J E S 2 J O B L O G

```
14.37.37 JOB   32  $HASP373 VTOC     STARTED - INIT  3 - CLASS S - SYS HMVS
14.37.37 JOB   32  IEF403I VTOC - STARTED - TIME=14.37.37
14.37.37 JOB   32  IEFACTRT LOADMACS/IEBUPDTE/00:00:00.05/00:00:00.09/00000/VTOC
14.37.37 JOB   32  IEFACTRT IEBUPDTE/IEBUPDTE/00:00:00.01/00:00:00.01/00000/VTOC
14.37.37 JOB   32  IEFACTRT ASM1    /IFOX00  /00:00:00.22/00:00:00.38/00000/VTOC
14.37.37 JOB   32  IEFACTRT ASM2    /IFOX00  /00:00:00.18/00:00:00.22/00000/VTOC
14.37.38 JOB   32  IEFACTRT ASM3    /IFOX00  /00:00:00.22/00:00:00.26/00000/VTOC
14.37.38 JOB   32  IEFACTRT ASM4    /IFOX00  /00:00:00.17/00:00:00.20/00000/VTOC
14.37.38 JOB   32  IEFACTRT ASM5    /IFOX00  /00:00:00.06/00:00:00.09/00000/VTOC
14.37.38 JOB   32  IEFACTRT ASM6    /IFOX00  /00:00:00.25/00:00:00.29/00000/VTOC
14.37.38 JOB   32  IEFACTRT ASM7    /IFOX00  /00:00:00.13/00:00:00.17/00000/VTOC
14.37.39 JOB   32  IEFACTRT LKED    /IEWL    /00:00:00.04/00:00:00.05/00000/VTOC
14.37.39 JOB   32  IEF404I VTOC - ENDED - TIME=14.37.39
14.37.39 JOB   32  $HASP395 VTOC     ENDED

------ JES2 JOB STATISTICS ------

 05 APR 25 JOB EXECUTION DATE

     7,886 CARDS READ

    14,166 SYSOUT PRINT RECORDS

         0 SYSOUT PUNCH RECORDS

      0.02 MINUTES EXECUTION TIME
```

```
1     //VTOC     JOB (SYS),'INSTALL VTOC',CLASS=S,MSGCLASS=X                  JOB   32
      ***
      *** SOURCE: CBT (V129) FILE #112
      *** TARGET: SYS2.CMDLIB   SYS2.HELP
      ***
      ********************************************************************
      *** This job installs the VTOC TSO command and help.                 *
      ********************************************************************
      ***
      *** Last update: 2025/04/05 10:32    via Rob Prins
      ***
      *** Note: original VTOC command + some updates to add the RACF and
      ***       UPDATE indicator and Y2K support.
      ***       newer VTOC modules from FILE112 from CBT won't assemble
      ***       correctly on MVS 3.8J with IFOX00.
      ***
      //INSTALL PROC SOUT='*',                <=== SYSOUT CLASS
      //             LIB='SYS2.CMDLIB',       <=== TARGET LOAD LIBRARY
      //             HELP='SYS2.HELP',        <=== HELP LIBRARY
      //             SYSTS=SYSDA,             <=== UNITNAME FOR WORK DATASETS
      //             ASMBLR=IFOX00,           <=== NAME OF YOUR ASSEMBLER
      //             ALIB='SYSC.LINKLIB',     <=== LOCATION OF YOUR ASSEMBLER
      //             MACLIB='SYS1.MACLIB',    <=== MACLIB DATASET NAME
      //             AMODGEN='SYS1.AMODGEN'   <=== AMODGEN DATASET NAME
      //*
      //LOADMACS EXEC PGM=IEBUPDTE,PARM=NEW
      //SYSPRINT DD  SYSOUT=&SOUT
      //SYSUT2   DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(,PASS),
      //             SPACE=(TRK,(120,,5),RLSE),DCB=(SYS1.MACLIB)
      //*
      //IEBUPDTE EXEC PGM=IEBUPDTE,PARM=NEW
      //SYSPRINT DD  SYSOUT=&SOUT
      //SYSUT1   DD  DSN=&HELP,DISP=SHR
      //SYSUT2   DD  DSN=&HELP,DISP=SHR
      //*
      //ASM1    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
      //STEPLIB  DD  DSN=&ALIB,DISP=SHR
      //SYSTERM  DD  SYSOUT=&SOUT
      //SYSPRINT DD  SYSOUT=&SOUT
      //SYSLIB   DD  DSN=&MACLIB,DISP=SHR
      //         DD  DSN=&AMODGEN,DISP=SHR
      //         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
      //SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(,PASS,DELETE),
      //             SPACE=(TRK,(30,15))
      //*
      //ASM2    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
      //STEPLIB  DD  DSN=&ALIB,DISP=SHR
      //SYSTERM  DD  SYSOUT=&SOUT
      //SYSPRINT DD  SYSOUT=&SOUT
      //SYSLIB   DD  DSN=&MACLIB,DISP=SHR
      //         DD  DSN=&AMODGEN,DISP=SHR
      //         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
      //SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
      //SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
      //*
      //ASM3    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
```

```
//STEPLIB  DD  DSN=&ALIB,DISP=SHR
//SYSTERM  DD  SYSOUT=&SOUT
//SYSPRINT DD  SYSOUT=&SOUT
//SYSLIB   DD  DSN=&MACLIB,DISP=SHR
//         DD  DSN=&AMODGEN,DISP=SHR
//         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
//SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
//*
//ASM4    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
//STEPLIB  DD  DSN=&ALIB,DISP=SHR
//SYSTERM  DD  SYSOUT=&SOUT
//SYSPRINT DD  SYSOUT=&SOUT
//SYSLIB   DD  DSN=&MACLIB,DISP=SHR
//         DD  DSN=&AMODGEN,DISP=SHR
//         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
//SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
//*
//ASM5    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
//STEPLIB  DD  DSN=&ALIB,DISP=SHR
//SYSTERM  DD  SYSOUT=&SOUT
//SYSPRINT DD  SYSOUT=&SOUT
//SYSLIB   DD  DSN=&MACLIB,DISP=SHR
//         DD  DSN=&AMODGEN,DISP=SHR
//         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
//SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
//*
//ASM6    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
//STEPLIB  DD  DSN=&ALIB,DISP=SHR
//SYSTERM  DD  SYSOUT=&SOUT
//SYSPRINT DD  SYSOUT=&SOUT
//SYSLIB   DD  DSN=&MACLIB,DISP=SHR
//         DD  DSN=&AMODGEN,DISP=SHR
//         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
//SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
//*
//ASM7    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
//STEPLIB  DD  DSN=&ALIB,DISP=SHR
//SYSTERM  DD  SYSOUT=&SOUT
//SYSPRINT DD  SYSOUT=&SOUT
//SYSLIB   DD  DSN=&MACLIB,DISP=SHR
//         DD  DSN=&AMODGEN,DISP=SHR
//         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
//SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
//SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
//*
//LKED    EXEC PGM=IEWL,COND=(0,NE),
//             PARM='XREF,LET,LIST,SIZE=(600K,64K),RENT,REUS,REFR'
```

```
        //SYSPRINT DD  SYSOUT=&SOUT
        //SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,10)
        //SYSLMOD  DD  DSN=&LIB,DISP=SHR
        //SYSLIN   DD  DSN=&&SYSLIN,DISP=(OLD,DELETE)
        //         DD  DDNAME=SYSIN
        //        PEND
        ***
 2      //        EXEC INSTALL
        ***
 3      ++INSTALL PROC SOUT='*',                <=== SYSOUT CLASS
        ++             LIB='SYS2.CMDLIB',       <=== TARGET LOAD LIBRARY
        ++             HELP='SYS2.HELP',        <=== HELP LIBRARY
        ++             SYSTS=SYSDA,             <=== UNITNAME FOR WORK DATASETS
        ++             ASMBLR=IFOX00,           <=== NAME OF YOUR ASSEMBLER
        ++             ALIB='SYSC.LINKLIB',     <=== LOCATION OF YOUR ASSEMBLER
        ++             MACLIB='SYS1.MACLIB',    <=== MACLIB DATASET NAME
        ++             AMODGEN='SYS1.AMODGEN'   <=== AMODGEN DATASET NAME
        ***
 4      ++LOADMACS EXEC PGM=IEBUPDTE,PARM=NEW
 5      ++SYSPRINT DD  SYSOUT=&SOUT
 6      ++SYSUT2   DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(,PASS),
        ++             SPACE=(TRK,(120,,5),RLSE),DCB=(SYS1.MACLIB)
        ***
 7      //LOADMACS.SYSIN DD *
        ***------------------------------------------------------------ LOADMACS
        ***
 8      ++IEBUPDTE EXEC PGM=IEBUPDTE,PARM=NEW
 9      ++SYSPRINT DD  SYSOUT=&SOUT
10      ++SYSUT1   DD  DSN=&HELP,DISP=SHR
11      ++SYSUT2   DD  DSN=&HELP,DISP=SHR
        ***
12      //IEBUPDTE.SYSIN DD *
        ***------------------------------------------------------------ IEBUPDTE
        ***
13      ++ASM1    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
14      ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
15      ++SYSTERM  DD  SYSOUT=&SOUT
16      ++SYSPRINT DD  SYSOUT=&SOUT
17      ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
18      ++         DD  DSN=&AMODGEN,DISP=SHR
19      ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
20      ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
21      ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
22      ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
23      ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(,PASS,DELETE),
        ++             SPACE=(TRK,(30,15))
        ***
24      //ASM1.SYSIN DD *
        ***------------------------------------------------------ ASM: VTOC
        ***
25      ++ASM2    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
26      ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
27      ++SYSTERM  DD  SYSOUT=&SOUT
28      ++SYSPRINT DD  SYSOUT=&SOUT
29      ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
30      ++         DD  DSN=&AMODGEN,DISP=SHR
31      ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
32      ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
33      ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
34      ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
35      ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
```

```
         ***
36       //ASM2.SYSIN DD *
         ***------------------------------------------------------ ASM: VTOCCHEK
         ***
37       ++ASM3    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
38       ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
39       ++SYSTERM  DD  SYSOUT=&SOUT
40       ++SYSPRINT DD  SYSOUT=&SOUT
41       ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
42       ++         DD  DSN=&AMODGEN,DISP=SHR
43       ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
44       ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
45       ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
46       ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
47       ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
         ***
48       //ASM3.SYSIN DD *
         ***------------------------------------------------------ ASM: VTOCEXCP
         ***
49       ++ASM4    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
50       ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
51       ++SYSTERM  DD  SYSOUT=&SOUT
52       ++SYSPRINT DD  SYSOUT=&SOUT
53       ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
54       ++         DD  DSN=&AMODGEN,DISP=SHR
55       ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
56       ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
57       ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
58       ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
59       ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
         ***
60       //ASM4.SYSIN DD *
         ***------------------------------------------------------ ASM: VTOCFORM
         ***
61       ++ASM5    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
62       ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
63       ++SYSTERM  DD  SYSOUT=&SOUT
64       ++SYSPRINT DD  SYSOUT=&SOUT
65       ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
66       ++         DD  DSN=&AMODGEN,DISP=SHR
67       ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
68       ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
69       ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
70       ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
71       ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
         ***
72       //ASM5.SYSIN DD *
         ***------------------------------------------------------ ASM: VTOCMSGX
         ***
73       ++ASM6    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
74       ++STEPLIB  DD  DSN=&ALIB,DISP=SHR
75       ++SYSTERM  DD  SYSOUT=&SOUT
76       ++SYSPRINT DD  SYSOUT=&SOUT
77       ++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
78       ++         DD  DSN=&AMODGEN,DISP=SHR
79       ++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
80       ++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
81       ++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
82       ++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
83       ++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
         ***
```

```
//ASM6.SYSIN DD *
***------------------------------------------------------ ASM: VTOCPRNT
***
++ASM7    EXEC PGM=&ASMBLR,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
++STEPLIB  DD  DSN=&ALIB,DISP=SHR
++SYSTERM  DD  SYSOUT=&SOUT
++SYSPRINT DD  SYSOUT=&SOUT
++SYSLIB   DD  DSN=&MACLIB,DISP=SHR
++         DD  DSN=&AMODGEN,DISP=SHR
++         DD  DSN=&&LCLMAC,UNIT=&SYSTS,DISP=(OLD,PASS)
++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
++SYSUT2   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
++SYSUT3   DD  UNIT=&SYSTS,SPACE=(TRK,(30,15))
++SYSPUNCH DD  DSN=&&SYSLIN,UNIT=&SYSTS,DISP=(MOD,PASS)
***
//ASM7.SYSIN DD *
***------------------------------------------------------ ASM: VTOCSORT
***
++LKED    EXEC PGM=IEWL,COND=(0,NE),
++             PARM='XREF,LET,LIST,SIZE=(600K,64K),RENT,REUS,REFR'
++SYSPRINT DD  SYSOUT=&SOUT
++SYSUT1   DD  UNIT=&SYSTS,SPACE=(TRK,10)
++SYSLMOD  DD  DSN=&LIB,DISP=SHR
++SYSLIN   DD  DSN=&&SYSLIN,DISP=(OLD,DELETE)
++         DD  DDNAME=SYSIN
//LKED.SYSIN DD *
***------------------------------------------------------ LKED
```

```
 STMT NO. MESSAGE
-
    5      IEF653I SUBSTITUTION JCL - SYSOUT=*
    6      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(,PASS),
    9      IEF653I SUBSTITUTION JCL - SYSOUT=*
   10      IEF653I SUBSTITUTION JCL - DSN=SYS2.HELP,DISP=SHR
   11      IEF653I SUBSTITUTION JCL - DSN=SYS2.HELP,DISP=SHR
   13      IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   14      IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   15      IEF653I SUBSTITUTION JCL - SYSOUT=*
   16      IEF653I SUBSTITUTION JCL - SYSOUT=*
   17      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   18      IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   19      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   20      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   21      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   22      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   23      IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(,PASS,DELETE),
   25      IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   26      IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   27      IEF653I SUBSTITUTION JCL - SYSOUT=*
   28      IEF653I SUBSTITUTION JCL - SYSOUT=*
   29      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   30      IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   31      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   32      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   33      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   34      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   35      IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   37      IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   38      IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   39      IEF653I SUBSTITUTION JCL - SYSOUT=*
   40      IEF653I SUBSTITUTION JCL - SYSOUT=*
   41      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   42      IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   43      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   44      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   45      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   46      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   47      IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   49      IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   50      IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   51      IEF653I SUBSTITUTION JCL - SYSOUT=*
   52      IEF653I SUBSTITUTION JCL - SYSOUT=*
   53      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   54      IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   55      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   56      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   57      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   58      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   59      IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   61      IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   62      IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   63      IEF653I SUBSTITUTION JCL - SYSOUT=*
   64      IEF653I SUBSTITUTION JCL - SYSOUT=*
   65      IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   66      IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   67      IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   68      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   69      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   70      IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
```

```
   71     IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   73     IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   74     IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   75     IEF653I SUBSTITUTION JCL - SYSOUT=*
   76     IEF653I SUBSTITUTION JCL - SYSOUT=*
   77     IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   78     IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   79     IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   80     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   81     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   82     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   83     IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   85     IEF653I SUBSTITUTION JCL - PGM=IFOX00,REGION=2048K,PARM=(NOLOAD,DECK,'LINECNT=55')
   86     IEF653I SUBSTITUTION JCL - DSN=SYSC.LINKLIB,DISP=SHR
   87     IEF653I SUBSTITUTION JCL - SYSOUT=*
   88     IEF653I SUBSTITUTION JCL - SYSOUT=*
   89     IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
   90     IEF653I SUBSTITUTION JCL - DSN=SYS1.AMODGEN,DISP=SHR
   91     IEF653I SUBSTITUTION JCL - DSN=&&LCLMAC,UNIT=SYSDA,DISP=(OLD,PASS)
   92     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   93     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   94     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,(30,15))
   95     IEF653I SUBSTITUTION JCL - DSN=&&SYSLIN,UNIT=SYSDA,DISP=(MOD,PASS)
   98     IEF653I SUBSTITUTION JCL - SYSOUT=*
   99     IEF653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(TRK,10)
  100     IEF653I SUBSTITUTION JCL - DSN=SYS2.CMDLIB,DISP=SHR
IEF236I ALLOC. FOR VTOC LOADMACS
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 251  ALLOCATED TO SYSUT2
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC LOADMACS - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00032.SO0111                          SYSOUT
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC            PASSED        *------290
IEF285I   VOL SER NOS= WORK00.
