | 9/08 | 9/25 | 11/13 | 12/14 | 14/22 | |
| | | | 5/08 | 7/14 | 9/08 | 10/38 | 11/29 | 12/14 | 15/07 | |
| | | | 6/48 | 7/14 | 9/20 | 11/06 | 11/43 | 12/14 | 15/10 | |
| S.COM.FX | 6 | | 6/43 | 8/51 | | | | | | |
| S.COM.SW | 7 | | 8/38 | | | | | | | |
| S.GOING | 4 | | 11/37 | | | | | | | |
| S.OUT | 0 | | 10/53 | | | | | | | |
| TEMPA | 0 | EXTERNAL* | 4/39 | 6/21 | 6/46 S | 9/08 | 11/06 | 11/30 | | |
| | | | 4/39 | 6/25 S | 6/48 | 10/23 S | 11/14 | 11/40 S | | |
| | | | 6/18 S | 6/35 | 9/06 S | 11/03 S | 11/21 S | 11/43 | | |
| TEMPB | 0 | EXTERNAL* | 4/41 S | 4/43 | 6/26 S | 6/36 | 10/25 S | 11/04 | 11/41 | |
| TEMPC | 0 | EXTERNAL* | 6/28 S | 7/20 | 10/30 S | 12/28 | | | | |
| TEMPD | 0 | EXTERNAL* | 8/42 S | 8/52 | 10/36 S | 11/22 | 12/17 | | | |
| TEMPE | 0 | EXTERNAL* | 8/19 S | 9/21 | 10/43 S | 12/06 | 12/26 | | | |
| TEMPF | 0 | EXTERNAL* | 12/04 | 12/04 | | | | | | |
| TEMPG | 0 | EXTERNAL* | 12/02 S | 12/18 | | | | | | |
| UNLOCK | 0 | EXTERNAL* | 7/01 | 7/27 | 9/15 | 11/52 | 13/22 | | | |
| WRITCAP | 0 | EXTERNAL* | 4/50 | 6/47 | 7/13 | 9/07 | 9/19 | 11/05 | 11/42 | 12/13 |
| ZAP | 0 | PROGRAM* | 2/24 E | 4/10 L | | | | | | |
| ZAP1 | 65 | PROGRAM* | 5/02 | 5/07 L | | | | | | |
| ZZZZ | 630 | PROGRAM* | 14/21 | 14/23 L | | | | | | |

MYERCO
MYRES