AD-A094 922 COMMAND AND CONTROL TECHNICAL CENTER WASHINGTON DC F/G 9/2
THE H-6000 TUNING GUIDE. VOLUME IV. APPENDIXES. REVISION 1. CHA--ETC(U)
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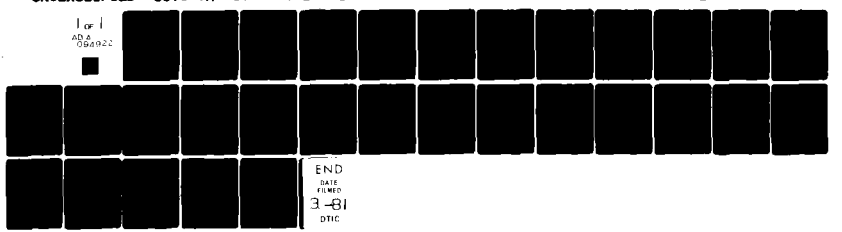

DEFENSE COMMUNICATIONS AGENCY

COMMAND AND CONTROL
TECHNICAL CENTER
WASHINGTON, D. C. 20301

LEVEL II

IN REPLY
REFER TO: C702

12 October 1979

TO: Recipients

SUBJECT: Change 2 to TM 180-78, The H-6000 Tuning Guide, Volume IV - Appendixes, Revision 1.

1. Insert the enclosed change pages and destroy the replaced pages according to applicable security regulations.

2. A list of effective pages to verify the accuracy of this manual is enclosed. This list should be inserted before the title page.

3. When this change has been posted, make an entry in the Record of Changes.

FOR THE DIRECTOR

J. DOUGLAS POTTER
Assistant to the Director
for Administration

28 Enclosures
Change 2 pages

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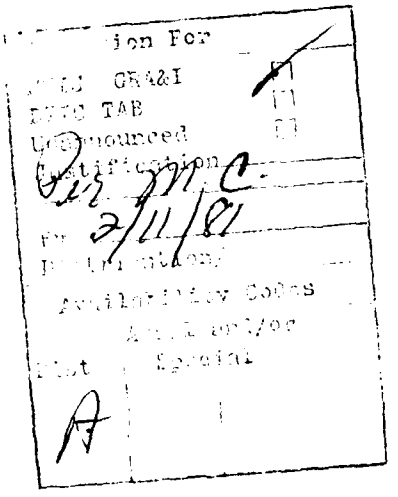
EFFECTIVE PAGES - 9 SEPT 1979

This list is used to verify the accuracy of TM 180-78 Volume IV Revision 1 after change 2 pages have been inserted. Original pages are indicated by the letter 0 and change 1 pages are indicated by the numeral 1, change 2 pages are indicated by the numeral 2.

Page No.	Change No.
Title Page - 176	0
177-178.1	2
178.2	1
179	2
180-181	0
182-194	2
194.1 - 194.8	2
195-207	0



2. TSS TRACE PACKAGE INSTALLATION.

Three steps are necessary to install the TSS trace package: preparation of an edit tape, preparation of a GMF object file, and input of the edit tape during system startup.

2.1 Preparation of edit tape.

Preparation of the edit tape requires a FILEDIT activity to create a dummy object library, a FILEDIT activity to reassemble the TSS modules to include new alters, and a SYSEDIT activity to convert the object file into a system loadable file on tape. The first FILEDIT activity is necessary since it is desired to use the OBJECT,UPDATE option in the second activity, and since an actual TSS object file is not conveniently available. Two groups of alters must be included in the second activity. The first is the group of alters which actually implement the GMF traces and console interface. The second group of alters consists of corrections or enhancements to TSS, included with the standard W6.4.2 release. Refer to figure J-5 for a complete listing of the JCL for setting up the edit tape.

This JCL stream will produce full listings of all the W6.4.2 TSS modules, altered for the trace package.

Site option patches #52A and #83A have been included in the alter file at line #'s 5060 and 6540 respectively as comments. These comments must be changed if the user wishes to include these options. If #83A is to be included, line 6460 must be changed to read "$ ALTER 6807,6807."

Site option patch #81A is included in the alter file at line #'s 9540-9590. This patch allows Time Sharing to softload the following SSA modules: .MFS03, .MFS04, .MFS08, .MFS09, .MFS36, and .MFS61. If different modules are desired these alters must be modified.

The following patches which make corrections to the W6.4.2 source code are included in the alter file:

#04H Correction to alter 809+

#09L Correction to format of SCF type-218 record

#10K Correction to IDENT image in DRL TASK

#11K Inclusion of COBR in common command list

#15J Correction to security problems in DRL TASK

#18H Elimination of security breach for invalid classification

#26I Correction to #77F to restrict CDIN for SACLANT users

#27I Correction to #85I for SACLANT; replaces #24G and #37G

#28I Modification to TSSH for #27I

#30G Correction to alter #06D

#31G Spelling correction for .TSQJ1

#33G Correction to typing error in alter 111+

#33L Prevention of subsystem's being locked in core after security breach

#34I Correction to TSS prompt after TSS MESS

#36L Prevention of system crash after reconnect; replaces #81K

#37J Bypass for coding associated with memory release

#40G Correction for TSS console messages

#42L Implementation of SDN K78045; replaces ,2K

#45L Deallocation of file after security breach; replaces #87K

#50J Deletion of part of 885W to enable SSA loading

#57I Correction to format of SCF type-001 record

#57J Correction to format of SCF type-216 record

#59L Prevention of TSS busy after security breach

#62J Prevention of DRL SWITCH on SY**

#68J Inclusion of SORT in common command list

#69I Prevention of lockup faults

#72H Correction to prevent ZCP faults in .MLOGN

#75H Enhancement to allow lowercase output to VIP 7705's

#77K Prevention of system crash from DRL FILACT type 14

#81J Implementation of SDN F7501

#83J Verification of DRL FILACT buffer address

#93K Implementation of SDN K78045

#96J Implementation of SDN F7501

When the altered version of TSS is to be run, any patches to TSSA must be repunched replacing the .MTIMS in columns 73-78 with XXXYYY. Such patches may be found in the EDIT section of the boot deck if they are being added using $ APPLY cards or in the PATCH section of the boot deck. In addition, patches may have been made to the system files by means of a PAVS tape. A listing of the PAVS tape must be obtained to determine if any of the patches were made to catalog name .MTIMS. This XXXYYY module will be the trace implemented version of Time Sharing, located on system file TSS-GECALL. The original patches to .MTIMS can either be left in the patch deck or removed, since when Time-Sharing reloads itself, such patches are not reapplied. Any patches to TSSB through TSSO not contained on the alter file must be relocated and repunched using XXXYYY in place of .MTIMS. To determine the appropriate alter numbers or octal locations for such patches, obtain an unaltered listing of Time Sharing and a corresponding load map. Edit the JCL stream for obtaining a modified Time Sharing to remove all changes to the Time Sharing modules, and insert the following two records for each module:

```
$       ALTER   1,1
        LBL     TSSx, NSEQ  (x=A, B, ..., O)
```

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2.3 Preparation of GMF object file.

Procedures for obtaining an object file are the same as those described in "GENERAL MONITORING FACILITY Users Manual"; they will not be repeated here.

2.4 Installation of new Time-Sharing on system files.

Installation of the TSS trace package requires that six cards be added to the H6000 boot deck. These are as follows:

```
$       FILDEF  ST1,TSS-GECALL,96/0,SYS,3T5
$       SYSTEM  TSS-GECALL
53211   OCTAL   2201000          MME     GECALL              .MTIMS
53212   OCTAL   676767707070     BCI     1,XXXYYY            .MTIMS
53213   OCTAL   0                                            .MTIMS
53214   OCTAL   0                                            .MTIMS
```

The $ FILDEF card is placed in the $ EDIT section. The tape drive name may need to be changed, based on the names given in the $ CONFIG section of the boot deck. The $ SYSTEM card is placed in the $ FILES section. A partial edit of file TSS-GECALL is necessary to copy the new Time-Sharing onto the system. The four OCTAL patch cards, when placed in the $ PATCH section, force TSS to reload itself with the altered version. Under W6.4.2, the entry point address for TSS is 53211; this is not necessarily the same for other system releases. The operator may select which version of TSS to bring up by inserting or removing these four cards, and by doing a warm boot of the system with only the $ PATCH section being replaced.

3. OPERATION OF THE TIME-SHARING TRACE TOOL.

3.1 Operator commands to TSS.

Two new operands have been added to the TSS operator verb. These are "TRACE ON," which causes TSS to start making special traces for the trace tool, and "TRACE OFF," which stops the special traces. A response line is printed on the console to acknowledge processing of the console command.

3.2 GMC data collection procedure.

The standard GMC data collection procedure, as described in "GENERAL MONITORING FACILITY Users Manual," has not been changed. In the I* file, M8 must be enabled (i.e. "M8" must not appear on the data card). The operator must enter the "TSS TRACE ON" command to enable collection of the Time-Sharing traces. This command may be entered at any time after Time-Sharing starts, but it must be in effect while GMC is running. The "TSS TRACE OFF" command may be entered at any time after Time-Sharing starts. Use of this command while GMC is running will avoid writing data to the tape if no analysis is to be done for that time period. Multiple OFF/ON sequences are permissible on the same GMC tape. When GMC is not running, use of "TSS TRACE OFF" will eliminate the overhead of making the special traces. If "TSS TRACE OFF" is entered while the trace is disabled, no extra processing will occur, except for the printing of the message on the console indicating that the command had been examined.