IEF285I   JES2.JOB00032.SI0101                          SYSIN
IEF373I STEP /LOADMACS/ START 25095.1437
IEF374I STEP /LOADMACS/ STOP  25095.1437 CPU    0MIN 00.04SEC SRB    0MIN 00.01SEC VIRT    48K SYS   244K
**** JOB NAME: VTOC     JOBCARD READ 2025/095 14:37:37 370/148 VS2 R03.8 HMVS ******************************************************
*                                                                                                                                *
*  STEP NUMBER:          1  USER CORE:         48K  START TIME:   14:37:37     CPU TIME:    00:00:00.05  ACTIVE TIME:  00:00:00.07 *
*  STEP NAME:     LOADMACS  SYSTEM CORE:      244K  STOP TIME:    14:37:37     SRB TIME:    00:00:00.01  ALLOC TIME:   14:37:37    *
*  PROGRAM NAME:  IEBUPDTE  REGION SIZE:      512K  ELAPSED TIME: 00:00:00.09  TCB TIME:    00:00:00.04  PROGRAM LOAD: 14:37:37    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                               *
*                           JES2 CARDS:        332       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                2,323      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                                *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   251/D3350       290                                                                                                          *
**********************************************************************************************************************************
IEF236I ALLOC. FOR VTOC IEBUPDTE
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 151  ALLOCATED TO SYSUT1
IEF237I 151  ALLOCATED TO SYSUT2
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC IEBUPDTE - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00032.SO0112                          SYSOUT
IEF285I   SYS2.HELP                                     KEPT          *--------0
IEF285I   VOL SER NOS= MVS000.
IEF285I   SYS2.HELP                                     KEPT          *--------5
IEF285I   VOL SER NOS= MVS000.
IEF285I   JES2.JOB00032.SI0102                          SYSIN
```

```
IEF373I STEP /IEBUPDTE/ START 25095.1437
IEF374I STEP /IEBUPDTE/ STOP  25095.1437 CPU    0MIN 00.01SEC SRB    0MIN 00.00SEC VIRT    48K SYS   248K
*********************************************************************************************************************
*                                                                                                                   *
*  STEP NUMBER:          2  USER CORE:         48K  START TIME:   14:37:37     CPU TIME:    00:00:00.01  ACTIVE TIME:  00:00:00.01 *
*  STEP NAME:     IEBUPDTE  SYSTEM CORE:      248K  STOP TIME:    14:37:37     SRB TIME:    00:00:00.00  ALLOC TIME:   14:37:37    *
*  PROGRAM NAME:  IEBUPDTE  REGION SIZE:      512K  ELAPSED TIME: 00:00:00.01  TCB TIME:    00:00:00.01  PROGRAM LOAD: 14:37:37    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                  *
*                           JES2 CARDS:         35       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 108      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                   *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   151/D3350         0  151/D3350         5                                                                        *
*********************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM1
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00002
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 281  ALLOCATED TO SYSUT2
IEF237I 252  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM1 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0113                        SYSOUT
IEF285I   JES2.JOB00032.SO0114                        SYSOUT
IEF285I   SYS1.MACLIB                                 KEPT          *-------70
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                KEPT          *-------23
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC          PASSED        *-------24
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000001        DELETED       *------759
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000002        DELETED       *-------53
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000003        DELETED       *-------24
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN          PASSED        *------130
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0103                        SYSIN
IEF373I STEP /ASM1    / START 25095.1437
IEF374I STEP /ASM1    / STOP  25095.1437 CPU    0MIN 00.20SEC SRB    0MIN 00.02SEC VIRT  2048K SYS   280K
*********************************************************************************************************************
*                                                                                                                   *
*  STEP NUMBER:          3  USER CORE:       2048K  START TIME:   14:37:37     CPU TIME:    00:00:00.22  ACTIVE TIME:  00:00:00.37 *
*  STEP NAME:     ASM1       SYSTEM CORE:      280K  STOP TIME:    14:37:37     SRB TIME:    00:00:00.02  ALLOC TIME:   14:37:37    *
*  PROGRAM NAME:  IFOX00     REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.38  TCB TIME:    00:00:00.20  PROGRAM LOAD: 14:37:37    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                  *
*                           JES2 CARDS:         86       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                               5,947      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                   *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
```

```
*   253/D3350         0  253/D3350         0  150/D3350        70  250/D3350        23  251/D3350        24  390/D3390       759   *
*   281/D3380        53  252/D3350        24  280/D3380       130                                                                    *
*****************************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM2
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00004
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 281  ALLOCATED TO SYSUT2
IEF237I 252  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM2 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0115                        SYSOUT
IEF285I   JES2.JOB00032.SO0116                        SYSOUT
IEF285I   SYS1.MACLIB                                 KEPT          *-------47
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                KEPT          *-------14
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC          PASSED        *-------24
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000004        DELETED       *------692
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000005        DELETED       *-------41
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000006        DELETED       *-------20
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN          PASSED        *-------93
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0104                        SYSIN
IEF373I STEP /ASM2    / START 25095.1437
IEF374I STEP /ASM2    / STOP  25095.1437 CPU    0MIN 00.16SEC SRB    0MIN 00.02SEC VIRT  2048K SYS   256K
*****************************************************************************************************************************
*                                                                                                                           *
*  STEP NUMBER:          4  USER CORE:       2048K  START TIME:   14:37:37     CPU TIME:    00:00:00.18  ACTIVE TIME:  00:00:00.20 *
*  STEP NAME:     ASM2      SYSTEM CORE:      256K  STOP TIME:    14:37:37     SRB TIME:    00:00:00.02  ALLOC TIME:   14:37:37    *
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.22  TCB TIME:    00:00:00.16  PROGRAM LOAD: 14:37:37    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                            *
*                           JES2 CARDS:         81       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 5,110      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                             *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350        47  250/D3350        14  251/D3350        24  390/D3390       692   *
*   281/D3380        41  252/D3350        20  280/D3380        93                                                                    *
*****************************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM3
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00006
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
```

```
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 252  ALLOCATED TO SYSUT2
IEF237I 281  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM3 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0117                        SYSOUT
IEF285I   JES2.JOB00032.SO0118                        SYSOUT
IEF285I   SYS1.MACLIB                                 KEPT          *------121
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                KEPT          *-------59
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC          PASSED        *------100
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000007        DELETED       *------549
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000008        DELETED       *-------45
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000009        DELETED       *-------16
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN          PASSED        *-------38
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0105                        SYSIN
IEF373I STEP /ASM3    / START 25095.1437
IEF374I STEP /ASM3    / STOP  25095.1437 CPU    0MIN 00.20SEC SRB    0MIN 00.02SEC VIRT  2048K SYS   260K
*******************************************************************************************************************
*                                                                                                                 *
*  STEP NUMBER:          5  USER CORE:       2048K  START TIME:   14:37:37     CPU TIME:    00:00:00.22  ACTIVE TIME:  00:00:00.24 *
*  STEP NAME:     ASM3      SYSTEM CORE:      260K  STOP TIME:    14:37:38     SRB TIME:    00:00:00.02  ALLOC TIME:   14:37:37    *
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.26  TCB TIME:    00:00:00.20  PROGRAM LOAD: 14:37:37    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                 *
*                           JES2 CARDS:         56       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                5,054      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                 *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350       121  250/D3350        59  251/D3350       100  390/D3390       549   *
*   252/D3350        45  281/D3380        16  280/D3380        38                                                                  *
*******************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM4
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00008
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 281  ALLOCATED TO SYSUT2
IEF237I 252  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM4 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0119                        SYSOUT
```

```
IEF285I   JES2.JOB00032.SO0120                           SYSOUT
IEF285I   SYS1.MACLIB                                    KEPT          *-------48
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                   KEPT          *-------14
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC             PASSED        *-------24
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000010           DELETED       *------596
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000011           DELETED       *-------37
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000012           DELETED       *-------18
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN             PASSED        *-------65
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0106                           SYSIN
IEF373I STEP /ASM4    / START 25095.1437
IEF374I STEP /ASM4    / STOP  25095.1437 CPU    0MIN 00.15SEC SRB    0MIN 00.02SEC VIRT  2048K SYS   280K
*******************************************************************************************************************
*                                                                                                                 *
*  STEP NUMBER:          6  USER CORE:       2048K  START TIME:   14:37:38     CPU TIME:    00:00:00.17  ACTIVE TIME:  00:00:00.18 *
*  STEP NAME:     ASM4      SYSTEM CORE:      280K  STOP TIME:    14:37:38     SRB TIME:    00:00:00.02  ALLOC TIME:   14:37:38    *
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.20  TCB TIME:    00:00:00.15  PROGRAM LOAD: 14:37:38    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                 *
*                           JES2 CARDS:         52       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                              4,339      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                 *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350        48  250/D3350        14  251/D3350        24  390/D3390       596   *
*   281/D3380        37  252/D3350        18  280/D3380        65                                                                   *
*******************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM5
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00010
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 252  ALLOCATED TO SYSUT2
IEF237I 281  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM5 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                   KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                       KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0121                           SYSOUT
IEF285I   JES2.JOB00032.SO0122                           SYSOUT
IEF285I   SYS1.MACLIB                                    KEPT          *-------30
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                   KEPT          *--------8
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC             PASSED        *-------11
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000013           DELETED       *-------97
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000014           DELETED       *-------16
IEF285I   VOL SER NOS= WORK01.