Figure J-5. ALTER FILE USED TO PREPARE EDIT TAPE

```
20$       IDENT
30$       FILEDIT SOURCE,OBJECT,INITIALIZE,NONE
40$       DATA    *C,,COPY
50$       GMAP    NLSTOU                                          TSSA
60        LBL     TSSA,NSEQ
70        SYMDEF  TSSA
80TSSA    DEC     0
90        END
100$      GMAP    NLSTOU                                          TSSB
110       LBL     TSSB,NSEQ
120       SYMDEF  TSSB
130TSSB   DEC     0
140       END
150$      GMAP    NLSTOU                                          TSSC
160       LBL     TSSC,NSEQ
170       SYMDEF  TSSC
180TSSC   DEC     0
190       END
200$      GMAP    NLSTOU                                          TSSD
210       LBL     TSSD,NSEQ
220       SYMDEF  TSSD
230TSSD   DEC     0
240       END
250$      GMAP    NLSTOU                                          TSSE
260       LBL     TSSE,NSEQ
270       SYMDEF  TSSE
280TSSE   DEC     0
290       END
300$      GMAP    NLSTOU                                          TSSF
310       LBL     TSSF,NSEQ
320       SYMDEF  TSSF
330TSSF   DEC     0
340       END
350$      GMAP    NLSTOU                                          TSSG
360       LBL     TSSG,NSEQ
370       SYMDEF  TSSG
380TSSG   DEC     0
390       END
400$      GMAP    NLSTOU                                          TSSH
410       LBL     TSSH,NSEQ
420       SYMDEF  TSSH
430TSSH   DEC     0
440       END
450$      GMAP    NLSTOU                                          TSSI
460       LBL     TSSI,NSEQ
470       SYMDEF  TSSI
480TSSI   DEC     0
490       END
500$      GMAP    NLSTOU                                          TSSJ
510       LBL     TSSJ,NSEQ
520       SYMDEF  TSSJ
```

Figure J-5. Alter File Used to Prepare Edit Tape (Part 1 of 20)

```
530TSSJ   DEC     0
540       END
  )$      GMAP    NLSTOU                                                  TSSK
560       LBL     TSSK,NSEQ
570       SYMDEF  TSSK
580TSSK   DEC     0
590       END
600$      GMAP    NLSTOU                                                  TSSL
610       LBL     TSSL,NSEQ
620       SYMDEF  TSSL
630TSSL   DEC     0
640       END
650$      GMAP    NLSTOU                                                  TSSM
660       LBL     TSSM,NSEQ
670       SYMDEF  TSSM
680TSSM   DEC     0
690       END
700$      GMAP    NLSTOU                                                  TSSN
710       LBL     TSSN,NSEQ
720       SYMDEF  TSSN
730TSSN   DEC     0
740       END
750$      GMAP    NLSTOU                                                  TSSO
760       LBL     TSSO,NSEQ
770       SYMDEF  TSSO
780TSSO   DEC     0
790       END
  )$      ENDEDIT
810$      ENDCOPY
820$      FILE    R*,Z2S
830$      LIMITS  1,,,1K
840$      FILE    P*,NULL
850$      FILEDIT SOURCE,OBJECT,UPDATE,NONE
860$      LIMITS  ,,,40K
870$      DATA    *C,,COPY
880$      INCLUDE
890$      SYSLD   CATALOG=XXXYYY
900$      LOWLOAD
910$      OPTION  NOSETU,SYMREF
920$      NOLIB
930$      MODIFY  SOURCE,OBJECT,TSSA
940$      GMAP                                                            TSSA
950$      UPDATE  LIST                                                    TSSA/GMF
960$      ALTER   598,598          ***** ALTER FROM SYSTEM PATCHES *****
970CARDIN PRGDES  CDIN,EXPCL,.TSCDI,.BSAC                                 @26I
980$      ALTER   666,666          ***** ALTER FROM SYSTEM PATCHES *****
990       PRGDES  EXUT,EXPCL,.TSQJ1,.BSAC                                 @31G
1000$      ALTER   749              ***** ALTERS FROM SYSTEM PATCHES *****
1010.BJOPS BOOL    200000                                                 @93K
1020       PRGDES  JOPS,EXPCL,.TJOPS,.BJOPS                               @93K
1030       PRGDES  JOPT,EXPCL,.TJOPT,.BJOPS                               @93K
```

Figure J-5. (Part 2 of 20)

```
1040$       ALTER   899             ***** ALTERS FROM SYSTEM PATCHES *****.
1050        ASCII   1,SORT                                                 Ø68J
1060        OCT     0                                                     Ø68J
1070        ASCII   1,COBR                                                Ø11K
1080        OCT     0                                                     Ø11K
1090$       ALTER   977             ***** ALTERS FROM SYSTEM PATCHES *****
1100        ZERO    C65             SORT                                  Ø68J
1110        ZERO    C66             COBR                                  Ø11K
1120$       ALTER   1067            ***** ALTERS FROM SYSTEM PATCHES *****
1130C65     XCALL   SORT,BIN                                              Ø68J
1140C66     XCALL   COBR,BIN                                              Ø11K
1150$       ALTER   1240,1240       ***** ALTER FROM SYSTEM PATCHES *****
1160        ASCII   1,DFAU                                                Ø04H
1170$       ALTER   1242,1242       ***** ALTER FROM SYSTEM PATCHES *****
1180        ASCII   1,WWLI                                                Ø04H
1190$       MODIFY  SOURCE,OBJECT,TSSB
1200$       GMAP                                                              TSSB
1210$       UPDATE  LIST                                                      TSSB/GMF
1220$       ALTER   156             ***** GMF ALTERS *****
1230        SYMREF  TREP                                                  GMF
1240        XED     TREP            EXECUTE DOUBLE AT TREP                GMF
1250        VFD     18/0,12/7,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74    GMF
1260$       MODIFY  SOURCE,OBJECT,TSSC
1270$       GMAP                                                              TSSC
1280$       UPDATE  LIST                                                      TSSC/GMF
1290$       ALTER   10              ***** ENABLE PMC *****
1300        PMC     ON                                                    GMF
1310$       MODIFY  SOURCE,OBJECT,TSSD
1320$       GMAP                                                              TSSD
1330$       UPDATE  LIST                                                      TSSD/GMF
1340$       ALTER   18              ***** ALTER FROM SYSTEM PATCHES *****
1350        PMC     ON                                                    GMF
1360$       ALTER   271             ***** GMF ALTERS *****
1370        SYMREF  TREP                                                  GMF
1380        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP             GMF
1390        VFD     18/7,12/175,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74  GMF
1400$       ALTER   392             ***** GMF ALTERS *****
1410        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP             GMF
1420        VFD     18/0,12/176,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74  GMF
1430$       ALTER   397             ***** ALTERS FROM SYSTEM PATCHES *****
1440        SYMREF  FVCC1           CANNOT RETRY DRL IF THIS              Ø59L
1450        LDA     FVCC1           --WAS A DEACCESS FOR A                Ø59L
1460        SZN     .WWUSI,2        --BREACH. GO SET UP A PSEUDO          Ø59L
1470        TMI     END             --CC TO RETRY PATDEA.                 Ø59L
1480$       ALTER   435,435         ***** ALTERS FROM SYSTEM PATCHES *****
1490        SZN     .WWUSI,2        IF WE ARE NOT WAITING FOR A           Ø59L
1500        TPL     ENDCC           --BREACH TO PROCESS, END CC.          Ø59L
1510        SYMREF  FVCC                                                  Ø59L
1520        LDA     FVCC            THIS COULD BE THE ATTEMPT TO          Ø59L
1530END     STA     .LCC,2          --RETRY PATDEA. HOPEFULLY WE          Ø59L
1540        LDA     .FL19+.FL30,DL  --WERE WAITING FOR THE CC TO          Ø59L
```

Figure J-5. (Part 3 of 20)

```
1550        ORSA    .LFLAG,2        --FINISH SO WE CAN USE THIS          059L
1560        LCA     .LPACC,DL       --PSEUDO/ARTIFICIAL CC TO            059L
1570        STA     .LTTYS,2        --CALL BRCH.                         059L
1580ENDCC   LDA     3,DL            TELL ALLOC THIS USER FINISHED        059L
1590$       MODIFY  SOURCE,OBJECT,TSSE
1600$       GMAP                                                             TSSE
1610$       UPDATE  LIST                                                     TSSF/GMF
1620$       ALTER   11              ***** ENABLE PMC *****
1630        PMC     ON                                                   GMF
1640$       MODIFY  SOURCE,OBJECT,TSSF
1650$       GMAP                                                             TSSF
1660$       UPDATE  LIST                                                     TSSF/GMF
1670$       ALTER   11              ***** GMF ALTER *****
1680        EDITP   ON                                                   GMF
1690        PMC     ON                                                   GMF
1700$       ALTER   192             ***** GMF ALTERS *****
1710        TTLS    GMF TIME-SHARING TRACE PACKAGE ROUTINE
1720        SYMDEF  TREP,JSTOFF,GMF002                                   GMF
1730        INHIB   ON                                                   GMF
1740JSTOFFESTC1     IC              SAVE IC + 1                          GMF
1750        TRA     *+1             GET OUT OF XED                       GMF
1760        SREG    SREGS           SAVE REGISTERS                       GMF
1770        LDA     =027674,DL      PLACE T190 TYPE IN A                 GMF
1780        LDQ     =0,DL           ZERO OUT Q                           GMF
1790        TRA     MAKTR           GO MAKE TRACE T190                   GMF
1800TREP    ESTC1   IC              SAVE IC + 1                          GMF
1810        TRA     *+1             GET OUT OF XED                       GMF
1820        SREG    SREGS           SAVE REGISTERS                       GMF
1830        LDA     IC,I            GET PATTERN #, TRACE TYPE            GMF
1840        LDX0    1,DU            INCREMENT OUR                        GMF
1850        ASX0    IC              RETURN ADDRESS                       GMF
1860        SZN     GMF002          CHECK T74 ON/OFF                     GMF
1870        TZE     EXIT1           TRA --> TRACE IS OFF                 GMF
1880        EAX0    0,AU            PATTERN --> X0                       GMF
1890        ANA     =077777,DL      TRACE TYPE IN AL                     GMF
1900        STA     TYPE            SAVE IN TYPE  0000000TTT74           GMF
1910        ARS     6               000000000TTT                         GMF
1920        EAX1    0,AL            X1 = 000TTT TRACE TYPE               GMF
1930*  FOR T7, T179, T181 NEED LNID IN QL SO TEST THIS                   GMF
1940        CMPX1   =182,DU         IS TRACE TYPE >= 182                 GMF
1950        TPL     GE182           YES --> TRA                          GMF
1960        CMPX1   7,DU            TEST FOR LOG-ON TRACE                GMF
1970        TZE     LINEID          NEED LINE ID+UST ADDRESS             GMF
1980        CMPX1   179,DU                                               GMF
1990        TZE     LINEID
2000        CMPX1   181,DU                                               GMF
2010        TNZ     USTADR                                               GMF
2020LINEID  LDQ     .LBUF,2         STATION ID                           GMF
2030        ANQ     =07777,DL         IN                                 GMF
2040        CMPQ    =02020,DL       SEE IF THIS GUY IS 2020              GMF
2050        TNZ     STOREQ          NO -- STORE ADDRESS                  GMF
```