```

```
IEF285I   SYS25095.T143737.RA000.VTOC.R0000015         DELETED       *--------8
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN           PASSED        *--------8
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0107                         SYSIN
IEF373I STEP /ASM5    / START 25095.1437
IEF374I STEP /ASM5    / STOP  25095.1437 CPU    0MIN 00.06SEC SRB    0MIN 00.00SEC VIRT  2048K SYS   280K
*******************************************************************************************************************
*                                                                                                                 *
*  STEP NUMBER:          7  USER CORE:       2048K  START TIME:   14:37:38     CPU TIME:    00:00:00.06  ACTIVE TIME:  00:00:00.07 *
*  STEP NAME:     ASM5      SYSTEM CORE:      280K  STOP TIME:    14:37:38     SRB TIME:    00:00:00.00  ALLOC TIME:   14:37:38    *
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.09  TCB TIME:    00:00:00.06  PROGRAM LOAD: 14:37:38    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                 *
*                           JES2 CARDS:          5       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 1,006      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                 *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350        30  250/D3350         8  251/D3350        11  390/D3390        97   *
*   252/D3350        16  281/D3380         8  280/D3380         8                                                                 *
*******************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM6
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00012
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 281  ALLOCATED TO SYSUT2
IEF237I 252  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM6 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                 KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                     KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0123                         SYSOUT
IEF285I   JES2.JOB00032.SO0124                         SYSOUT
IEF285I   SYS1.MACLIB                                  KEPT          *-------81
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                 KEPT          *-------17
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC           PASSED        *-------30
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000016         DELETED       *------857
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000017         DELETED       *-------52
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000018         DELETED       *-------28
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN           PASSED        *------105
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0108                         SYSIN
IEF373I STEP /ASM6    / START 25095.1437
IEF374I STEP /ASM6    / STOP  25095.1437 CPU    0MIN 00.23SEC SRB    0MIN 00.02SEC VIRT  2048K SYS   264K
*******************************************************************************************************************
*                                                                                                                 *
*  STEP NUMBER:          8  USER CORE:       2048K  START TIME:   14:37:38     CPU TIME:    00:00:00.25  ACTIVE TIME:  00:00:00.28 *
*  STEP NAME:     ASM6      SYSTEM CORE:      264K  STOP TIME:    14:37:38     SRB TIME:    00:00:00.02  ALLOC TIME:   14:37:38    *
```

```
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.29  TCB TIME:    00:00:00.23  PROGRAM LOAD: 14:37:38    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                                  *
*                           JES2 CARDS:        106       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 6,429      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                                  *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350        81  250/D3350        17  251/D3350        30  390/D3390       857   *
*   281/D3380        52  252/D3350        28  280/D3380       105                                                                  *
************************************************************************************************************************************
IEF236I ALLOC. FOR VTOC ASM7
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00014
IEF237I JES2 ALLOCATED TO SYSTERM
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 150  ALLOCATED TO SYSLIB
IEF237I 250  ALLOCATED TO
IEF237I 251  ALLOCATED TO
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 281  ALLOCATED TO SYSUT2
IEF237I 252  ALLOCATED TO SYSUT3
IEF237I 280  ALLOCATED TO SYSPUNCH
IEF237I JES2 ALLOCATED TO SYSIN
IEF142I VTOC ASM7 - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00032.SO0125                        SYSOUT
IEF285I   JES2.JOB00032.SO0126                        SYSOUT
IEF285I   SYS1.MACLIB                                 KEPT          *-------39
IEF285I   VOL SER NOS= MVSRES.
IEF285I   SYS1.AMODGEN                                KEPT          *-------12
IEF285I   VOL SER NOS= SMP000.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC          PASSED        *-------20
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000019        DELETED       *------528
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000020        DELETED       *-------26
IEF285I   VOL SER NOS= MVS381.
IEF285I   SYS25095.T143737.RA000.VTOC.R0000021        DELETED       *-------14
IEF285I   VOL SER NOS= WORK01.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN          PASSED        *-------46
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0109                        SYSIN
IEF373I STEP /ASM7    / START 25095.1437
IEF374I STEP /ASM7    / STOP  25095.1437 CPU    0MIN 00.12SEC SRB    0MIN 00.01SEC VIRT  2048K SYS   264K
************************************************************************************************************************************
*                                                                                                                                  *
*  STEP NUMBER:          9  USER CORE:       2048K  START TIME:   14:37:38     CPU TIME:    00:00:00.13  ACTIVE TIME:  00:00:00.15 *
*  STEP NAME:     ASM7      SYSTEM CORE:      264K  STOP TIME:    14:37:38     SRB TIME:    00:00:00.01  ALLOC TIME:   14:37:38    *
*  PROGRAM NAME:  IFOX00    REGION SIZE:     2048K  ELAPSED TIME: 00:00:00.17  TCB TIME:    00:00:00.12  PROGRAM LOAD: 14:37:38    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                                  *
*                           JES2 CARDS:         16       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 3,605      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                                  *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   253/D3350         0  253/D3350         0  150/D3350        39  250/D3350        12  251/D3350        20  390/D3390       528   *
*   281/D3380        26  252/D3350        14  280/D3380        46                                                                  *
************************************************************************************************************************************
IEF236I ALLOC. FOR VTOC LKED
IEF237I JES2 ALLOCATED TO SYSPRINT
```

```
IEF237I 390  ALLOCATED TO SYSUT1
IEF237I 151  ALLOCATED TO SYSLMOD
IEF237I 280  ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO
IEF142I VTOC LKED - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00032.SO0127                        SYSOUT
IEF285I   SYS25095.T143737.RA000.VTOC.R0000022         DELETED       *--------0
IEF285I   VOL SER NOS= WORK03.
IEF285I   SYS2.CMDLIB                                 KEPT          *-------11
IEF285I   VOL SER NOS= MVS000.
IEF285I   SYS25095.T143737.RA000.VTOC.SYSLIN           DELETED       *------486
IEF285I   VOL SER NOS= MVS380.
IEF285I   JES2.JOB00032.SI0110                        SYSIN
IEF373I STEP /LKED    / START 25095.1437
IEF374I STEP /LKED    / STOP  25095.1437 CPU    0MIN 00.03SEC SRB    0MIN 00.01SEC VIRT   512K SYS   248K
*******************************************************************************************************************
*                                                                                                                 *
*  STEP NUMBER:         10  USER CORE:        512K  START TIME:   14:37:38     CPU TIME:    00:00:00.04  ACTIVE TIME:  00:00:00.04 *
*  STEP NAME:     LKED      SYSTEM CORE:      248K  STOP TIME:    14:37:39     SRB TIME:    00:00:00.01  ALLOC TIME:   14:37:38    *
*  PROGRAM NAME:  IEWL      REGION SIZE:      512K  ELAPSED TIME: 00:00:00.05  TCB TIME:    00:00:00.03  PROGRAM LOAD: 14:37:38    *
*  CONDITION CODE:   00000  PERFORMANCE GROUP: 003                                                                 *
*                           JES2 CARDS:          0       SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT *
*                                                                 2,528      0 /    0        0           0 /    0          0 /    0 *
*                                                                                                                 *
*   ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT   *
*   390/D3390         0  151/D3350        11  280/D3380       486                                                                *
*******************************************************************************************************************
IEF237I 251  ALLOCATED TO SYS00001
IEF285I   SYS25095.T143739.RA000.VTOC.R0000001         KEPT          *--------0
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS25095.T143737.RA000.VTOC.LCLMAC           DELETED
IEF285I   VOL SER NOS= WORK00.
IEF375I  JOB /VTOC    / START 25095.1437
IEF376I  JOB /VTOC    / STOP  25095.1437 CPU    0MIN 01.20SEC SRB    0MIN 00.13SEC
```

```
./       ADD NAME=ALLOC
         MACRO                                                   00000100
&NAME    ALLOC &DUMMY,&PERM,&DSN=,&DDN=,&DDNRET=,&MEMBER=,&DISP=,      X00000200
               &VOL=,&UNIT=,&SYSOUT=,&FREE=,&COPIES=,&LABEL=,          X00000300
               &BLKSIZE=,&DEN=,&DSORG=,&KEYLEN=,&LRECL=,&RECFM=,       X00000400
               &PASWORD=,&DSNRET=,&MF=AUTO,&PREFIX=,&ERROR=,           X00000500
               &SPACE=,&F=,&FILE=,&DA=,&QNAME=,&DSORGRT=,              X00000600
               &VOLRET=,&DCBDSN=,&DCBDDN=,&SPECIAL=,&DDNTO=,           X00000700
               &FORMS=,&DEST=,&SSREQ=,&FORUSER=,&TU=,&DSNPDE=           00000800
.*********************************************************************** 00000900
.*                                                                     * 00001000
.*    THIS MACRO PROVIDES A DYNAMIC ALLOCATION FUNCTION BY BUILDING    * 00001100
.*    A DYNAMIC ALLOCATION PARAMETER LIST AND INVOKING SVC 99.         * 00001200
.*    IT FIRST SETS UP A WORKAREA ENVIRONMENT FOR THE PARAMETER LIST   * 00001300
.*    AND THEN TESTS THE KEYWORDS SUPPLIED AND INVOKES INNER MACROS    * 00001400
.*    TO BUILD THE TEXT UNITS. THE INNER MACROS THEMSELVES USE INNER   * 00001500
.*    MACROS TO UPDATE GLOBAL VARIABLES, STORE TEXT UNIT POINTERS ETC  * 00001600
.*    THERE ARE THREE WAYS OF SPECIFYING THE WORK AREA ADDRESS.        * 00001700
.*    A) MF=AUTO, MF=G, MF=(E,ADDRESS,LNTHSYMB).                       * 00001800
.*    IN THE FIRST FORM, AN INNER MACRO DYNSPACE IS CALLED TO NAME     * 00001900
.*    A WORK AREA, THE NAME BEING RETURNED IN THE GLOBAL SETC          * 00002000
.*    VARIABLE &DYNSP. A DSECT IS CREATED TO MAP THIS AREA.            * 00002100
.*    THE GLOBAL VARIABLES &DTUO (TEXT UNIT OFFSET COUNTER) AND        * 00002200
.*    &DTUPO (TEXT UNIT POINTER OFFSET ACCUMULATOR) ARE SET TO ZERO.   * 00002300
.*    THESE ACCUMULATORS ARE UPDATED AS EACH TEXT UNIT PROCESSOR       * 00002400
.*    AQUIRES STORAGE. AFTER ALL TEXT UNITS HAVE BEEN BUILT, THE       * 00002500
.*    AMOUNT OF SPACE USED IS CALCULATED, AND THE DYNSPACE MACRO IS    * 00002600
.*    THEN CALLED AGAIN TO LOG THE AMOUNT NEEDED. DYNSPACE SETS A      * 00002700
.*    GLOBAL VARIABLE &DYNSPQ TO THE HIGHEST AMOUNT ANY ALLOC OR       * 00002800
.*    FREE MACRO REQUESTED, AND WHEN CALLED WITH THE EXPAND OPTION,    * 00002900
.*    (NO OPERANDS OR NAME FIELD SUPPLIED), EXPANDS INTO A DS FOR      * 00003000
.*    THAT QUANTITY. (SEE DYNSPACE)                                    * 00003100
.*    MF=G SPECIFIES THAT THE ALLOC MACRO ENTER THE BEGIN MACRO        * 00003200
.*    WORKAREA TO ACQUIRE THE STORAGE NECESSARY. IT DOES THIS VIA      * 00003300
.*    THE RCPDS MACRO. (SEE RCPDS). HOWEVER, IF THE ALLOC MACRO IS     * 00003400
.*    CALLED SEVERAL TIMES WITH THIS OPTION, A LOT OF STORAGE WILL BE  * 00003500
.*    USED UP, AS THE STORAGE WILL NOT BE SHARED. THUS, THIS FORM      * 00003600
.*    SHOULD ONLY BE USED IF THE ALLOC/FREE MACRO IS ONLY TO BE USED   * 00003700
.*    ONCE OR TWICE DURING AN ASSEMBLY.                                * 00003800
.*    MF=E CAUSES THE MACRO TO USE A USER SPECIFIED WORK AREA. THE     * 00003900
.*    SECOND PARAMETER GIVES THE NAME OF THE WORKAREA, AND AN          * 00004000
.*    OPTIONAL THIRD PARAMETER IS THE NAME OF A SYMBOL TO BE EQUATED   * 00004100
.*    TO THE LENGTH OF THE REQUIRED WORK AREA.                         * 00004200
.*                                                                     * 00004300
.*    DYNAMIC ALLOCATION FUNCTIONS ARE SIMILAR TO THOSE AVAILABLE     *  00004400
.*    WITH JCL, USING THE SAME KEYWORDS. HOWEVER, CERTAIN FORMATS     *  00004500
.*    ARE SLIGHTLY DIFFERENT. FOR INSTANCE, CERTAIN KEYWORDS CAN      *  00004600
.*    HAVE VARYING PARAMETERS, EG DATASET NAME, DDNAME, VOLSER ETC.   *  00004700
.*    PROVISION IS MADE FOR BOTH VARIABLE SPECIFICATION.              *  00004800
.*    IN THE ABSOLUTE FORM, THE PARAMETER IS ENTERED IN QUOTES,       *  00004900
.*    E.G.   ALLOC DSN='SYS1.LINKLIB',DISP=SHR                        *  00005000
.*    HOWEVER, THIS NAME REMAINS FIXED FOR THE ASSEMBLY.              *  00005100
```

```
.*    IN THE VARIABLE FORMAT, THE ADDRESS OF A LOCATOR IS SPECIFIED, *  00005200