Figure J-5. (Part 4 of 20)

```
2060        CMPX1   7,DU            TEST FOR LOG-ON TRACE                   GMF
2070        TNZ     LINE1           NOT LOG-ON TRACE                        GMF
2080        LDA     .TSDJB          CHECK FOR DEFERRED USER STARTING        GMF
2090        TRA     LINE2                                                   GMF
2100LINE1   LDA     .LCJID,2        GET DEFERRED JOB ID                     GMF
2110LINE2   TZE     STOREQ          NOT DEFERRED USER (TSRI)                GMF
2120        LRS     16              MOVE LAST DIGIT TO BITS 0-3 IN Q        GMF
2130        DUP     2,3             MOVE OTHER 3 DIGITS                     GMF
2140        ARS     2               SKIP HIGH-ORDER 2 BITS                  GMF
2150        LRS     4               MOVE DIGIT TO Q-UPPER                   GMF
2160        QRL     20              MOVE TO Q-LOWER                         GMF
2170        ORQ     =0200000,DL     INDICATE DEFERRED USER                  GMF
2180STOREQ  STQ     SAVQ            SAVE Q-REGISTER                         GMF
2190        CMPX1   181,DU          TEST FOR TRACE TYPE T181                GMF
2200        TZE     T181                                                    GMF
2210USTADR  STX2    TYPE            STORE UST ADDRESS INTO TRACE            GMF
2220        LDA     TYPE            GET A-REGISTER FOR TRACE                GMF
2230*  SET UP TRANSFER TABLE DEPENDENT UPON PATTERN VALUE                   GMF
2240XFER    TRA     *+1,0           TRANSFER TABLE FOLLOWS                  GMF
2250        TRA     MAKTR           FOR X0=0 ONLY NEEDED TO SET UP A        GMF
2260        TRA     QPTRN           FOR X0=1 Q=1 FOR A T172, T173           GMF
2270        TRA     QPTRN           FOR X0=2  SET Q = PATTERN STORED IN X0
2280        TRA     QPTRN           FOR X0=3  SET Q = PATTERN STORED IN X0
2290        TRA     QPTRN           FOR X0=4  SET Q = PATTERN STORED IN X0
2300        TRA     QPTRN           FOR X0=5  SET Q = PATTERN STORED IN X0
2310        TRA     QPTRN           FOR X0=6  SET Q = PATTERN STORED IN X0
2320        TRA     QPTRN           FOR X0=7  SET Q = PATTERN STORED IN X0
2330        TRA     QPTRN           FOR X0=8  SET Q = PATTERN STORED IN X0
2340        TRA     QPTRN           FOR X0=9  SET Q = PATTERN STORED IN X0
2350        TRA     QPTRN           FOR X0=10 SET Q = PATTERN STORED IN X0
2360        TRA     QPTRN           FOR X0=11 SET Q = PATTERN STORED IN X0
2370        TRA     QLFLG           FOR X0=12 Q = .LFLAG FOR T146,T163,T174
2380        TRA     T144            FOR X0=13 TYPE T144 GETS TIME TYPES IN Q
2390        TRA     T160            FOR X0=14 TYPE T160 GETS FAULT TYPE IN Q
2400        TRA     T16A            FOR X0=15 TYPE T16 Q=SSNAME (LODPRM+8)
2410        TRA     T16B            FOR X0=16 TYPE T16 Q=SSNAME (POPPR1+11)
2420        TRA     T165            FOR X0=17 TYPE T165                     GMF
2430        TRA     DFRCHK          FOR X0=18 T138 (SOME),T139,             GMF
2440*                               T146 (T136), T149, T163                 GMF
2450        TRA     T172            FOR X0=19 TYPE T172 (SOME)              GMF
2460        TRA     T146            FOR X0=20 TYPE T146 (SOME)              GMF
2470        TRA     T180            FOR X0=21 TYPE T180                     GMF
2480*       CONTROL COMES HERE FOR PATTERN=22 (T179)                        GMF
2490        STX3    SAVQ            UST ADDRESS OF RE-CONNECTED SESSION     GMF
2500        LDQ     SAVQ            GET ENTIRE Q-REGISTER FOR TRACE         GMF
2510        TRA     MAKTR           MAKE TRACE T179                         GMF
2520*  END OF TRANSFER TABLE                                                GMF
2530T180    EAQ     0,4             GET NEW UST ADDRESS IN QU               GMF
2540        TRA     MAKTR           MAKE TRACE T180                         GMF
2550QPTRN   EAQ     0,0             PATTERN --> Q FROM X0 FOR T173,T175     GMF
2560        QRL     18              MOVE PATTERN TO QL                      GMF
```

Figure J-5. (Part 5 of 20)

```
2570          TRA     MAKTR           GO MAKE TRACE                          GMF
2580QLFLG     LDQ     .LFLAG,2        T146,T163,T174 NEED .LFLAG BITS 18-35
  90          ANQ     =0777777,DL     IN QL                                  GMF
2600          CMPX1   =146,DU         CHECK IF T146                          GMF
2610          TZE     LDQU            YES--GO GET .LFLG2 IN QU               GMF
2620          TRA     MAKTR           GO MAKE TRACE T163, T174               GMF
2630T144      LDQ     -1,3            TIME TYPES - .LTM00 THRU .LTM5         GMF
2640          EAX4    0,QL            OLD TYPE LOCATION                      GMF
2650          TMI     STORQL          -1?                                    GMF
2660          EAX4    -61,4           NO - CONVERT TO ACTUAL TIME TYPE       GMF
2670STORQL    SXL4    SAVQ            SAVE OLD TYPE                          GMF
2680          EAX4    0,QU            NEW TYPE LOCATION                      GMF
2690          EAX4    -61,4           CONVERT TO ACTUAL TIME TYPE            GMF
2700          STX4    SAVQ            SAVE NEW TYPE                          GMF
2710          LDQ     SAVQ            NEW TYPE IN QU, OLD TYPE IN QL         GMF
2720          TRA     MAKTR           GO MAKE TRACE                          GMF
2730T160      LDQ     SREGS+4         FAULT TYPE IN                          GMF
2740          CMPQ    5,DL            DO NOT CAPTUR   AULT TYPE 5            GMF
2750          TZE     EXIT1           X                                      GMF
2760          CMPQ    10,DL           OR 10                                  GMF
2770          TZE     EXIT1           X                                      GMF
2780          CMPQ    =4,DL           IS THIS A DERAIL FAULT                 GMF
2790          TNZ     MAKTR           NO, GO MAKE TRACE                      GMF
2800          LDX3    .TESSB          ELSE, MUST RETRIEVE DERAIL #           GMF
2810          ANX3    =0777000,DU     ISOLATE SS BASE ADDRESS                GMF
2820          LDQ     .LFLAG,2        IF THIS IS                             GMF
2830          CANQ    =0100000,DL        A MASTER SS                         GMF
  40          TZE     *+3                                                    GMF
2850          LDX3    18                 GET DERAIL LOCATION DIRECTLY        GMF
2860          TRA     *+2                                                    GMF
2870          ADLX3   18              ELSE ADD IN RELATIVE IC UPON ENTRY     GMF
2880          LDQ     -1,3            ACTUAL DRL INSTRUCTION AT IC-1         GMF
2890          EAQ     0,QU            LEAVE DERAIL # IN UPPER                GMF
2900          ADLQ    =4,DL           PUT FAULT TYPE (DERAIL=4) IN LOWER     GMF
2910          TRA     MAKTR           GO MAKE TRACE                          GMF
2920T16A      LDX3    SREGS+4         POINTER TO SSNAME IN X3 FROM OLD AU    GMF
2930          LDQ     0,3             ASCII SSNAME IN Q                      GMF
2940          TRA     MAKTR           GO MAKE TRACE T16                      GMF
2950T16B      LDX3    SREGS           SAVED X0 --> X3                        GMF
2960          LDX3    0,3             POINTER TO SSNAME IN X3                GMF
2970          LDQ     0,3             ASCII SSNAME IN Q                      GMF
2980          TRA     MAKTR           GO MAKE TRACE T16                      GMF
2990T165      LDQ     .LFLAG,2        WANT TO CHECK                          GMF
3000          ANQ     =0000040,DL     BIT 30 OF .LFLAG                       GMF
3010          TZE     EXIT1           DONT MAKE TRACE IF BIT 30 OFF          GMF
3020          TRA     MAKTR           MAKE TRACE T165 IF BIT 30 ON           GMF
3030DFRCHK    SZN     .LCJID,2        TEST DEFERRED JOB NO. IN UST           GMF
3040          TNZ     CHK146          NONZERO--DEFERRED USER                 GMF
3050          LDQ     .LFLG2,2        CHECK IF COMMAND FILE                  GMF
3060          CANQ    =0001000,DU     IS BIT 8 ON?                           GMF
3070          TZE     NRMAL           NO --> NOT COMMAND FILE                GMF
```