.*    WHERE THE LOCATOR CONSISTS OF A SIX BYTE FIELD, THE FIRST 4    *  00005300
.*    BYTES OF WHICH POINT TO THE PARAMETER, WHILE THE NEXT TWO      *  00005400
.*    CONTAIN THE LENGTH.                                            *  00005500
.*    EG          ALLOC DSN=LOCATOR                                  *  00005600
.*       LOCATOR  DC    A(DSN),Y(12)                                  *  00005700
.*       DSN      DC    C'SYS1.LINKLIB'                               *  00005800
.*                                                                    *  00005900
.*       NUMERIC QUANTITIES E.G. COPIES= FOR SYSOUT, SHOULD EITHER   *  00006000
.*       SPECIFY A NUMERIC VALUE, COPIES=3,                           *  00006100
.*       A VALUE IN A REGISTER, COPIES=(R3),                          *  00006200
.*       OR THE NAME OFF A FULLWORD CONTAINING THE VALUE,             *  00006300
.*          COPIES=NUMCOPYS, WHERE NUMCOPYS IS THE NAME OF A          *  00006400
.*       FULLWORD FIELD.                                              *  00006500
.*                                                                    *  00006600
.*       OTHER KEYWORDS SUCH AS DISP= CAN ONLY HAVE THE ABSOLUTE      *  00006700
.*       FORM, AND VALUES SHOULD NOT BE ENTERED WITHIN QUOTES.        *  00006800
.*       ADDITIONAL FACILITIES NOT AVAILABLE WITH JCL ARE THE         *  00006900
.*       RETURN BY THE SYSTEM OF INFORMATION ON THE DATASET, EG       *  00007000
.*       DSORG. THIS IS DONE BY SPECIFYING DSORGRT=SYMBOL, WHERE      *  00007100
.*       SYMBOL IS A SYMBOL WHICH WILL BE EQUATED TO A TWO BYTE       *  00007200
.*       FIELD CONTAINING THE DSORG TYPE (SEE JOB MANAGEMENT,         *  00007300
.*       SUPERVISOR AND TSO).                                         *  00007400
.*       THE SYSTEM CAN ALSO GENERATE AND RETURN A DDNAME. THIS IS    *  00007500
.*       CARRIED OUT BY ENTERING DDNTO=(ADDR1,ADDR2,,...)             *  00007600
.*       WHERE ADDR1,ADDR2 ETC ARE THE NAMES OF 8 BYTE FIELDS WHICH   *  00007700
.*       ARE TO RECEIVE THE DDNAME.                                   *  00007800
.*       FOR FURTHER INFORMATION ON DYNAMIC ALLOCATION, SEE           *  00007900
.*       JOB MANAGEMENT, SUPERVISOR AND TSO.                          *  00008000
.*                                                                    *  00008100
.********************************************************************** 00008200
         GBLA  &RCPDYN            COUNTER FOR NO ENTRIES TO MACRO       00008300
         GBLA  &DTUO              OFFSET TO TEXT UNITS                  00008400
         GBLA  &DTUPO             OFFSET TO TEXT UNIT POINTERS          00008500
         GBLB  &RCPS99(2)         TELL RCPDSECT NEED DSECTS             00008600
         GBLC  &DYNP              PREFIX FOR LABELS FOR THIS CALL       00008700
         GBLC  &DYNSP         NAME FOR AUTOMATIC STORAGE ALLOC          00008800
         LCLA  &DDNRTO,&DSNRTO         FOR EQUATES FOR RETURNED FLDS    00008900
         LCLA  &VOLRTO,&DSRGRTO        FOR EQUATES FOR RETURNED FIELDS  00009000
         LCLA  &I                 COUNTER                               00009100
         LCLB  &DSECT             DSECT NEEDED FOR STORAGE, MF=E        00009200
         LCLC  &C,&T,&PAR                                               00009300
.*                                                                      00009400
.*   THE ALLOC MACRO PROVIDES A DYNAMIC ALLOCATION FUNCTION,            00009500
&RCPS99(1)     SETB           1                                         00009600
&RCPDYN  SETA  &RCPDYN+1          INCEREMENT COUNTER                    00009700
&DYNP    SETC  'DYN&RCPDYN' SET DEFAULT PREFIX                          00009800
&NAME    DS    0H                                                       00009900
         AIF   ('&PREFIX' EQ '').TMF                                    00010000
         AIF   (K'&PREFIX LT 4).POK                                     00010100
         MNOTE 4,'PREFIX TOO LONG, 1ST 4 CHARS USED'                    00010200
&DYNP    SETC  '&PREFIX'(1,4)                                           00010300
```

```
         AGO   .TMF                                                     00010400
.POK     ANOP                                                           00010500
&DYNP    SETC  '&PREFIX'                                                00010600
.TMF     AIF   ('&MF(1)' EQ 'G').GEN                                    00010700
         AIF   ('&MF' NE 'AUTO').TMFE                                   00010800
NAME     DYNSPACE             GET NAME FOR SPACE                        00010900
         LA    R1,&DYNSP              LOAD ADDRESS OF PARAM LIST        00011000
         USING &DYNP.DS,R1            USE GENERATED DSECT               00011100
&T       SETC  'A'                                                      00011200
&PAR     SETC  '&DYNSP+4'                                               00011300
&DSECT   SETB  1                                                        00011400
         AGO   .START                                                   00011500
.TMFE    AIF   ('&MF(2)' NE '').E2OK                                    00011600
         MNOTE 4,'PLIST ADDRESS OMITTED, MF=G USED'                     00011700
         AGO   .GEN                                                     00011800
.E2OK    ANOP                                                           00011900
&DSECT   SETB  1                                                        00012000
         AIF   ('&MF(2)' EQ '(').RMFE                                   00012100
         LA    R1,&MF(2)              LOAD PARAM LIST ADDRESS           00012200
         USING &DYNP.DS,R1            USE GENERATED DSECT               00012300
         AGO   .START                                                   00012400
.RMFE    AIF   ('&MF(2)' EQ '(R1)' OR '&MF(2)' EQ '(1)').START          00012500
         LR    R1,&PAR                LOAD S99 PARAM LIST ADDRESS       00012600
         AGO   .START                                                   00012700
.GEN     LA    R1,&DYNP.RBP           LOAD ADDRESS OF S99 RBP           00012800
.START   LA    R15,&DYNP.RB           LOAD ADDRESS OF S99 RB            00012900
         USING S99RB,R15                                                00013000
         ST    R15,0(R1)              AND STORE IN RB POINTER           00013100
         XC    4(&DYNP.LEN-4,R1),4(R1) ZERO PARAMETER LIST              00013200
         MVI   S99RBLN,20             MOVE IN LIST LENGTH               00013300
         MVI   S99VERB,S99VRBAL       MOVE IN VERB CODE                 00013400
         LA    R14,&DYNP.TUP          LOAD ADDRESS OF TU POINTERS       00013500
         ST    R14,S99TXTPP           STORE ADDRESS IN S99 RB           00013600
         LA    R15,&DYNP.TU           POINT TO SPACE FOR TEXT UNITS     00013700
         USING S99TUNIT,R15                                             00013800
&DTUO    SETA  0                                                        00013900
&DTUPO   SETA  0                                                        00014000
         AIF   ('&SSREQ' EQ 'YES').SSREQ                                00014100
.TDSN    AIF   ('&DSN&DA' NE '').DSN                                    00014200
         AIF   ('&DSNPDE' NE '').DSNPDE                                 00014300
         AIF   ('&DSNRET' NE '').DSNRT                                  00014400
         AIF   ('&SYSOUT' NE '').SYSOUT                                 00014500
         AIF   ('&DUMMY' NE '').DUMMY                                   00014600
         AIF   ('&QNAME' NE '').QNAME                                   00014700
.TDDN    AIF   ('&DDN&FILE&F' NE '').DDN                                00014800
         AIF   ('&DDNRET&DDNTO' NE '').DDNRT                            00014900
.TUNIT   AIF   ('&UNIT&VOL' NE '').UNIT                                 00015000
.TVOLRET AIF   ('&VOLRET' NE '').VOLRET                                 00015100
.TDSRGO  AIF   ('&DSORGRT' NE '').DSORGRT                               00015200
.TLABEL  AIF   ('&LABEL' NE '').LABEL                                   00015300
.TPSWD   AIF   ('&PASWORD' NE '').PASWORD                               00015400
.TFORUSE AIF   ('&FORUSER' NE '').FORUSER                               00015500
```

```
.TTU     AIF   ('&TU' NE '').TU                                        00015600
.TDISP   AIF   ('&DISP' NE '').DISP                                    00015700
.TSPACE  AIF   ('&SPACE' NE '').SPACE                                  00015800
.TLRECL  AIF   ('&LRECL' NE '').DCB                                    00015900
         AIF   ('&DEN' NE '').DCB                                      00016000
         AIF   ('&RECFM' NE '').DCB                                    00016100
         AIF   ('&BLKSIZE' NE '').DCB                                  00016200
         AIF   ('&DSORG' NE '').DCB                                    00016300
         AIF   ('&KEYLEN' NE '').DCB                                   00016400
.TDCBDSN AIF   ('&DCBDSN' NE '').DCBDSN                                00016500
.TDCBDDN AIF   ('&DCBDDN' NE '').DCBDDN                                00016600
.TFREE   AIF   ('&FREE' EQ 'CLOSE').FREE                       TE7343 00016700
.TPERM   AIF   ('&PERM' EQ 'PERM' OR '&PERM' EQ 'PERMANENT').PERM      00016800
         AIF   ('&DUMMY' EQ 'PERM' OR '&DUMMY' EQ 'PERMANENT').PERM    00016900
.TSPECI  AIF   ('&SPECIAL' NE '').SPECIAL                              00017000
         AGO   .SVC99                                                  00017100
.SSREQ   RCPSSREQ                                                      00017200
         AGO   .TDSN                                                   00017300
.DSN     RCPDSN &DSN&DA,&MEMBER                                        00017400
         AGO   .TDDN                                                   00017500
.DSNPDE  RCPDSNPD &DSNPDE                                              00017600
         AGO   .TDDN                                                   00017700
.DSNRT   RCPDSNRT &DSNRET                                              00017800
&DSNRTO  SETA  &DTUO-46                                                00017900
         AGO   .TDDN                                                   00018000
.SYSOUT  RCPSYSOU &SYSOUT,COPIES=&COPIES,FREE=&FREE,DEST=&DEST,       X00018100
               FORMS=&FORMS                                            00018200
         AGO   .TDDN                                                   00018300
.DUMMY   RCPDUMMY &DUMMY                                               00018400
         AGO   .TDDN                                                   00018500
.QNAME   RCPQNAME &QNAME                                               00018600
         AGO   .TDDN                                                   00018700
.DDN     RCPDDN &DDN&F&FILE                                            00018800
         AGO   .TUNIT                                                  00018900
.DDNRT   RCPDDNRT &DDNRET                                              00019000
&DDNRTO  SETA  &DTUO-10                                                00019100
         AGO   .TUNIT                                                  00019200
.UNIT   RCPUNIT &UNIT,&VOL                                             00019300
         AGO   .TVOLRET                                                00019400
.VOLRET  RCPVOLRT &VOLRET                                              00019500
&VOLRTO  SETA  &DTUO-8                                                 00019600
         AGO   .TDSRGO                                                 00019700
.DSORGRT RCPDSRGR                                                      00019800
&DSRGRTO SETA  &DTUO-2                                                 00019900
         AGO   .TLABEL                                                 00020000
.LABEL   RCPLABEL &LABEL                                               00020100
         AGO   .TPSWD                                                  00020200
.PASWORD RCPPSWD &PASWORD                                              00020300
         AGO   .TFORUSE                                                00020400
.FORUSER RCPFORUS &FORUSER                                             00020500
         AGO   .TTU                                                    00020600
.TU      RCPTU &TU                                                     00020700
```

```
         AGO   .TDISP                                                   00020800
.DISP    RCPDISP &DISP                                                  00020900
         AGO   .TSPACE                                                  00021000
.SPACE   RCPSPACE &SPACE                                                00021100
         AGO   .TLRECL                                                  00021200
.DCB     RCPDDCB LRECL=&LRECL,DEN=&DEN,RECFM=&RECFM,BLKSIZE=&BLKSIZE,  X00021300
               DSORG=&DSORG,KEYLEN=&KEYLEN                              00021400
         AGO .TDCBDSN                                                   00021500
.DCBDSN  RCPDCBDS &DCBDSN                                               00021600
         AGO .TDCBDDN                                                   00021700
.DCBDDN  RCPDCBDD &DCBDDN                                               00021800
         AGO .TFREE                                            TE7343 00021900
.FREE    RCPFREE  &FREE                                        TE7343 00022000
         AGO   .TPERM                                                   00022100
.PERM    RCPPERM                                                        00022200
         AGO   .TSPECI                                                  00022300
.SPECIAL RCPSPEC &SPECIAL                                               00022400
.SVC99   ANOP                                                           00022500
&DTUPO   SETA  &DTUPO-4                                                 00022600
         SPACE                                                          00022700
         MVI   &DYNP.TUP+&DTUPO,X'80'  SET HIGH ORDER BIT ON TEXT PTRS  00022800
         MVI   &DYNP.RBP,X'80'         SET HIGH ORDER BIT ON RB PTR     00022900
         RCPSR2 UNSAVE                                                  00023000
&DTUPO   SETA  &DTUPO+4                                                 00023100
         AIF   (NOT &DSECT).DYNA                                        00023200
         DROP  R1,R15                  DEACTIVATE ADDRESSABILITY        00023300
         LA    R14,4(R1)               POINT TO REQUEST BLOCK           00023400
.DYNA    DYNALLOC                                                       00023500
         AIF   (NOT &DSECT).LTR                                         00023600
         USING &DYNP.RB,R14            SET UP ADDRESSABILITY            00023700
**       NOTE  R14 HAS RB ADDRESS, R15 HAS SVC 99 RETURN CODE        ** 00023800
.LTR     AIF   ('&ERROR' EQ '').TDDTO                                   00023900
         LTR   R15,R15                 TEST RETURN CODE                 00024000
         BNZ   &ERROR                  BRANCH IF NON ZERO               00024100
.TDDTO   AIF   ('&DDNTO' EQ '').RESERVE                                 00024200
&I       SETA  0                                                        00024300
.DDNTOL  ANOP                                                           00024400
&I       SETA  &I+1                                                     00024500
         AIF   ('&DDNTO(&I)' EQ '').RESERVE                             00024600
         AIF   ('&DDNTO(&I)'(1,1) EQ '(').DDNTOR                        00024700
         MVC   &DDNTO(&I).(8),&DYNP.TU+&DDNRTO+2                        00024800
         AGO   .DDNTOL                                                  00024900
.DDNTOR  ANOP                                                           00025000
&C       SETC  '&DDNTO(&I)'(2,K'&DDNTO(&I)-2)                           00025100
         MVC   0(8,&C),&DYNP.TU+&DDNRTO+2                               00025200
         AGO   .DDNTOL                                                  00025300
.RESERVE AIF   (&DSECT).RESDS                                           00025400
         SPACE 1                                                        00025500
*********************************************************************** 00025600
**       RESERVE SPACE FOR DYNALLOC PARAMETER LIST                   ** 00025700
*********************************************************************** 00025800
         RCPDS                                                          00025900
```

```
.SSP     ANOP                                                          00026000
&DYNP.RBP DS   F                       SVC 99 REQ BLOCK POINTER        00026100
&DYNP.RB  DS   5F                      SVC 99 REQUEST BLOCK            00026200
&DYNP.TUP DS   CL&DTUPO                SPACE FOR TEXT POINTERS         00026300
         AIF   (&DTUO EQ 0).DTU21                                      00026400
&DYNP.TU  DS   CL&DTUO                 SPACE FOR TEXT UNITS            00026500
         AIF   (&DSNRTO EQ 0).TDDNRTO                                  00026600
&DSNRET  EQU   &DYNP.TU+&DSNRTO        OFFSET TO RETURNED DSN          00026700
.TDDNRTO AIF   ('&DDNRET' EQ '').DTU11                                 00026800
&DDNRET  EQU   &DYNP.TU+&DDNRTO        OFFSET TO RETURNED DDNAME       00026900
.DTU11   AIF   (&VOLRTO EQ 0).DTU12                                    00027000
&VOLRET  EQU   &DYNP.TU+&VOLRTO        OFFSET TO RETURNED VOLSER       00027100
.DTU12   AIF   (&DSRGRTO EQ 0).DTU10                                   00027200
&DSORGRT EQU   &DYNP.TU+&DSRGRTO       OFFSET TO RETURNED DSORG        00027300
         AGO   .DTU10                                                  00027400
.DTU21   ANOP                                                          00027500
&DYNP.TU  DS   0C                      NO SPACE NEEDED FOR TEXT UNITS  00027600
.DTU10   ANOP                                                          00027700
&DYNP.LEN EQU  *-&DYNP.RBP             LENGTH OF SPACE USED            00027800
         AIF   (&DSECT).DSP                                            00027900
         RCPDS                                                         00028000
         SPACE 3                                                       00028100
         AGO   .EXIT                                                   00028200
.RESDS   ANOP                                                          00028300
         AIF   ('&DYNSP' EQ '').SP3                                    00028400
         DYNSPACE ADD                                                  00028500
.SP3     SPACE                                                         00028600
&DYNP.DS DSECT                         DSECT TO MAP SVC 99 DATA        00028700
         AGO   .SSP                                                    00028800
.DSP     AIF   ('&MF(3)' EQ '').END1                                   00028900
&MF(3)   EQU   &DYNP.LEN               LENGTH OF AREA                  00029000
.END1    ANOP                                                          00029100
&SYSECT  CSECT                                                         00029200
         SPACE 3                                                       00029300
.EXIT    MEND                                                          00029400
IEB817I MEMBER NAME (ALLOC   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=CLEAR
         MACRO                                                  00000100
&NAME    CLEAR &FIELD,&CHAR,&LENGTH                             00000200
         LCLC  &FILL,&L                                         00000300
&L       SETC  'L'''                                            00000400
&FILL    SETC  '&CHAR'                                          00000500
         AIF   ('&CHAR' NE '').CHSPEC                           00000600
&FILL    SETC  '40'                                             00000700
.CHSPEC  ANOP                                                   00000800
&NAME    MVI   &FIELD,X'&FILL'   SET THE FIRST POSITION         00000900
         AIF   ('&LENGTH' EQ '').NOLSPEC                        00001000
         MVC   &FIELD+1(&LENGTH),&FIELD  FILL THE ENTIRE FIELD  00001100
         MEXIT                                                  00001200
.NOLSPEC ANOP                                                   00001300
         MVC   &FIELD+1(&L&FIELD-1),&FIELD  FILL THE ENTIRE FIELD 00001400
         MEND                                                   00001500
IEB817I MEMBER NAME (CLEAR   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=CONV
         MACRO                                                  00000100
&LABEL   CONV  &TO,&FROM,&LEN,&EDMASK,&SCOMP                    00000200
         LCLC  &L,&FIRSTFR,&EDM,&COMP                           00000300
         LCLA  &COUNT                                           00000400
&L       SETC  'L'''                                            00000500
         AIF   ('&LABEL' EQ '').NOLABEL  SKIP LABEL IF NOT PRESENT  00000600
&LABEL   DS    0H             SET THE LABEL                     00000700
.NOLABEL ANOP                                                   00000800
&EDM     SETC  'EDMASK'      DEFAULT EDIT MASK                  00000900
         AIF   ('&EDMASK' EQ '').DEFMASK  IF NOT ENTERED USE DEFAULT  00001000
&EDM     SETC  '&EDMASK'     USE THE ENTERED VALUE              00001100
.DEFMASK ANOP                                                   00001200
&COMP    SETC  'BLANKS'      DEFAULT COMPARISON CHARS           00001300
         AIF   ('&SCOMP' EQ '').DEFCOMP  NOT ENTERED, USE THE DEFAULT  00001400
&COMP    SETC  '&SCOMP'      GET WHAT THE GUY WANTS             00001500
.DEFCOMP ANOP                                                   00001600
&FIRSTFR SETC  '&FROM'(1,1)   GET FIRST CHAR OF &FROM           00001700
         AIF   ('&FIRSTFR' EQ '(').REGISTR                      00001800
         L     R1,&FROM       GET THE DATA TO CONVERT            00001900
         CVD   R1,DOUBLE      CONVERT TO PACKED DECIMAL          00002000
         AGO   .INDEC                                           00002100
.REGISTR ANOP                                                   00002200
&COUNT   SETA  K'&FROM-2                                        00002300
&FIRSTFR SETC  '&FROM'(2,&COUNT)  STRIP THE PERRONS             00002400
         CVD   &FIRSTFR,DOUBLE   CONVERT TO PACKED DECIMAL      00002500
.INDEC   ANOP                                                   00002600
         MVC   CHARS,&EDM     PUT IN THE EDIT MASK               00002700
         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS              00002800
         AIF   ('&LEN' NE '').LENSET                             00002900
         MVC   &TO,CHARS+16-&L&TO  MOVE IN THE NUMBER            00003000
         CLC   CHARS(16-&L&TO),&COMP   WAS THERE AN OVERFLOW?    00003100
         BE    *+10           NO, EVERYTHING WAS OK              00003200
         MVC   &TO,STARS      BAD NEWS, NOTE IT                  00003300
         MEXIT                                                  00003400
.LENSET  ANOP                                                   00003500
         MVC   &TO.(&LEN),CHARS+16-&LEN MOVE IN THE NUMBER      00003600
         CLC   CHARS(16-&LEN),&COMP   WAS THERE AN OVERFLOW?    00003700
         BE    *+10           NO, EVERYTHING WAS OK              00003800
         MVC   &TO.(&LEN),STARS   BAD NEWS, NOTE IT              00003900
         MEND                                                   00004000
IEB817I MEMBER NAME (CONV    ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=CONVY2K
         MACRO                                                   00000100
&LABEL   CONVY2K &TO,&FROM,&LEN,&EDMASK,&SCOMP                   00000200
         LCLC  &L,&FIRSTFR,&EDM,&COMP                            00000300
         LCLA  &COUNT                                            00000400
&L       SETC  'L'''                                             00000500
         AIF   ('&LABEL' EQ '').NOLABEL  SKIP LABEL IF NOT PRESENT 00000600
&LABEL   DS    0H             SET THE LABEL                     00000700
.NOLABEL ANOP                                                    00000800
&EDM     SETC  'EDMASK'      DEFAULT EDIT MASK                   00000900
         AIF   ('&EDMASK' EQ '').DEFMASK  IF NOT ENTERED USE DEFAULT 00001000
&EDM     SETC  '&EDMASK'     USE THE ENTERED VALUE               00001100
.DEFMASK ANOP                                                    00001200
&COMP    SETC  'BLANKS'      DEFAULT COMPARISON CHARS            00001300
         AIF   ('&SCOMP' EQ '').DEFCOMP  NOT ENTERED, USE THE DEFAULT 00001400
&COMP    SETC  '&SCOMP'      GET WHAT THE GUY WANTS              00001500
.DEFCOMP ANOP                                                    00001600
&FIRSTFR SETC  '&FROM'(1,1)   GET FIRST CHAR OF &FROM            00001700
         AIF   ('&FIRSTFR' EQ '(').REGISTR                       00001800
         L     R1,&FROM       GET THE DATA TO CONVERT            00001900
         CVD   R1,DOUBLE      CONVERT TO PACKED DECIMAL          00002000
         AGO   .INDEC                                            00002100
.REGISTR ANOP                                                    00002200
&COUNT   SETA  K'&FROM-2                                         00002300
&FIRSTFR SETC  '&FROM'(2,&COUNT)  STRIP THE PERRONS              00002400
         CVD   &FIRSTFR,DOUBLE   CONVERT TO PACKED DECIMAL       00002500
.INDEC   ANOP                                                    00002600
         MVC   CHARS,&EDM     PUT IN THE EDIT MASK                00002700
         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS               00002800
         AIF   ('&LEN' NE '').LENSET                              00002900
         MVC   &TO,CHARS+16-&L&TO  MOVE IN THE NUMBER             00003000
         CLC   CHARS(16-&L&TO),&COMP   WAS THERE AN OVERFLOW?     00003100
         BE    *+10           NO, EVERYTHING WAS OK               00003200
         MVC   &TO,STARS      BAD NEWS, NOTE IT                   00003300
         MEXIT                                                   00003400
.LENSET  ANOP                                                    00003500
         MVC   &TO.(&LEN),CHARS+16-&LEN MOVE IN THE NUMBER       00003600
         CLC   CHARS(16-&LEN),&COMP   WAS THERE AN OVERFLOW?     00003700
*        BE    *+10           NO, EVERYTHING WAS OK               00003800
         B     *+10           ALLOW YY > 99 FOR YEAR 2000     Y2K DEC97 00003900
         MVC   &TO.(&LEN),STARS   BAD NEWS, NOTE IT               00004000
         MEND                                                    00004100
IEB817I MEMBER NAME (CONVY2K ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=DYNSPACE
         MACRO                                                  00000100
&NAME    DYNSPACE &TYPE                                         00000200
.*                                                              00000300
.*    THIS IS AN INNER MACRO TO ALLOC/FREE.                     00000400
.*    IT IS CALLED TO   A) NAME AN AREA FOR THE PARMLIST        00000500
.*                      B) LOG THE VARIOUS AMOUNTS NEEDED BY    00000600
.*                         EACH, REMEMBERING THE LARGEST.       00000700
.*                      C) GENERATING A DS FOR THE LARGEST AMOUNT. 00000800
.*    THE FIRST TWO FUNCTIONS ARE INVOKED BY ALLOC/FREE MACROS ONLY, 00000900
.*    AND THE THIRD IS USED BY THE PROGRAMMER, EITHER EXPLICITLY, 00001000
.*    OR BY BEGINWKA, IF THE LATTER IS USED.                    00001100
.*                                                              00001200
.*     TO INVOKE THE NAMING FUNCTION, ALLOC/FREE GENERATE       00001300
.*     NAME DYNSPACE                                            00001400
.*     NOTE. THE NAMING OPERATION ONLY GENERATES A NAME ON THE  00001500
.*     FIRST CALL IN THE ASSEMBLY. THE NAME REMAINS THE SAME UNTIL 00001600
.*     DYNSPACE IS CALLED TO EXPAND INTO A DS.                  00001700
.*                                                              00001800
.*     THE SECOND FUNCTION IS INVOKED BY THE MACRO CALL         00001900
.*          DYNSPACE ADD                                        00002000