Figure J-5. (Part 6 of 20)

```
3080          CMPX1    =146,DU          HAVE COMMAND FILE; CHECK IF T146     GMF
3090          TZE      MAK136           YES - MAKE THE T146 A T136           GMF
3100          CMPX1    =138,DU          CHECK IF T138                        GMF
3110          TZE      MAKTR            YES - MAKE T138 (COMMAND FILE USER)  GMF
3120          ANQ      =0020000,DU      IS BIT 4 ON (TALK MODE)              GMF
3130          TZE      EXIT1            NO --> DONT TRACE                    GMF
3140          CMPX1    =163,DU          YES -- CHECK IF T163                 GMF
3150          TZE      QLFLG            YES --> GO MAKE T163                 GMF
3160          TRA      EXIT1            NO --> DONT TRACE                    GMF
3170NRMAL     CMPX1    =149,DU          CHECK IF T149                        GMF
3180          TZE      MAKTR            YES -- MAKE TRACE T149               GMF
3190          CMPX1    =139,DU          CHECK IF T139                        GMF
3200          TZE      MAKTR            YES -- MAKE T139                     GMF
3210          CMPX1    =138,DU          CHECK IF T138                        GMF
3220          TZE      EXIT1            YES - NO TRACE (NORMAL USER)         GMF
3230          TRA      QLFLG            HAVE T163 OR T146 (NEED .LFLAG)      GMF
3240*         IF TRACE IS T146 (DEFERRED USER), MAKE IT A T136 AND TRACE     GMF
3250*         IT, OR IF TRACE IS T138 (DEFERRED USER) TRACE IT, ELSE EXIT    GMF
3260CHK146    CMPX1    =146,DU          IS THIS T146?                        GMF
3270          TNZ      CHK138           NO - SEE IF T138                     GMF
3280MAK136    SBA      =01200,DL        YES - MAKE THE T146 A T136 TRACE     GMF
3290          TRA      QFLAGS           GO MAKE T136 AFTER PICK UP .LFLAG,.LFLG2
3300CHK138    CMPX1    =138,DU          CHECK IF T138                        GMF
3310          TZE      MAKTR            YES - MAKE T138 (DEFERRED USER)      GMF
3320          TRA      EXIT1            NO - NO TRACE                        GMF
3330QFLAGS    LDQ      .LFLAG,2         T146, T136 GET .LFLAG                GMF
3340          ANQ      =0777777,DL      IN QL                                GMF
3350LDQU      LDX4     .LFLG2,2         GET .LFLG2 IN X4                     GMF
3360          STQ      SAVQ             PUT Q IN SAVQ                        GMF
3370          EAQ      0,4              .LFLG2 IN QU                         GMF
3380          ORQ      SAVQ             .LFLAG BACK IN QL                    GMF
3390          TRA      MAKTR            GO MAKE T136 OR T146                 GMF
3400T172      LDQ      .LFILE,2         PROGRAM STACK POINTER IN QU          GMF
3410          LDQ      0,QU             CURRENT ENTRY POINTER IN QU          GMF
3420          LDQ      0,QU             PROGRAM DESCRIPTOR POINTER IN QU     GMF
3430          LDQ      0,QU             ASCII SSNAME IN Q                    GMF
3440          CMPQ     NU               NEWUSER COMMAND?                     GMF
3450          TZE      EXIT1            YES - DONT TRACE                     GMF
3460          LDQ      0,DL             SET Q=0 FOR THIS T172                GMF
3470          TRA      MAKTR            GO MAKE TRACE T172                   GMF
3480T146      LDQ      =0020000,DL      FORCE Q BITS 21,22 = 01              GMF
3490          TRA      LDQU             GO GET .LFLG2 IN QU                  GMF
3500*  HAVE T181 HERE.  MUST PREPARE A AND Q                                 GMF
3510T181      STZ      SSFLG            ZERO                                 GMF
3520          STZ      SAVSS              SOME                               GMF
3530          STZ      BTSFLG               FLAGS                            GMF
3540          STZ      BTSLAL                 AND SWITCHES                   GMF
3550          STQ      LIN181           SAVE LINE ID FOR TRACE               GMF
3560          LDX3     .TAMPT           POINTER TO DUMMY MAP ENTRY           GMF
3570CHKNXT    LDX3     0,3              POINTER TO NEXT ACTIVE ENTRY         GMF
3580          TZE      SSNM             NO MORE ENTRIES                      GMF
```

Figure J-5. (Part 7 of 20)

```
3590        LDQ     1,3             WORD 2 OF ENTRY                          GMF
3600        QLS     18              BIT 18 ON?                               GMF
  10        TMI     BTOS            YES - BTOS BUFFER ENTRY                  GMF
3620        SZN     SSFLG           SS ENTRY ENCOUNTERED YET?                GMF
3630        TNZ     CHKNXT          YES - GET NEXT ENTRY                     GMF
3640        STQ     UST             NO - SAVE ENTRY'S UST POINTER            GMF
3650        CMPX2   UST             IS IT THIS USER'S ENTRY?                 GMF
3660        TNZ     CHKNXT          NO - GET NEXT ENTRY                      GMF
3670        LDA     0,3             YES - WORD 1 OF ENTRY                    GMF
3680        ARS     9               SS SIZE IN A BITS 30-35                  GMF
3690        LDQ     1,3             WORD 2 OF ENTRY                          GMF
3700        LRS     9               SS SIZE IN Q 0-8, SS LAL IN Q 9-17       GMF
3710        STQ     SAVSS           SAVE Q                                   GMF
3720        AOS     SSFLG           SET SS ENTRY INDICATOR                   GMF
3730        SZN     BTSFLG          BTOS ENTRY ENCOUNTERED YET?              GMF
3740        TZE     CHKNXT          NO - GET NEXT ENTRY                      GMF
3750SSNM    LDQ     SAVSS           SS SIZE AND SS LAL IN QU                 GMF
3760        ANQ     =0777777,DU     ZERO OUT QL                              GMF
3770        ORQ     BTSLAL          ADD BTOS LAL TO Q BITS 18-26             GMF
3780        STX2    TYPE            STORE UST ADDRESS                        GMF
3790        LDA     .LFILE,2        PROGRAM STACK POINTER IN AU              GMF
3800        LDX3    0,AU*           ADDRESS OF SUBSYSTEM NAME                GMF
3810        LDA     0,3             SUBSYSTEM NAME                           GMF
3820        STA     SSNAM                                                    GMF
3830        EAX3    LIN181          ADDRESS OF LINE ID+SUBSYSTEM NAME        GMF
3840        LDA     TYPE            GET A-REGISTER FOR TRACE                 GMF
3850        TRA     MAKTR           GO MAKE TRACE                            GMF
  50BTOS    ANQ     =0377777,DU     CLEAR BTOS INDICATOR BIT                 GMF
3870        STQ     UST             SAVE ENTRY'S UST POINTER                 GMF
3880        CMPX2   UST             IS IT THIS USER'S BTOS ENTRY?            GMF
3890        TNZ     CHKNXT          NO - GET NEXT ENTRY                      GMF
3900        LDQ     1,3             YES - WORD 2 OF ENTRY                    GMF
3910        QRS     18              BTOS LAL IN Q BITS 18-26                 GMF
3920        ANQ     =0777000,DL     ZERO OUT REST OF Q                       GMF
3930        STQ     BTSLAL          SAVE BTOS LAL                            GMF
3940        AOS     BTSFLG          SET BTOS ENTRY INDICATOR                 GMF
3950        SZN     SSFLG           SS ENTRY ENCOUNTERED YET?                GMF
3960        TZE     CHKNXT          NO - GET NEXT ENTRY                      GMF
3970        TRA     SSNM            YES - FINISH TRACE ENTRY                 GMF
3980GE182   LDA     TYPE            A GETS 0000000TTT74                      GMF
3990        CMPX0   0,DU            CHECK PATTERN                            GMF
4000        TZE     MAKTR           GO MAKE TRACE (PATTERN=0 FOR T182,T183)
4010*  STILL HAVE T184, T185 WITH PATTERNS 22,23                             GMF
4020        CMPX0   23,DU           CHECK IF PATTERN=23                      GMF
4030        TZE     T185            YES -- HAVE T185                         GMF
4040*       HAVE TRACE T184 HERE                                             GMF
4050        LDQ     SREGS+4         IS SIZE NEGATIVE                         GMF
4060        TPL     MAKTR           NO--CORE NOT RELEASED, MAKE TRACE T184
4070        LCQ     SREGS+4         COMPLEMENT NEGATIVE SIZE                 GMF
4080        ORQ     =0400000,DU     SET BIT 0 TO INDICATE SIZE DECREASE      GMF
4090        TRA     MAKTR           GO MAKE TRACE T184                       GMF
```

Figure J-5. (Part 8 of 20)