.*     (NO NAME FIELD AND ONE OPERAND)                          00002100
.*     IT USES THE GLOBAL VARIABLES &DTUO AND &DTUPO TO CALCULATE 00002200
.*     THE SPACE FOR THIS REQUEST, AND UPDATES &DYNSPQ ONLY IF THE 00002300
.*     CURRENT REQUEST IS FOR A GREATER AMOUNT                  00002400
.*                                                              00002500
.*     THE THIRD FUNCTION IS INVOKED BY CALLING DYNSPACE WITH NO 00002600
.*     NAME OR OPERAND FIELD.                                   00002700
.*     THIS EXPANDS INTO A DEFINE STORAGE, CLEARS THE DYNSPACE NAME 00002800
.*     GLOBAL SETC, AND THE &DYNSPQ GLOBAL SETA.                00002900
.*     THUS, THE MACRO IS SERIALLY REUSABLE IN ALL FUNCTIONS.   00003000
.*                                                              00003100
         GBLA  &DYNSPQ,&DTUO,&DTUPO,&RCPDYN                     00003200
         GBLC  &DYNP,&DYNSP                                     00003300
         LCLA  &I                                               00003400
         AIF   ('&NAME' NE '').NAME                             00003500
         AIF   ('&TYPE' EQ '').ALLOC                            00003600
.*   THE ACCUMULATE FUNCTION IS REQUIRED                        00003700
&I       SETA  24+&DTUO+&DTUPO         GET AMOUNT FOR THIS REQUEST 00003800
         AIF   (&I LE &DYNSPQ).EXIT    IF CURRENT < MAX, EXIT   00003900
&DYNSPQ  SETA  &I                      ELSE UPDATE CURRENT MAXIMUM 00004000
         MEXIT                                                  00004100
.NAME    AIF   ('&DYNSP' NE '').EXIT   IF NAME ALREADY EXISTS, EXIT 00004200
&DYNSP   SETC  'DYNSP&RCPDYN'           ELSE GENERATE A NAME     00004300
.EXIT    MEXIT                                                  00004400
.ALLOC   AIF   ('&DYNSP' EQ '').EXIT                            00004500
*                                                               00004600
**     RESERVE SPACE FOR ALLOC/FREE MACRO WORK AREA             00004700
*                                                               00004800
&DYNSP   DS    0F,CL&DYNSPQ            RESERVE SPACE            00004900
&DYNSP   SETC  ''                      SET MAX QUANTITY TO 0    00005000
&DYNSPQ  SETA 0                                                 00005100
```

```
                 MEND                                                   00005200
IEB817I MEMBER NAME (DYNSPACE) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=ENTER
         MACRO                                                  00000100
&SUBR    ENTER &BASES,&SAVE,&CSECT                              00000200
.*   THIS MACRO, USED WITH THE LEAVE MACRO, WILL PERFORM        00000300
.*   STANDARD HOUSEKEEPING FOR A CSECT, INCLUDING SAVEAREA      00000400
.*   CONSTRUCTION AND CHAINING, AND GETTING SOME STORAGE,       00000500
.*   IF THAT IS DESIRED.                                        00000600
.*   THE LEAVE MACRO WILL FREE THE GOTTEN STORAGE               00000700
.*   THE OPERANDS ARE                                           00000800
.*       &SUBR    ENTER  &BASES,&SAVE,&CSECT                    00000900
.*    WHERE                                                     00001000
.*       &SUBR    IS THE NAME OF THE CSECT                      00001100
.*       &BASES   ARE THE BASE REGISTERS FOR THE ROUTINE        00001200
.*       &SAVE    IS THE LABEL FOR A SAVEAREA, OR A SUBPOOL     00001300
.*                AND LENGTH FOR THE GETMAIN                    00001400
.*       &CSECT   TO CONTINUE AN EXISTING CSECT WITH ENTRY      00001500
.*                POINT &SUBR                                   00001600
.*                                                              00001700
.*    EXAMPLES -                                                00001800
.*              ENTER 13,*                                      00001900
.*                                                              00002000
.*       THIS WILL GENERATE NON-REENTRANT CODE, USING SAVEAREA  00002100
.*       AS THE SAVE AREA LABEL, AND REGISTER 13 FOR THE BASE   00002200
.*       REGISTER.                                              00002300
.*                                                              00002400
.*       RENTMOD  ENTER (12,11),(,LDSECT)                       00002500
.*                                                              00002600
.*       THIS WILL GENERATE REENTRANT CODE WITH REGISTERS 12 AND 00002700
.*       11 FOR BASE REGISTERS.  A GETMAIN WILL BE DONE FOR THE 00002800
.*       DEFAULT SUBPOOL (0) WITH A LENGTH 'LDSECT'.            00002900
.*                                                              00003000
         GBLC  &LV,&SP                                          00003100
         LCLA  &K,&N                                            00003200
         LCLC  &AREA,&B(16),&SUBNAME,&S                         00003300
&SUBNAME SETC  '&SUBR'                                          00003400
         AIF   ('&SUBNAME' NE '').SUBSPEC                       00003500
&SUBNAME SETC  'MAIN'         DEFAULT CSECT NAME                00003600
.SUBSPEC AIF   ('&CSECT' EQ '').NOTENT  IS IT AN ENTRY POINT?   00003700
&CSECT   CSECT                                                  00003800
&SUBNAME DS    0F                                               00003900
         AGO   .CSSPEC                                          00004000
.NOTENT  ANOP                                                   00004100
&SUBNAME CSECT                                                  00004220
.CSSPEC  ANOP                                                   00004300
         SAVE  (14,12),T,&SUBNAME   SAVE THE REGISTERS          00004400
         AIF   ('&BASES(1)' EQ '15' OR '&BASES' EQ '').R15SET   00004500
         AIF   ('&BASES(1)' EQ '13' AND '&SAVE' NE '').R15SET   00004600
         LR    &BASES(1),15  SET FIRST BASE REG                 00004700
.R15SET  CNOP  0,4                                              00004800
&S       SETC  '&SUBNAME'                                       00004900
         AIF   (N'&SAVE EQ 2).P4   SUBPOOL, SIZE SPEC?          00005000
         AIF   ('&SAVE' EQ '').P3  NO SAVEAREA - DEFAULT        00005100
```

```
&AREA    SETC  '&SAVE'                                            00005200
         AIF   ('&SAVE' NE '*').P2                                00005300
&AREA    SETC  'SAVEAREA'                                         00005400
.P2      AIF   ('&BASES(1)' NE '13').P4                           00005500
&S       SETC  '*'                                                00005600
         USING &SUBNAME,15                                        00005700
         ST    14,&AREA+4                                         00005800
         LA    14,&AREA                                           00005900
         ST    14,8(13)                                           00006000
         L     14,&AREA+4                                         00006100
         ST    13,&AREA+4                                         00006200
         BAL   13,*+76        SKIP AROUND THE SAVEAREA            00006300
         DROP  15                                                 00006400
         AGO   .P4                                                00006500
.P3      AIF   ('&BASES(1)' NE '13').P4                           00006600
         MNOTE 8,'*** CONTENTS OF REG 13 ARE LOST.  NO SAVE AREA WAS ESX00006700
               TABLISHED.'                                        00006800
.P4      AIF   ('&BASES(1)' NE '14' OR '&SAVE' EQ '').P5          00006900
         MNOTE 8,'*** MACRO RESTRICTION - REG 14 MUST NOT BE USED AS THX00007000
               E FIRST BASE REGISTER IF A SAVE AREA IS USED.'     00007100
.P5      AIF   ('&BASES' EQ '').P9                                00007200
&N       SETA  N'&BASES                                           00007300
.P6      ANOP                                                     00007400
&K       SETA  &K+1                                               00007500
&B(&K)   SETC  ','.'&BASES(&K)'                                   00007600
         AIF   (N'&SAVE EQ 1).PE                                  00007700
         AIF   ('&BASES(&K)' NE '13').P7                          00007800
         MNOTE 8,'*** REG 13 MAY NOT BE USED AS A BASE REGISTER FOR REEX00007900
               NTRANT CODE.'                                      00008000
         AGO   .P7                                                00008100
.PE      AIF   ('&BASES(&K+1)' NE '13' OR '&SAVE' EQ '').P7       00008200
         MNOTE 8,'*** WHEN USING A SAVE AREA, REG 13 MAY NOT BE USED ASX00008300
                A SECONDARY BASE REGISTER.'                       00008400
.P7      AIF   ('&BASES(&K+1)' NE '').P6                          00008500
         USING &S&B(1)&B(2)&B(3)&B(4)&B(5)&B(6)&B(7)&B(8)&B(9)&B(10)&B(X00008600
               11)&B(12)&B(13)&B(14)&B(15)&B(16)                  00008700
&K       SETA  1                                                  00008800
         AIF   ('&BASES(1)' NE '13' OR '&SAVE' EQ '').P8          00008900
&AREA    DC    18F'0'                                             00009000
.P8      AIF   (&K GE &N).P10                                     00009100
         LA    &BASES(&K+1),X'FFF'(&BASES(&K))                    00009200
         LA    &BASES(&K+1),1(&BASES(&K+1))                       00009300
&K       SETA  &K+1                                               00009400
         AGO   .P8                                                00009500
.P9      USING &SUBNAME,15                                        00009600
.P10     AIF   (N'&SAVE GE 2).P13                                 00009700
         AIF   ('&SAVE' EQ '' OR '&BASES(1)' EQ '13').P12         00009800
         AIF   ('&SAVE' GE '0').P16  NUMERIC MEANS A PASSED AREA  00009900
         ST    14,&AREA+4                                         00010000
         LA    14,&AREA                                           00010100
         ST    14,8(13)                                           00010220
         L     14,&AREA+4                                         00010300
```

```
         ST    13,&AREA+4                                          00010400
.P11     BAL   13,*+76       SKIP AROUND THE SAVEAREA              00010500
&AREA    DC    18F'0'                                              00010600
.P12     MEXIT                                                     00010700
.P13     ANOP                                                      00010800
&LV      SETC  '&SAVE(2)'                                          00010900
&SP      SETC  '0'                                                 00011000
         AIF   ('&SAVE(1)' EQ '').P14                              00011100
&SP      SETC  '&SAVE(1)'                                          00011200
.P14     CNOP  0,4          DO A GETMAIN FOR THE AREA              00011300
         BAL   1,*+8          POINT THE SP AND LV                  00011400
ENT&SYSNDX DC  AL1(&SP)       SUBPOOL FOR THE GETMAIN              00011500
         DC    AL3(&LV)       LENGTH OF THE GETMAIN                00011600
         L     0,0(1)         GET THE DATA IN REG 1                00011700
         SVC   10             ISSUE THE GETMAIN                    00011800
.*                            CHAIN THE SAVEAREAS                  00011900
         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE       00012000
         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS           00012100
         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS   00012200
         LR    13,1           THIS IS MY SAVEAREA                  00012300
         LM    0,2,20(2)      RESTORE ORIGINAL REGS                00012400
         MEXIT                                                     00012500
.P16     L     1,&AREA+0(1)   NUMERIC &SAVE IMPLIES A PASSED SAVEAREA 00012600
         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE       00012700
         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS           00012800
         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS   00012900
         LR    13,1           THIS IS MY SAVEAREA                  00013000
         LM    0,2,20(2)      RESTORE ORIGINAL REGS                00013100
         MEND                                                      00013200
IEB817I MEMBER NAME (ENTER   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=ENTERX
         MACRO                                                  00000100
&SUBR    ENTERX &BASES,&SAVE,&CSECT                             00000200
.*   THIS MACRO, USED WITH THE LEAVE MACRO, WILL PERFORM        00000300
.*   STANDARD HOUSEKEEPING FOR A CSECT, INCLUDING SAVEAREA      00000400
.*   CONSTRUCTION AND CHAINING, AND GETTING SOME STORAGE,       00000500
.*   IF THAT IS DESIRED.                                        00000600
.*   THE LEAVE MACRO WILL FREE THE GOTTEN STORAGE               00000700
.*   THE OPERANDS ARE                                           00000800
.*       &SUBR    ENTER  &BASES,&SAVE,&CSECT                    00000900
.*    WHERE                                                     00001000
.*       &SUBR    IS THE NAME OF THE CSECT                      00001100
.*       &BASES   ARE THE BASE REGISTERS FOR THE ROUTINE        00001200
.*       &SAVE    IS THE LABEL FOR A SAVEAREA, OR A SUBPOOL     00001300
.*                AND LENGTH FOR THE GETMAIN                    00001400
.*       &CSECT   TO CONTINUE AN EXISTING CSECT WITH ENTRY      00001500
.*                POINT &SUBR                                   00001600
.*                                                              00001700
.*    EXAMPLES -                                                00001800
.*              ENTER 13,*                                      00001900
.*                                                              00002000
.*       THIS WILL GENERATE NON-REENTRANT CODE, USING SAVEAREA  00002100
.*       AS THE SAVE AREA LABEL, AND REGISTER 13 FOR THE BASE   00002200
.*       REGISTER.                                              00002300
.*                                                              00002400
.*       RENTMOD  ENTER (12,11),(,LDSECT)                       00002500
.*                                                              00002600
.*       THIS WILL GENERATE REENTRANT CODE WITH REGISTERS 12 AND 00002700
.*       11 FOR BASE REGISTERS.  A GETMAIN WILL BE DONE FOR THE 00002800
.*       DEFAULT SUBPOOL (0) WITH A LENGTH 'LDSECT'.            00002900
.*                                                              00003000
         GBLC  &LV,&SP                                          00003100
         LCLA  &K,&N                                            00003200
         LCLC  &AREA,&B(16),&SUBNAME,&S                         00003300
&SUBNAME SETC  '&SUBR'                                          00003400
         AIF   ('&SUBNAME' NE '').SUBSPEC                       00003500
&SUBNAME SETC  'MAIN'         DEFAULT CSECT NAME                00003600
.SUBSPEC AIF   ('&CSECT' EQ '').NOTENT  IS IT AN ENTRY POINT?   00003700
&CSECT   CSECT                                                  00003800
&SUBNAME DS    0F                                               00003900
         AGO   .CSSPEC                                          00004000
.NOTENT  ANOP                                                   00004100
&SUBNAME CSECT                                                  00004200
.CSSPEC  ANOP                                                   00004300
         SAVE  (14,12),T,&SUBNAME   SAVE THE REGISTERS          00004400
         AIF   ('&BASES(1)' EQ '15' OR '&BASES' EQ '').R15SET   00004500
         AIF   ('&BASES(1)' EQ '13' AND '&SAVE' NE '').R15SET   00004600
         LR    &BASES(1),15  SET FIRST BASE REG                 00004700
.R15SET  CNOP  0,4                                              00004800
&S       SETC  '&SUBNAME'                                       00004900
         AIF   (N'&SAVE EQ 2).P4   SUBPOOL, SIZE SPEC?          00005000
         AIF   ('&SAVE' EQ '').P3  NO SAVEAREA - DEFAULT        00005100
```

```
&AREA    SETC  '&SAVE'                                            00005200
         AIF   ('&SAVE' NE '*').P2                                00005300
&AREA    SETC  'SAVEAREA'                                         00005400
.P2      AIF   ('&BASES(1)' NE '13').P4                           00005500
&S       SETC  '*'                                                00005600
         USING &SUBNAME,15                                        00005700
         ST    14,&AREA+4                                         00005800
         LA    14,&AREA                                           00005900
         ST    14,8(13)                                           00006000
         L     14,&AREA+4                                         00006100
         ST    13,&AREA+4                                         00006200
         BAL   13,*+76        SKIP AROUND THE SAVEAREA            00006300
         DROP  15                                                 00006400
         AGO   .P4                                                00006500
.P3      AIF   ('&BASES(1)' NE '13').P4                           00006600
         MNOTE 8,'*** CONTENTS OF REG 13 ARE LOST.  NO SAVE AREA WAS ESX00006700
               TABLISHED.'                                        00006800
.P4      AIF   ('&BASES(1)' NE '14' OR '&SAVE' EQ '').P5          00006900
         MNOTE 8,'*** MACRO RESTRICTION - REG 14 MUST NOT BE USED AS THX00007000
               E FIRST BASE REGISTER IF A SAVE AREA IS USED.'     00007100
.P5      AIF   ('&BASES' EQ '').P9                                00007200
&N       SETA  N'&BASES                                           00007300
.P6      ANOP                                                     00007400
&K       SETA  &K+1                                               00007500
&B(&K)   SETC  ','.'&BASES(&K)'                                   00007600
         AIF   (N'&SAVE EQ 1).PE                                  00007700
         AIF   ('&BASES(&K)' NE '13').P7                          00007800
         MNOTE 8,'*** REG 13 MAY NOT BE USED AS A BASE REGISTER FOR REEX00007900
               NTRANT CODE.'                                      00008000
         AGO   .P7                                                00008100
.PE      AIF   ('&BASES(&K+1)' NE '13' OR '&SAVE' EQ '').P7       00008200
         MNOTE 8,'*** WHEN USING A SAVE AREA, REG 13 MAY NOT BE USED ASX00008300
                A SECONDARY BASE REGISTER.'                       00008400
.P7      AIF   ('&BASES(&K+1)' NE '').P6                          00008500
         USING &S&B(1)&B(2)&B(3)&B(4)&B(5)&B(6)&B(7)&B(8)&B(9)&B(10)&B(X00008600
               11)&B(12)&B(13)&B(14)&B(15)&B(16)                  00008700
&K       SETA  1                                                  00008800
         AIF   ('&BASES(1)' NE '13' OR '&SAVE' EQ '').P8          00008900
&AREA    DC    18F'0'                                             00009000
.P8      AIF   (&K GE &N).P10                                     00009100
         LA    &BASES(&K+1),X'FFF'(&BASES(&K))                    00009200
         LA    &BASES(&K+1),1(&BASES(&K+1))                       00009300
&K       SETA  &K+1                                               00009400
         AGO   .P8                                                00009500
.P9      USING &SUBNAME,15                                        00009600
.P10     AIF   (N'&SAVE GE 2).P13                                 00009700
         AIF   ('&SAVE' EQ '' OR '&BASES(1)' EQ '13').P12         00009800
         AIF   ('&SAVE(1,1)' GE '0').P16  NUMERIC MEANS A PASSED AREA 00009900
         ST    14,&AREA+4                                         00010000
         LA    14,&AREA                                           00010100
         ST    14,8(13)                                           00010200
         L     14,&AREA+4                                         00010300
```

```
         ST    13,&AREA+4                                          00010400
.P11     BAL   13,*+76       SKIP AROUND THE SAVEAREA              00010500
&AREA    DC    18F'0'                                              00010600
.P12     MEXIT                                                     00010700
.P13     ANOP                                                      00010800
&LV      SETC  '&SAVE(2)'                                          00010900
&SP      SETC  '0'                                                 00011000
         AIF   ('&SAVE(1)' EQ '').P14                              00011100
&SP      SETC  '&SAVE(1)'                                          00011200
.P14     CNOP  0,4          DO A GETMAIN FOR THE AREA              00011300
         BAL   1,*+8          POINT THE SP AND LV                  00011400
ENT&SYSNDX DC  AL1(&SP)       SUBPOOL FOR THE GETMAIN              00011500
         DC    AL3(&LV)       LENGTH OF THE GETMAIN                00011600
         L     0,0(1)         GET THE DATA IN REG 1                00011700
         SVC   10             ISSUE THE GETMAIN                    00011800
.*                            CHAIN THE SAVEAREAS                  00011900
         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE       00012000
         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS           00012100
         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS   00012200
         LR    13,1           THIS IS MY SAVEAREA                  00012300
         LA    4,12(13)       YES, POINT PAST THE CHAIN            00012400
         L     5,ENT&SYSNDX   GET THE SIZE                         00012500
         LA    6,12           MINUS THE CHAIN AREA (12 BYTES )     00012600
         SR    5,6            GIVES THE AMOUNT TO CLEAR            00012700
         SR    7,7            CLEAR THE FROM COUNT AND CLEAR BYTE  00012800
         MVCL  4,6            WHEE, CLEAR IT OUT                   00012900
         LM    0,7,20(2)      RESTORE THE ORIGINAL REGISTERS       00013000
         MEXIT                                                     00013100
.P16     L     1,&AREA+0(1)   NUMERIC &SAVE IMPLIES A PASSED SAVEAREA 00013200
         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE       00013300
         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS           00013400
         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS   00013500
         LR    13,1           THIS IS MY SAVEAREA                  00013600
         LM    0,2,20(2)      RESTORE ORIGINAL REGS                00013700
         MEND                                                      00013800
IEB817I MEMBER NAME (ENTERX  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=FREE
          MACRO                                                   00000100
&NAME     FREE  &UNALC,&DSN=,&DDN=,&MEMBER=,&DISP=,&SYSOUT=,     X00000200
                &ERROR=,&MF=AUTO,&PREFIX=,&FILE=,&F=,&DA=,&HOLD=  00000300
          GBLA  &RCPDYN            COUNTER FOR NO ENTRIES TO MACRO 00000400
          GBLA  &DTUO              OFFSET TO TEXT UNITS            00000500
          GBLA  &DTUPO             OFFSET TO TEXT UNIT POINTERS    00000600
          GBLB  &RCPS99(2)         TELL RCPDSECT NEED DSECTS       00000700
          GBLC  &DYNP              PREFIX FOR LABELS FOR THIS CALL 00000800
          GBLC  &DYNSP         NAME FOR AUTOMATIC STORAGE ALLOC    00000900
          LCLB  &DSECT             DSECT NEEDED FOR STORAGE, MF=E  00001000
          LCLC  &C,&T,&PAR                                         00001100
&RCPS99(1)      SETB           1                                   00001200
&RCPDYN   SETA  &RCPDYN+1          INCEREMENT COUNTER              00001300
&DYNP     SETC  'DYN&RCPDYN' SET DEFAULT PREFIX                    00001400
&NAME     DS    0H                                                 00001500
          AIF   ('&PREFIX' EQ '').TMF                              00001600
          AIF   (K'&PREFIX LT 4).POK                               00001700
          MNOTE 4,'PREFIX TOO LONG, 1ST 4 CHARS USED'              00001800
&DYNP     SETC  '&PREFIX'(1,4)                                     00001900
          AGO   .TMF                                               00002000
.POK      ANOP                                                     00002100
&DYNP     SETC  '&PREFIX'                                          00002200
.TMF      AIF   ('&MF(1)' EQ 'G').GEN                              00002300
          AIF   ('&MF' NE 'AUTO').TMFE                             00002400
NAME      DYNSPACE             GET NAME FOR SPACE                  00002500
          LA    R1,&DYNSP               LOAD ADDRESS OF PARAM LIST 00002600
          USING &DYNP.DS,R1             USE GENERATED DSECT        00002700
&T        SETC  'A'                                                00002800
&PAR      SETC  '&DYNSP+4'                                         00002900
&DSECT    SETB  1                                                  00003000
          AGO   .START                                             00003100
.TMFE     AIF   ('&MF(2)' NE '').E2OK                              00003200
          MNOTE 4,'PLIST ADDRESS OMITTED, MF=G USED'               00003300
          AGO   .GEN                                               00003400
.E2OK     ANOP                                                     00003500
&DSECT    SETB  1                                                  00003600
          AIF   ('&MF(2)' EQ '(').RMFE                             00003700
          LA    R1,&MF(2)               LOAD PARAM LIST ADDRESS    00003800
&T        SETC  'A'                                                00003900
&PAR      SETC  '&MF(2)+4'                                         00004000
          USING &DYNP.DS,R1             USE GENERATED DSECT        00004100
          AGO   .START                                             00004200
.RMFE     AIF   ('&MF(2)' EQ '(R1)' OR '&MF(2)' EQ '(1)').START    00004300
&PAR      SETC  '&MF(2)'(2,K'&MF(2)-2)                             00004400
&T        SETC  'R'                                                00004500
          LR    R1,&PAR                 LOAD S99 PARAM LIST ADDRESS 00004600
&PAR      SETC  '4&MF(2)'                                          00004700
          USING &DYNP.DS,R1             USE GENERATED DSECT        00004800
          AGO   .START                                             00004900
.GEN      LA    R1,&DYNP.RBP            LOAD ADDRESS OF S99 RBP    00005000
&T        SETC  'A'                                                00005100
```

```
&PAR     SETC  '&DYNP.RB'                                          00005200
.START   LA    R15,&DYNP.RB            LOAD ADDRESS OF S99 RB     00005300
         USING S99RB,R15                                           00005400
         ST    R15,0(R1)               AND STORE IN RB POINTER    00005500
         XC    4(&DYNP.LEN-4,R1),4(R1) ZERO PARAMETER LIST        00005600
         MVI   S99RBLN,20              MOVE IN LIST LENGTH        00005700
         MVI   S99VERB,S99VRBUN        MOVE IN VERB CODE          00005800
         LA    R14,&DYNP.TUP           LOAD ADDRESS OF TU POINTERS 00005900
         ST    R14,S99TXTPP            STORE ADDRESS IN S99 RB    00006000
         LA    R15,&DYNP.TU            POINT TO SPACE FOR TEXT UNITS 00006100
         USING S99TUNIT,R15                                        00006200
&DTUO    SETA  0                                                   00006300
&DTUPO   SETA  0                                                   00006400
         AIF   ('&DSN&DA' NE '').DSN                               00006500
         AIF   ('&SYSOUT' NE '').SYSOUT                            00006600
.TDDN    AIF   ('&DDN&FILE&F' NE '').DDN                           00006700
.TDISP   AIF   ('&DISP' NE '').DISP                                00006800
.TUNALC  AIF   ('&UNALC' NE '').PERM                               00006900
.THOLD   AIF   ('&HOLD' NE '').HOLD                                00007000
         AGO   .SVC99                                              00007100
.DSN     RCPFDSN &DSN&DA,&MEMBER                                   00007200
         AGO   .TDDN                                               00007300
.SYSOUT  RCPFSYS &SYSOUT                                           00007400