CH-2

```
4100T185  LDQ      0,DL            CLEAR ACCUMULATOR                      GMF
4110      LDX3     .TAMPT          GET POINTER TO 1ST ENTRY (DUMMY)       GMF
4120PROCES ADLQ    0,3             ACCUMULATE HOLE SIZES (BITS 27-35)     GMF
4130      LDX3     0,3             GET RELATIVE POINTER TO NEXT ENTRY     GMF
4140      TNZ      PROCES          IF NON-ZERO, GO FETCH AND PROCESS      GMF
4150      QLS      9               IF ZERO, THIS WAS LAST ONE. POSITION   GMF
4160      EAX3     0,QL               AND STORE IN INSTRUCTION            GMF
4170      STX3     INSTR              X                                   GMF
4180      LXL3     .TACOR          SWAP END ADDR IS TSS SIZE              GMF
4190      EAA      0,3             PUT IN A UPPER; 0 --> AL               GMF
4200      SBLX3    .TACOR          CALC SWAP AREA SIZE                    GMF
4210      EAQ      0,3             POSITION IN QREG  (UPPER)              GMF
4220INSTR ORQ      **,DL           OR IN AVAILABLE SWAP CORE SIZE         GMF
4230      ORA      TYPE            REINSERT TYPE TO LOWER OF A            GMF
4240      LXL3     .TCNOU          CURRENT NUMBER OF USERS IN X3          GMF
4250MAKTR MME      .EMM            ENTER MASTER MODE                      GMF
4260      XEC      .CRTRC+2        CHECK TRACE MECHANISM ON/OFF           GMF
4270      TSS      EXIT1           TRACE IS OFF/SEE NOTE BELOW            GMF
4280* NOTE-DURING OPERATION ABOVE SHOULD NEVER BE TAKEN SINCE IF          GMF
4290* TRACE MECHANISM IS OFF, SO WILL T74 AND WE WONT GET                 GMF
4300* THIS FAR.                                                          GMF
4310      LDX0     .CRTRC+3        ADDRESS --> X0                         GMF
4320      TSX1     1,0*            MAKE TRACE ENTRY                       GMF
4330EXIT1 LREG     SREGS,$         RELOAD REG; CNTRL RTRNS HERE AFTER TRACE
4340      RET      IC,$            RETURN TO TS MODULE                    GMF
4350*                                                                     GMF
4360TYPE  BSS      1               USED TO STORE TYPE                     GMF
4370IC    BSS      1               SAVE AREA FOR IC                       GMF
4380SSFLG BSS      1               SUBSYSTEM FLAG                         GMF
4390SAVSS BSS      1               SAVE SUBSYSTEM                         GMF
4400BTSFLG BSS     1               BTOS FLAG                              GMF
4410BTSLAL BSS     1               BTOS LOWER ADDRESS LIMIT               GMF
4420UST   BSS      1               UST POINTER                            GMF
4430SAVQ  BSS      1               WORD TO SAVE Q REGISTER                GMF
4440SREGS 8BSS     8               AREA TO SAVE REGISTERS                 GMF
4450LIN181EBSS     1               T181 LINE ID STORED HERE               GMF
4460SSNAM BSS      1               SUBSYSTEM NAME FOR T181                GMF
4470GMF002 DEC     0               FLAG FOR TRACE ON OR OFF               GMF
4480NU    ASCII    1,NEWU                                                 GMF
4490$     MODIFY   SOURCE,OBJECT,TSSG
4500$     GMAP                                                        TSSG
4510$     UPDATE   LIST                                               TSSG/GMF
4520$     ALTER    82 -            ***** GMF ALTERS *****
4530      SYMREF   TREP                                                GMF
4540      XED      TREP            EXECUTE DOUBLE AT TREP              GMF
4550      PMC      ON                                                  GMF
4560      VFD      18/0,12/164,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
4570$     MODIFY   SOURCE,OBJECT,TSSH
4580$     GMAP                                                        TSSH
4590$     UPDATE   LIST                                               TSSH/GMF
4600$     ALTER    24              ***** GMF ALTER *****
```

Figure J-5. (Part 9 of 20)

```
4610        PMC     ON                                                  GMF
4620$       ALTER   185             ***** GMF ALTERS *****
  30        SYMREF  TREP                                                GMF
4640        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP           GMF
4650        VFD     18/16,12/16,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
4660$       ALTER   272             ***** ALTER FROM SYSTEM PATCHES *****
4670        LDQ     2,0             PICK UP RESTRICT BITS               #28I
4680$       ALTER   378             ***** GMF ALTERS *****
4690        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP           GMF
4700        VFD     18/0,12/171,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
4710$       ALTER   404             ***** GMF ALTERS *****
4720        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP           GMF
4730        VFD     18/15,12/16,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
4740$       MODIFY  SOURCE,OBJECT,TSSI
4750$       GMAP                                                            TSSI
4760$       UPDATE  LIST                                                    TSSI/GMF
4770$       ALTER   19              ***** ENABLE PMC *****
4780        PMC     ON                                                  GMF
4790$       ALTER   207             ***** GMF ALTERS *****
4800        SYMREF  TREP                                                GMF
4810        XED     TREP            EXECUTE DOUBLE AT TREP              GMF
4820        VFD     18/19,12/172,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
4830$       ALTER   633,647         ***** ALTERS FROM SYSTEM PATCHES *****
4840        CANQ    .BSAC,DL        WAS IT RESTRICTED                   #27I
4850        TZE     0,1             NO                                  #27I
4860        LDA     .WWUSM,2        RESTRICTED USERS                    #27I
4870        ERA     =020000,DL      HAVE BIT 20 OFF                     #27I
  80        CANA    =0120000,DL     AND BIT 20 OFF (SIC)                #27I
4890        TNZ     0,1             TRANSFER FOR NON-RESTRICT           #27I
4900        LDXO    =0706,DU        BREACH CODE 76                      #27I
4910        TRA     BRCH            SHOUT HIM DOWN                      #27I
4920$       MODIFY  SOURCE,OBJECT,TSSJ
4930$       GMAP                                                            TSSJ
4940$       UPDATE  LIST                                                    TSSJ/GMF
4950$       ALTER   65              ***** GMF ALTERS *****
4960        SYMREF  TREP                                                GMF
4970TRMAC   MACRO                                                       GMF
4980        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP           GMF
4990        VFD     18/#1,12/#2,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
5000        ENDM    TRMAC                                               GMF
5010        PMC     ON                                                  GMF
5020$       ALTER   89              ***** GMF ALTER *****
5030        TRMAC   23,185          PATTERN VALUE, TRACE TYPE           GMF
5040$       ALTER   246             ***** GMF ALTER *****
5050        TRMAC   0,177           PATTERN VALUE, TRACE TYPE           GMF
5060*       ALTER   454,454         ***** ALTER FROM SYSTEM PATCHES *****
5070*       EAX1    1               PUT ONE LINE IN MESSAGE             #52A
5080$       ALTER   455,458         ***** ALTERS FROM SYSTEM PATCHES *****
5090        STCQ    STD4,70                                             #40G
5100        LDA     .FBT32,DL                                           #40G
5110        CANA    .TLFLG                                              #40G
```

Figure J-5. (Part 10 of 20)

CH-2

```
5120        TZE     MSR325                                                  #40G
5130$       ALTER   691             ***** GMF ALTER *****
5140        TRMAC   0,137           PATTERN VALUE, TRACE TYPE               GMF
5150$       ALTER   982             ***** GMF ALTER *****
5160        TRMAC   18,149          PATTERN VALUE, TRACE TYPE               GMF
5170$       ALTER   1271,1271       ***** ALTER FROM SYSTEM PATCHES *****
5180        STA     0,3                                                     #34I
5190$       ALTER   1558            ***** GMF ALTER *****
5200        TRMAC   0,143           PATTERN VALUE, TRACE TYPE               GMF
5210$       ALTER   1836            ***** GMF ALTER *****
5220        TRMAC   1,172           PATTERN VALUE, TRACE TYPE               GMF
5230$       ALTER   1919            ***** GMF ALTER *****
5240        TRMAC   12,146          PATTERN VALUE, TRACE TYPE               GMF
5250$       ALTER   1994            ***** GMF ALTER *****
5260        TRMAC   0,138           PATTERN VALUE, TRACE TYPE               GMF
5270$       MODIFY  SOURCE,OBJECT,TSSK
5280$       GMAP                                                                TSSK
5290$       UPDATE  LIST                                                        TSSK/GMF
5300$       ALTER   26              ***** GMF ALTERS *****
5310        SYMREF  TREP                                                    GMF
5320TRMAC   MACRO                                                           GMF
5330        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP               GMF
5340        VFD     18/#1,12/#2,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74    GMF
5350        ENDM    TRMAC                                                   GMF
5360        PMC     ON                                                      GMF
5370$       ALTER   92              ***** GMF ALTER *****
5380        TRMAC   0,148           PATTERN VALUE, TRACE TYPE               GMF
5390$       ALTER   266,266         ***** ALTER FROM SYSTEM PATCHES *****
5400        TRA     *+6,$           SKIP RELM                               #37J
5410$       ALTER   286             ***** GMF ALTER *****
5420        TRMAC   0,164           PATTERN VALUE, TRACE TYPE               GMF
5430$       ALTER   1122            ***** GMF ALTER *****
5440        TRMAC   0,142           PATTERN VALUE, TRACE TYPE               GMF
5450$       ALTER   1138            ***** GMF ALTER *****
5460        TRMAC   0,143           PATTERN VALUE, TRACE TYPE               GMF
5470$       ALTER   1819            ***** ALTERS FROM SYSTEM PATCHES *****
5480        CMPX7   100,DU          ADDRESS >= 144                          #83J
5490        TMI     KOTER1          IF NOT, ILLEGAL ADDRESS                 #83J
5500$       ALTER   1824            ***** ALTERS FROM SYSTEM PATCHES *****
5510        STX2    4,4             STORE UST ADDRESS IN UPPER HALF         #57J
5520        LDX1    =3HDRL,DU       SET FOR DRL FILACT                      #57J
5530        SXL1    4,4             STORE IT INTO LOWER HALF                #57J
5540$       ALTER   1957            ***** ALTER FROM SYSTEM PATCHES *****
5550        STZ     10,0                                                    #77K
5560$       ALTER   2253            ***** GMF ALTER *****
5570        TRMAC   1,175           PATTERN VALUE, TRACE TYPE               GMF
5580$       ALTER   2500            ***** GMF ALTER *****
5590        TRMAC   0,176           PATTERN VALUE, TRACE TYPE               GMF
5600$       ALTER   2797,2798       ***** ALTERS FROM SYSTEM PATCHES *****
5610REMFL   LDX0    .FU0,DU         LET PATDEA KNOW WE HAVE BREACHED        #45L
5620        ORSX0   .WWUSI,2        --CUZ WE MUST DEALLOCATE THE FILE       #45L
```

Figure J-5. (Part 11 of 20)

```
5630REMFL2 LDX0     .LSIZE,2        SO WE NEED THE FILE ENTRY              #45L
5640       ANX0     =0777000,DU     --FROM W10 OF FMS BUFFER               #45L
  50       STX0     3,IC            --SO WE CAN SET UP A CALL              #45L
5660       ADLX0    .LDRL,2         --TO PATDEA.                           #45L
5670       LXL0     2,0                                                    #45L
5680       ADLX0    **,DU                                                  #45L
5690       SXL0     BUFCAL                                                 #45L
5700       LXL4     10,0                                                   #45L
5710       .EMM.                                                           #45L
5720       ADLX4    .CRLAL,6                                               #45L
5730       LDA      1,4             FILENAME+0                             #45L
5740       LDQ      2,4             FILENAME+1                             #45L
5750       TSS      *+1                                                    #45L
5760       TSX1     PATDEA          THIS IS THE CALL                       #45L
5770BUFCAL ZERO     0,**            ZERO, BUFFER ADDRESS WITH BAR          #45L
5780       ZERO     0,0             +1,NEVER                               #45L
5790       ZERO     0,0             +2,NEVER                               #45L
5800       TSX1     LINSRV          GO WAIT FOR REAL CC TO FINISH          #45L
5810       SYMDEF   FVCC                                                   #45L
5820FVCC   TSX3     *+1                                                    #45L
5830       EAX2     -.LCC-1,3       OK,THE REAL CC HAS FINISHED            #45L
5840       STZ      -1,3            --AND THE FILE IS NOW DEACCESSED       #45L
5850       LDX0     .FU0,DU                                                #45L
5860       ERSX0    .WWUSI,2                                               #45L
5870       EAX0     8               LETS BREACH THIS USER                  #45L
5880       TRA      BRCH                                                   #45L
5890       SYMDEF   FVCC1                                                  #45L
  00FVCC1  TSX3     *+1             THE SMC WAS BUSY AND PATDEA            #45L
5910       EAX2     -.LCC-1,3       --COULD NOT DEALLOCATE THE FILE.       #45L
5920       STZ      -1,3                                                   #45L
5930       TRA      REMFL2          GO RETRY PATDEA                        #45L
5940$      ALTER    3484,3485       ***** ALTER #30G FROM SYSTEM PATCHES *****
5950$      ALTER    3655            ***** GMF ALTER *****
5960       TRMAC    0,143           PATTERN VALUE, TRACE TYPE              GMF
5970$      ALTER    3989,3989       ***** ALTERS FROM SYSTEM PATCHES *****
5980       ANA      -1,DL                                                  #57I
5990       ALR      24                                                     #57I
6000$      ALTER    4000,4000       ***** ALTERS FROM SYSTEM PATCHES *****
6010       LDA      .LBUF,2                                                #57I
6020       ANA      -1,DL                                                  #57I
6030       ALR      24                                                     #57I
6040       ORA      DATPT2                                                 #57I
6050$      ALTER    4058,4058       ***** ALTER FROM SYSTEM PATCHES *****
6060DATPT2 OCT      3400000                                                #57I
6070$      ALTER    4062,4062       ***** ALTER FROM SYSTEM PATCHES *****
6080DATPT3 OCT      4400000                                                #57I
6090$      ALTER    4071            ***** GMF ALTER *****
6100       TRMAC    0,143           PATTERN VALUE, TRACE TYPE              GMF
6110$      ALTER    4160            ***** GMF ALTER *****
6120       TRMAC    9,173           PATTERN VALUE, TRACE TYPE              GMF
6130$      ALTER    4403            ***** GMF ALTER *****
```

Figure J-5. (Part 12 of 20)

```
6140        TRMAC   0,143           PATTERN VALUE, TRACE TYPE              GMF
6150$       ALTER   4515            ***** GMF ALTER *****
6160        TRMAC   0,16            PATTERN VALUE, TRACE TYPE              GMF
6170$       ALTER   4624            ***** GMF ALTER *****
6180        TRMAC   0,142           PATTERN VALUE, TRACE TYPE              GMF
6190$       ALTER   4654            ***** GMF ALTER *****
6200        TRMAC   0,143           PATTERN VALUE, TRACE TYPE              GMF
6210$       ALTER   4808            ***** GMF ALTER *****
6220        TRMAC   0,143           PATTERN VALUE, TRACE TYPE              GMF
6230$       ALTER   5437            ***** ALTER #62J FROM SYSTEM PATCHES *****
6240BAD     .TSS    SWH4                                                   #62J
6250$       ALTER   5450            ***** ALTERS FROM SYSTEM PATCHES *****
6260        LXL0    3,3             SY**                                   #62J
6270        TZE     BAD,$           YES                                    #62J
6280        LXL0    3,4             SY**                                   #62J
6290        TZE     BAD,$           YES                                    #62J
6300$       ALTER   5528            ***** GMF ALTER *****
6310        TRMAC   11,173          PATTERN VALUE, TRACE TYPE              GMF
6320$       ALTER   5545            ***** GMF ALTER *****
6330        TRMAC   2,175           PATTERN VALUE, TRACE TYPE              GMF
6340$       ALTER   5553            ***** GMF ALTER *****
6350        TRMAC   0,176           PATTERN VALUE, TRACE TYPE              GMF
6360$       ALTER   5685            ***** GMF ALTER *****
6370        TRMAC   3,175           PATTERN VALUE, TRACE TYPE              GMF
6380$       ALTER   5736            ***** GMF ALTER *****
6390        TRMAC   0,176           PATTERN VALUE, TRACE TYPE              GMF
6400$       ALTER   5904            ***** GMF ALTER *****
6410        TRMAC   10,173          PATTERN VALUE, TRACE TYPE              GMF
6420$       ALTER   6157            ***** GMF ALTER *****
6430        TRMAC   4,175           PATTERN VALUE, TRACE TYPE              GMF
6440$       ALTER   6573            ***** GMF ALTER *****
6450        TRMAC   0,147           PATTERN VALUE, TRACE TYPE              GMF
6460$       ALTER   6807            ***** ALTERS FROM SYSTEM PATCHES *****
6470*       NOTE  CHANGE THE PRECEDING CARD TO "6807,6807" IF
6480*       SITE OPTION #83A IS USED.
6490        LDA     .LFILE,2                                               #92K
6500        LDQ     0,AU*                                                  #92K
6510        LDA     2,QU                                                   #92K
6520        CANA    =0200000,DL                                            #92K
6530        TNZ     *+8                                                    #92K
6540*       LDA     =11520000       TIME LIMIT (SEC*64000) FOR DRL TASK    #83A
6550$       ALTER   6850,6856       ***** ALTER #10K FROM SYSTEM PATCHES *****
6560*                                                                      #10K
6570$       ALTER   7004,7004       ***** ALTERS FROM SYSTEM PATCHES *****
6580        EAX1    4                                                      #15J
6590        SZN     TSK155,*1                                              #15J
6600        TNZ     TSK955                                                 #15J
6610        STX4    TSK152                                                 #15J
6620        TSX1    TSXSPF                                                 #15J
6630TSK152  ZERO    **,REW                                                 #15J
6640        ZERO    .TCTM8                                                 #15J
```

Figure J-5. (Part 13 of 20)

```
6650$       ALTER   7072,7072       ***** ALTERS FROM SYSTEM PATCHES *****
6660TSK240  LDXO    TSK152                                              #15J
  70$       ALTER   7105            ***** GMF ALTER *****
6680        TRMAC   0,143           PATTERN VALUE, TRACE TYPE           GMF
6690$       ALTER   7215            ***** GMF ALTER *****
6700        TRMAC   8,173           PATTERN VALUE, TRACE TYPE           GMF
6710$       ALTER   7354            ***** GMF ALTER *****
6720        TRMAC   0,143           PATTERN VALUE, TRACE TYPE           GMF
6730$       ALTER   8205            ***** GMF ALTER *****
6740        TRMAC   0,143           PATTERN VALUE, TRACE TYPE           GMF
6750$       ALTER   8462            ***** GMF ALTER *****
6760        TRMAC   6,175           PATTERN VALUE, TRACE TYPE           GMF
6770$       ALTER   8498            ***** GMF ALTER *****
6780        TRMAC   0,176           PATTERN VALUE, TRACE TYPE           GMF
6790$       ALTER   8919            ***** GMF ALTER *****
6800        TRMAC   22,179          TRACE FOR CONN COMMAND              GMF
6810$       ALTER   8977            ***** ALTER FROM SYSTEM PATCHES *****
6820        STZ     .LKCC,2         NO CC WAITING                       #36L
6830$       ALTER   9254            ***** GMF ALTER *****
6840        TRMAC   5,175           PATTERN VALUE, TRACE TYPE           GMF
6850$       ALTER   9263            ***** GMF ALTER *****
6860        TRMAC   0,176           PATTERN VALUE, TRACE TYPE           GMF
6870$       ALTER   9296,9296       ***** ALTER FROM SYSTEM PATCHES *****
6880        TRA     3,IC                                                #18H
6890$       ALTER   9398            ***** ALTERS FROM SYSTEM PATCHES *****
6900        ANA     -1,DL           SAVE LOWER HALF ONLY                #09L
6910        ORA     =0202020,DU     BLANK OUT THE UPPER HALF            #09L
  20$       ALTER   9409            ***** ALTER FROM SYSTEM PATCHES *****
0930        STZ     ACCNT+17        ZERO OUT WORD 18                    #09L
6940$       ALTER   9445,9446       ***** ALTERS FROM SYSTEM PATCHES *****
6950        ANA     =07777,DL       MASK LINE ID                        #33G
6960        CMPA    =07777,DL       CHECK LINE FOR FALSE                #33G
6970$       ALTER   9454,9454       ***** ALTER FROM SYSTEM PATCHES *****
6980        NOP     .CRLGQ+4,ID                                         #72H
6990$       ALTER   9489,9489       ***** ALTER FROM SYSTEM PATCHES *****
7000        LDA     .LFLAG,2        IF SUBSYS KNOWN                     #33L
7010$       MODIFY  SOURCE,OBJECT,TSSL
7020$       GMAP                                                                TSSL
7030$       UPDATE  LIST                                                        TSSL/GMF
7040$       ALTER   37              ***** GMF ALTERS *****
7050        SYMREF  TREP                                                GMF
7060TRMAC   MACRO                                                       GMF
7070        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP           GMF
7080        VFD     18/#1,12/#2,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74 GMF
7090        ENDM    TRMAC                                               GMF
7100        PMC     ON                                                  GMF
7110$       ALTER   176             ***** GMF ALTER *****
7120        TRMAC   12,174          PATTERN VALUE, TRACE TYPE           GMF
7130$       ALTER   1021            ***** GMF ALTER *****
7140        TRMAC   0,182           PATTERN VALUE, TRACE TYPE           GMF
7150$       ALTER   1086            ***** GMF ALTER *****
```

Figure J-5. (Part 14 of 20)

```
7160        TRMAC   22,184          PATTERN VALUE, TRACE TYPE                GMF
7170$       ALTER   1315            ***** GMF ALTER *****
7180        TRMAC   21,181          PATTERN VALUE, TRACE TYPE                GMF
7190$       ALTER   1966            ***** GMF ALTER *****
7200        TRMAC   13,144          PATTERN VALUE, TRACE TYPE                GMF
7210$       ALTER   2255            ***** GMF ALTER *****
7220        TRMAC   0,148           PATTERN VALUE, TRACE TYPE                GMF
7230$       ALTER   2366            ***** GMF ALTER *****
7240        TRMAC   0,148           PATTERN VALUE, TRACE TYPE                GMF
7250$       ALTER   2536            ***** GMF ALTER *****
7260        TRMAC   0,135           VIP PAGING TRACE                         GMF
7270$       ALTER   2943            ***** GMF ALTER *****
7280        TRMAC   18,163          PATTERN VALUE, TRACE TYPE                GMF
7290$       ALTER   2949            ***** GMF ALTER *****
7300        TRMAC   18,146          TRACE WILL BE T136 IF DEFERRED OR CRUN
7310$       MODIFY  SOURCE,OBJECT,TSSM
7320$       GMAP                                                             TSSM
7330$       UPDATE  LIST                                                     TSSM/GMF
7340$       ALTER   69              ***** GMF ALTERS *****
7350        SYMREF  TREP                                                     GMF
7360        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP                GMF
7370        VFD     18/14,12/160,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74    GMF
7380        PMC     ON                                                       GMF
7390$       ALTER   760             ***** GMF ALTERS *****
7400        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP                GMF
7410        VFD     18/0,12/176,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74     GMF
7420$       ALTER   852             ***** GMF ALTERS *****
7430        CMPA    =6HTRACE        TEST FOR NEW COMMAND                     GMF
7440        TZE     GMF001                                                   GMF
7450$       ALTER   860             ***** GMF ALTERS *****
7460*                                                                        GMF
7470*                                                                        GMF
7480*       TRACE ON/OFF                                                     GMF
7490*                                                                        GMF
7500*                                                                        GMF
7510        SYMREF  GMF002                                                   GMF
7520GMF001  EAA     0,QU            ISOLATE OPERAND                          GMF
7530        CMPA    =3HOFF,DU       TEST LEGAL VALUES                        GMF
7540        TZE     GMF003                                                   GMF
7550        CMPA    =3HON ,DU                                                GMF
7560        TZE     GMF004                                                   GMF
7570        STQ     GMF999          STORE INTO CONSOLE MESSAGE               GMF
7580        EAA     GMF899          DCW ADDRESS                              GMF
7590        TRA     GMF100          WRITE MESSAGE                            GMF
7600*       TRACE OFF                                                        GMF
7610        SYMREF  JSTOFF                                                   GMF
7620GMF003  SZNC    GMF002          SET INDICATOR OFF, TEST IT               GMF
7630        TZE     2,IC            DON'T MAKE TRACE IF ALREADY OFF          GMF
7640        XED     JSTOFF          MAKE TRACE TYPE T190                     GMF
7650        EAA     GMF898          DCW ADDRESS                              GMF
7660        TRA     GMF100          WRITE MESSAGE                            GMF
```

Figure J-5. (Part 15 of 20)

```
7670*       TRACE ON                                                        GMF
7680GMF004  STC2    GMF002          SET FLAG TO NONZERO                     GMF
  90        EAA     GMF897          DCW ADDRESS                             GMF
7700GMF100  ARL     18              POSITION DCW ADDRESS                    GMF
7710        STCA    GMF101,07       STORE INTO GEINOS SEQUENCE              GMF
7720        MME     GEINOS          WRITE MESSAGE TO CONSOLE                GMF
7730        WTYP                                                            GMF
7740GMF101  ZERO    EXTS6A,**                                               GMF
7750        ZERO                                                            GMF
7760        TRA     EXTS08          GET NEXT ENTRY                          GMF
7770GMF897  IOTD    *+1,5                                                   GMF
7780        OCT     770117171717                                            GMF
7790        BCI     4,*T/S GMF TRACE STARTED                                GMF
7800GMF898  IOTD    *+1,5                                                   GMF
7810        OCT     770117171717                                            GMF
7820        BCI     4,*T/S GMF TRACE STOPPED                                GMF
7830GMF899EIOTD     *+1,6                                                   GMF
7840        OCT     770117171717                                            GMF
7850        BCI     4,*T/S INVALID GMF OPTION                               GMF
7860GMF999  BCI     1,                                                      GMF
7870$       ALTER   956             ***** GMF ALTERS *****
7880        VFD     18/TREP,018/717200 EXECUTE DOUBLE AT TREP               GMF
7890        VFD     18/0,12/161,06/74 HAVE 18/PATTERN, 12/TRACE #, 06/74    GMF
7900$       MODIFY  SOURCE,OBJECT,TSSN
7910$       GMAP                                                                TSSN
7920$       UPDATE  LIST                                                        TSSN/GMF
7930$       ALTER   22              ***** ENABLE PMC *****
  40        PMC     ON                                                      GMF
7950$       ALTER   126,126         ***** ALTER FROM SYSTEM PATCHES *****
7960        TNZ     PATCH                                                   #81J
7970$       ALTER   140             ***** ALTERS FROM SYSTEM PATCHES *****
7980        INHIB   SAVE,ON                                                 #81J
7990PATCH   LDA     .LBUF,2                                                 #81J
8000        LCQ     =O10000,DL                                              #81J
8010        MME     .EMM                                                    #81J
8020        LXL4    .CRCGT                                                  #81J
8030        LDX1    .CRCGT                                                  #81J
8040        XED     .CRMPG                                                  #81J
8050        DRL     .CRCGT+1                                                #81J
8060        XED     .CRMPG+2                                                #81J
8070L1      CMK     ,1                                                      #81J
8080        TZE     FND1,$                                                  #81J
8090        ADLX1   11,DU                                                   #81J
8100        SBLX4   1,DU                                                    #81J
8110        TNZ     L1,$                                                    #81J
8120NCON    STC2    .CRCGT+1                                                #81J
8130        XED     .CROGT                                                  #81J
8140        TSS     GUST3N                                                  #81J
8150FND1    SZN     0,1                                                     #81J
8160        TPL     NCON,$                                                  #81J
8170        LDAC    4,1                                                     #81J
```

Figure J-5. (Part 16 of 20)

CH-2

```
8180        STC2    .CRCGT+1                                                    #81J
8190        XED     .CROGT                                                      #81J
8200        TSS     *+1                                                         #81J
8210        INHIB   RESTORE                                                     #81J
8220        STA     105,2                                                       #81J
8230        TRA     GUST3N                                                      #81J
8240$       ALTER   381             ***** GMF ALTERS *****
8250        SYMREF  TREP                                                        GMF
8260TRMAC   MACRO                                                               GMF
8270        VFD     18/TREP,018/717200  EXECUTE DOUBLE AT TREP                  GMF
8280        VFD     18/#1,12/#2,C6/74 HAVE 18/PATTERN, 12/TRACE #, 06/74        GMF
8290        ENDM    TRMAC                                                       GMF
8300        TRMAC   21,180          PATTERN VALUE, TRACE TYPE                   GMF
8310$       ALTER   685             ***** GMF ALTER *****
8320        TRMAC   0,182           PATTERN VALUE, TRACE TYPE                   GMF
8330$       ALTER   788             ***** GMF ALTER *****
8340        TRMAC   0,183           PATTERN VALUE, TRACE TYPE                   GMF
8350$       ALTER   1099            ***** GMF ALTER *****
8360R.T165  TRMAC   17,165          PATTERN VALUE, TRACE TYPE                   GMF
8370        TRA     R.NORM          CONTINUE WHERE LEFT OFF                     GMF
8380$       ALTER   1102,1102       ***** GMF ALTER *****
8390        TRA     R.T165          MAKE TRACE T165                             GMF
8400$       ALTER   1118            ***** GMF ALTER *****
8410        TRMAC   18,138          PATTERN VALUE, TRACE TYPE                   GMF
8420$       ALTER   1142            ***** GMF ALTER *****
8430        TRMAC   17,165          PATTERN VALUE, TRACE TYPE                   GMF
8440$       ALTER   1160            ***** GMF ALTERS *****
8450R.T145  TRMAC   0,145           PATTERN VALUE, TRACE TYPE                   GMF
8460        TRA     R.NORM          CONTINUE IN ORIGINAL SEQUENCE               GMF
8470$       ALTER   1162,1162       ***** GMF ALTER *****
8480        TRA     R.T145          DON'T ADD INSTRUCTIONS HERE                 GMF
8490$       ALTER   1193            ***** GMF ALTER *****
8500        TRMAC   0,143           PATTERN VALUE, TRACE TYPE                   GMF
8510$       ALTER   1234            ***** GMF ALTER *****
8520        TRMAC   0,143           PATTERN VALUE, TRACE TYPE                   GMF
8530$       ALTER   1236            ***** GMF ALTER *****
8540        TRMAC   0,140           PATTERN VALUE, TRACE TYPE                   GMF
8550$       ALTER   1280            ***** GMF ALTER *****
8560        TRMAC   0,148           PATTERN VALUE, TRACE TYPE                   GMF
8570$       ALTER   1288            ***** GMF ALTER *****
8580        TRMAC   20,146          PATTERN VALUE, TRACE TYPE                   GMF
8590$       ALTER   1326            ***** GMF ALTER *****
8600        TRMAC   0,143           PATTERN VALUE, TRACE TYPE                   GMF
8610$       ALTER   1348            ***** GMF ALTER *****
8620        TRMAC   0,145           PATTERN VALUE, TRACE TYPE                   GMF
8630$       ALTER   1356            ***** GMF ALTER *****
8640        TRMAC   20,146          PATTERN VALUE, TRACE TYPE                   GMF
8650$       ALTER   1420            ***** GMF ALTER *****
8660        TRMAC   0,143           PATTERN VALUE, TRACE TYPE                   GMF
8670$       ALTER   1443            ***** GMF ALTER *****
8680        TRMAC   0,145           PATTERN VALUE, TRACE TYPE                   GMF
```

Figure J-5. (Part 17 of 20)

```
8690$       ALTER   1451            ***** GMF ALTER *****
°700        TRMAC   20,146         PATTERN VALUE, TRACE TYPE          GMF
  10$       ALTER   1488            ***** GMF ALTER *****
8720        TRMAC   0,143           PATTERN VALUE, TRACE TYPE          GMF
8730$       ALTER   1510            ***** GMF ALTER *****
8740        TRMAC   0,143           PATTERN VALUE, TRACE TYPE          GMF
8750$       ALTER   1545            ***** GMF ALTER *****
8760        TRMAC   18,139          PATTERN VALUE, TRACE TYPE          GMF
8770$       ALTER   1600            ***** GMF ALTERS *****
8780T145    LDA     -1,3            GET GEROUT VFD WORD                GMF
8790        ANA     =0770000,DL     GET GEROUT OP-CODE                 GMF
8800        CMPA    =0210000,DL     PAPER TAPE START?                  GMF
8810        TZE     T145A           YES-MAKE TRACE T145                GMF
8820        CMPA    =0220000,DL     PAPER TAPE CONTINUE?               GMF
8830        TNZ     R.NORM          NO-CONTINUE                        GMF
8840T145A   TRMAC   0,145           PATTERN VALUE, TRACE TYPE          GMF
8850        TRA     R.NORM          CONTINUE IN ORIGINAL SEQUENCE      GMF
8860*
8870*       NOTE—THE A-REGISTER NEED NOT BE SAVED, SINCE R.NORM+1      GMF
8880*       RESTORES ALL REGISTERS                                     GMF
8890$       ALTER   1604,1604       ***** GMF ALTER *****
8900        TRA     T145            DON'T ADD INSTRUCTIONS HERE        GMF
8910$       MODIFY  SOURCE,OBJECT,TSSO
8920$       GMAP                                                           TSSO
8930$       UPDATE  LIST                                                   TSSO/GMF
8940$       ALTER   9               ***** ENABLE PMC *****             GMF
°950        PMC     ON                                                 GMF
 .60        SYMREF  TREP                                               GMF
8970TRMAC   MACRO                                                      GMF
8980        VFD     18/TREP,018/717200  EXECUTE DOUBLE AT TREP        GMF
8990        VFD     18/#1,12/#2,06/74   HAVE 18/PATTERN, 12/TRACE #    GMF
9000        ENDM    TRMAC                                              GMF
9010$       ALTER   322             ***** GMF ALTERS *****
9020        TRMAC   18,149          PATTERN VALUE, TRACE TYPE          GMF
9030$       ALTER   366             ***** GMF ALTER *****
9040        TRMAC   0,148           PATTERN VALUE, TRACE TYPE          GMF
9050$       ALTER   374             ***** GMF ALTER *****
9060        TRMAC   20,146          PATTERN VALUE, TRACE TYPE          GMF
9070$       ALTER   422             ***** GMF ALTER *****
9080        TRMAC   12,146          PATTERN VALUE, TRACE TYPE          GMF
9090$       ALTER   728             ***** GMF ALTER *****
9100        TRMAC   0,148           PATTERN VALUE, TRACE TYPE          GMF
9110$       ALTER   836             ***** ALTERS FROM SYSTEM PATCHES *****
9120        LDA     COUNT                                              Ø69I
9130        STA     CNTR                                               Ø69I
9140$       ALTER   886,886         ***** ALTER FROM SYSTEM PATCHES *****
9150        TSX1    P2                                                 Ø69I
9160$       ALTER   906,906         ***** ALTER FROM SYSTEM PATCHES *****
9170        TSX1    P2                                                 Ø69I
9180$       ALTER   913             ***** ALTER FROM SYSTEM PATCHES *****
9190COUNT   DEC     -48                                                Ø69I
```

Figure J-5. (Part 18 of 20)

```
9200SAVAR  OCT     0                                                    ∅69I
9210P2     ESTA    SAVAR                                                ∅69I
9220       AOS     CNTR                                                 ∅69I
9230       TZE     3,IC                                                 ∅69I
9240       LDA     SAVAR                                                ∅69I
9250       TRA     KOTBCK                                               ∅69I
9260       STX5    CNTR                                                 ∅69I
9270       SXL6    CNTR                                                 ∅69I
9280       MME     .EMM                                                 ∅69I
9290       EAX7    0,7                                                  ∅69I
9300       TNZ     *+3,$                                                ∅69I
9310       LDAQ    .CRMCM                                               ∅69I
9320       SMCM    0                                                    ∅69I
9330       LDX5    CNTR,$                                               ∅69I
9340       LXL6    CNTR,$                                               ∅69I
9350       LDA     COUNT,$                                              ∅69I
9360       STA     CNTR,$                                               ∅69I
9370       LDA     SAVAR,$                                              ∅69I
9380       TSS     KOTBCK                                               ∅69I
9390CNTR   OCT     0                                                    ∅69I
9400GMASK  OCT     17,17                                                ∅69I
9410$      ALTER   933          ***** ALTERS FROM SYSTEM PATCHES *****
9420       LXL4    .LBUF,2                                              ∅75H
9430       ANX4    =0370000,DU                                          ∅75H
9440       SBLX4   =0130000,DU                                          ∅75H
9450       TPL     KOTBC0                                               ∅75H
9460$      ALTER   1123         ***** GMF ALTERS *****
9470T.137B EAX2    -.LKCC-1,3   SET UP X2=UST ADDRESS                   GMF
9480       TRMAC   0,137        PATTERN VALUE, TRACE TYPE               GMF
9490       EAX1    KOTBCC+2     THESE TWO INSTRUCTIONS REPLACE THE      GMF
9500       TRA     KSTAT        TSX1 KSTAT REPLACED BELOW BY TRA T.137B
9510$      ALTER   1124,1124     ***** GMF ALTER *****
9520       TRA     T.137B       TO MAKE TRACE OUT OF LINE               GMF
9530$      ALTER   1239,1240     ***** ALTERS FROM SYSTEM PATCHES *****
9540       ZERO    .MFS03,.MFS03 LOAD MODULE .MFS03                     ∅81A
9550       ZERO    .MFS04,.MFS04                                        ∅81A
9560       ZERO    .MFS09,.MFS09                                        ∅81A
9570       ZERO    .MFS36,.MFS36                                        ∅81A
9580       ZERO    .MFS61,.MFS61                                        ∅81A
9590       ZERO    .MFS08,.MFS08                                        ∅81A
9600$      ALTER   1244,1244     ***** ALTER FROM SYSTEM PATCHES *****
9610       TZE     SSALD7       THERE ARE NONE, SKIP THIS               ∅50J
9620$      ALTER   1393-         ***** GMF ALTERS *****
9630       MME     GEINOS       PRINT STARTING MESSAGE                  GMF
9640       WTYP                                                         GMF
9650       ZERO    IN930,MAIN01                                         GMF
9660       ZERO    STATUS                                               GMF
9670       MME     GEROAD       WAIT                                    GMF
9680$      ALTER   1447          ***** GMF ALTERS *****
9690MAIN01 IOTD    *+1,9                                                GMF
9700       OCT     770117171717                                         GMF
```

Figure J-5. (Part 19 of 20)

```
9710        BCI     3,*T/S GMF VERSION                                          GMF
9720        DATE                                                                GMF
  30        BCI     4, SUCCESSFULLY LOADED                                      GMF
9740TSC     BCI     1,.TSSEC                                                    #96J
9750H1      DEC     -1                                                          #96J
9760$       ALTER   2296            ***** ALTERS FROM SYSTEM PATCHES *****
9770        STA     H1                                                          #96J
9780        LDA     IN022                                                       #96J
9790        CMPA    TSC                                                         #96J
9800        TNZ     P2A                                                         #96J
9810        LDA     H1                                                          #96J
9820        ADLA    =0200,DL                                                    #96J
9830        TRA     *+2                                                         #96J
9840P2A     LDA     H1                                                          #96J
9850$       INCLUDE
9860$       ENTRY   MAIN
9870$       EXECUTE
9880$       ENDLD
9890$       ENDEDIT
9900$       ENDCOPY
9910$       PRMFL   M*,R,S,B29IDPX0/TSS6.4.1
9920$       FILE    *R,Z2R
9930$       FILE    R*,X3S,30L
9940$       SYSEDIT
9950ENDFILE/TSS-GECALL/
9960$       LIMITS  ,40K
9970$       FILE    R*,X3R
  80$       TAPE    Q*,X5D,,99999,,RING-IN  ** SUPPLY TAPE NUMBER **
```

Figure J-5. (Part 20 of 20)

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