         AGO   .TDDN                                               00007500
.DDN     RCPFDDN &DDN&F&FILE                                       00007600
         AGO   .TDISP                                              00007700
.DISP RCPFDISP &DISP                                               00007800
         AGO   .TUNALC                                             00007900
.PERM    RCPUNALC                                                  00008000
         AGO   .THOLD                                              00008100
.HOLD    RCPFHOLD &HOLD                                            00008200
.SVC99   ANOP                                                      00008300
&DTUPO   SETA  &DTUPO-4                                            00008400
         SPACE                                                     00008500
         MVI   &DYNP.TUP+&DTUPO,X'80'  SET HIGH ORDER BIT ON TEXT PTRS 00008600
         MVI   &DYNP.RBP,X'80'         SET HIGH ORDER BIT ON RB PTR 00008700
         RCPSR2 UNSAVE                                             00008800
&DTUPO   SETA  &DTUPO+4                                            00008900
         AIF   (NOT &DSECT).DYNA                                   00009000
         DROP  R1,R15                  DEACTIVATE ADDRESSABILITY   00009100
.DYNA    DYNALLOC                                                  00009200
         AIF   ('&ERROR' EQ '').RESERVE                            00009300
         AIF   ('&PAR' EQ '').LTR                                  00009400
         L&T   R14,&PAR                 LOAD REG 14 WITH ADDRESS OF RB 00009500
         AIF   (NOT &DSECT).LTR                                    00009600
         USING &DYNP.RB,R14            SET UP ADDRESSABILITY       00009700
.LTR     LTR   R15,R15                 TEST RETURN CODE            00009800
         BNZ   &ERROR                  BRANCH IF NON ZERO          00009900
**       NOTE.  R14 POINTS TO REQUEST BLOCK, R15 HAS RETURN CODE     ** 00010000
.RESERVE AIF   (&DSECT).RESDS                                      00010100
         SPACE                                                     00010200
*********************************************************************** 00010300
```

```
**       RESERVE SPACE FOR DYNALLOC DATA                            ** 00010400
******************************************************************** 00010500
         RCPDS                                                       00010600
.SSP     ANOP                                                        00010700
&DYNP.RBP DS   F                      SVC 99 REQ BLOCK POINTER       00010800
&DYNP.RB  DS   5F                     SVC 99 REQUEST BLOCK           00010900
&DYNP.TUP DS   CL&DTUPO               SPACE FOR TEXT POINTERS        00011000
         AIF   (&DTUO EQ 0).DTU11                                    00011100
&DYNP.TU  DS   CL&DTUO                SPACE FOR TEXT UNITS           00011200
         AGO   .DTU10                                                00011300
.DTU11   ANOP                                                        00011400
&DYNP.TU  DS   0C                     NO SPACE NEEDED FOR TEXT UNITS 00011500
.DTU10   ANOP                                                        00011600
&DYNP.LEN EQU  *-&DYNP.RBP            LENGTH OF SPACE USED           00011700
         AIF   (&DSECT).DSP                                          00011800
         RCPDS                                                       00011900
         SPACE 3                                                     00012000
         AGO   .EXIT                                                 00012100
.RESDS   ANOP                                                        00012200
         AIF   ('&DYNSP' EQ '').SP3                                  00012300
         DYNSPACE ADD                                                00012400
.SP3     SPACE                                                       00012500
&DYNP.DS DSECT                        DSECT TO MAP SVC 99 DATA       00012600
         AGO   .SSP                                                  00012700
.DSP     AIF   ('&MF(3)' EQ '').END1                                 00012800
&MF(3)   EQU   &DYNP.LEN              LENGTH OF AREA                 00012900
.END1    ANOP                                                        00013000
&SYSECT  CSECT                                                       00013100
         SPACE 3                                                     00013200
.EXIT    MEND                                                        00013300
IEB817I MEMBER NAME (FREE    ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=LEAVE
          MACRO                                                   00000100
&NAME     LEAVE &EQ,&RC=                                          00000200
          GBLC  &LV,&SP                                           00000300
&NAME     LR    2,13                                              00000400
          L     13,4(13)                                          00000500
          AIF   ('&RC' EQ '').L0                                  00000600
          LA    15,&RC         LOAD THE RETURN CODE               00000700
.L0       STM   15,1,16(13)  STORE RETURN REGS                    00000800
          AIF   ('&LV' EQ '').L1  ANYTHING TO FREE?               00000900
          FREEMAIN R,LV=&LV,SP=&SP,A=(2)  FREE THE AREA           00001000
.L1       RETURN (14,12),T     RETURN FROM WHENCE WE CAME         00001100
          AIF   ('&EQ' NE 'EQ').L4  REGISTERS TOO?                00001200
          COPY  REGS                                              00001300
.L4       MEND                                                    00001400
IEB817I MEMBER NAME (LEAVE   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=MSG
         MACRO                                                    00000100
&NAME    MSG   &TEXT                                              00000200
         LCLA  &A                                                 00000300
&A       SETA  K'&TEXT-2+4  SUBTRACT QUOTES, ADD PREFIX FOUR BYTES 00000400
&NAME    DC    H'&A',H'0',C&TEXT                                  00000500
         MEND                                                     00000600
IEB817I MEMBER NAME (MSG     ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=PDEDSNAM
         MACRO                                                  00000100
         PDEDSNAM                                               00000200
*                                                               00000300
*        DEFINE A DSECT FOR THE DSNAME PARSE DESCRIPTION        00000400
*                                                               00000500
PDEDSNAM DSECT                                                  00000600
PDEDSN   DS    A              POINTER TO DSNAME                 00000700
PDEDSNL  DS    H              LENGTH OF DSNAME                  00000800
PDEDFLG1 DS    X              DATA SET NAME FLAGS               00000900
PDEDFLD1 EQU   X'80'          ONE IF THE DSNAME IS PRESENT      00001000
PDEDFLQ1 EQU   X'40'          ONE IF THE DSNAME IS WITHIN QUOTES 00001100
PDEDMEM  DS    A              POINTER TO MEMBER NAME            00001200
PDEDMEML DS    H              LENGTH OF MEMBER NAME             00001300
PDEDFLG2 DS    X              MEMBER   NAME FLAGS               00001400
PDEDFLD2 EQU   X'80'          ONE IF THE MEMBER IS PRESENT      00001500
PDEDPASS DS    A              POINTER TO PASSWORD               00001600
PDEDPASL DS    H              LENGTH OF PASSWORD                00001700
PDEDFLG3 DS    X              PASSWORD      FLAGS               00001800
PDEDFLD3 EQU   X'80'          ONE IF THE PASSWORD IS PRESENT    00001900
PDEDCHAN DS    0F             CHAIN ADDRESS                     00002000
PDEDCHNF DS    X              CHAIN FLAGS ( X'FF' FOR END )     00002100
PDEDCHN  DS    AL3            TRUE CHAIN POINTER                00002200
         MEND                                                   00002300
IEB817I MEMBER NAME (PDEDSNAM) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPBFRGS
         MACRO                                                  00000100
         RCPBFRGS &BUFPTR,&WKREGS                               00000200
         GBLC  &RCPBFRP,&RCPBFR1,&RCPBFR2                       00000300
         AIF   ('&BUFPTR' EQ '').TGP                            00000400
&RCPBFRP SETC  '&BUFPTR'                                        00000500
         AGO   .TWK1                                            00000600
.TGP     AIF   ('&RCPBFRP' NE '').TWK1                          00000700
&RCPBFRP SETC  'R1'                                             00000800
.TWK1    AIF   ('&WKREGS(1)' EQ '').TG1                         00000900
&RCPBFR1 SETC  '&WKREGS(1)'                                     00001000
         AGO   .TWK2                                            00001100
.TG1     AIF   ('&RCPBFR1' NE '').TWK2                          00001200
&RCPBFR1 SETC  'R14'                                            00001300
.TWK2    AIF   ('&WKREGS(2)' EQ '').TG2                         00001400
&RCPBFR2 SETC  '&WKREGS(2)'                                     00001500
         MEXIT                                                  00001600
.TG2     AIF   ('&RCPBFR2' NE '').EXIT                          00001700
&RCPBFR2 SETC  'R15'                                            00001800
.EXIT    MEND                                                   00001900
IEB817I MEMBER NAME (RCPBFRGS) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPBTU
         MACRO                                                  00000100
         RCPBTU &KEY,&NUM,&PAR                                  00000200
         LCLA  &L                                               00000300
.*                                                              00000400
.*  INNER MACRO FOR ALLOC, TO GENERATE TEXT UNITS ENTERED       00000500
.*  IN QUOTES                                                   00000600
.*                                                              00000700
&L       SETA  K'&PAR-2                GET LENGTH OF TEXT UNIT   00000800
         MVI   S99TUKEY+1,&KEY         SET TEXT UNIT KEY         00000900
         MVI   S99TUNUM+1,&NUM         SET NUMBER FIELD          00001000
         MVI   S99TULNG+1,&L           MOVE IN LENGTH            00001100
         MVC   S99TUPAR(&L.),=C&PAR    MOVE IN TEXT UNIT         00001200
&L       SETA  &L+6                                              00001300
         AIF   (&L/2 EQ (&L+1)/2).LOK                            00001400
&L       SETA  &L+1                                              00001500
.LOK     RCPDINC &L                                              00001600
         MEND                                                    00001700
IEB817I MEMBER NAME (RCPBTU  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPBTU2
         MACRO                                                  00000100
         RCPBTU &KEY,&NUM,&PAR                                  00000200
         GBLA  &DTUPO                                           00000300
         GBLC  &DYNP                                            00000400
         LCLA  &L                                               00000500
.*                                                              00000600
.*  INNER MACRO FOR ALLOC, TO BRANCH AROUND TEXT UNIT AND       00000700
.*  CREATE TEXT UNIT                                            00000800
.*                                                              00000900
&L       SETA  K'&PAR+8                GET LENGTH TO BRANCH AROUND  00001000
         AIF   (&L/2 EQ (&L+1)/2).LOK  MAKE SURE LENGTH IS EVEN     00001100
&L       SETA  &L+1                                             00001200
.LOK     BAL   R14,*+&L                BRANCH AROUND TEXT UNIT  00001300
&L       SETA  K'&PAR-2                                         00001400
         DC    Y(&KEY,&NUM,&L),C&PAR   TEXT UNIT                00001500
         LA    R14,0(R14)              CLEAR HIGH ORDER BYTE    00001600
         ST    R14,&DYNP.TUP+&DTUPO    STORE TEXT UNIT ADDRESS  00001700
&DTUPO   SETA  &DTUPO+4                                         00001800
         MEND                                                   00001900
IEB817I MEMBER NAME (RCPBTU2 ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=RCPCKID
          MACRO                                                   00000100
&NAME     RCPCKID              &CHECKID                           00000200
          GBLB  &RCPECT(2),&RCPPSCB(2)                            00000300
          GBLC  &RCPPRE                                           00000400
          LCLC  &CHARVAR,&P                                       00000500
          LCLA  &COUNTR,&L                                        00000600
&P        SETC  '&RCPPRE'                                         00000700
&RCPPSCB(1) SETB  1                                               00000800
&RCPECT(1)  SETB  1                                               00000900
          EJECT                                                   00001000
          SPACE 4                                                 00001100
*********************************************************************00001200
***  THE USERID OF THE USER IS CHECKED. IF IT IS NOT VALID, THE    ****00001300
***   COMMAND PRETENDS IT DOES NOT EXIST BY LINKING TO EXEC IN     ****00001400
***   THE SAME WAY THE TMP DOES IF IT CANNOT FIND THE COMMAND.     ****00001500
*********************************************************************00001600
          SPACE 3                                                 00001700
          L     R1,CPPLPSCB             LOAD ADDRESS OF PSCB      00001800
          USING PSCB,R1                 PSCB ADDRESSABILITY       00001900
.NID      ANOP                                                    00002000
&COUNTR   SETA  &COUNTR+1                                         00002100
          AIF   ('&CHECKID(&COUNTR)' EQ '').ENDID                 00002200
&CHARVAR  SETC  '&CHECKID(&COUNTR)'                               00002300
&L        SETA  K'&CHARVAR                                        00002400
          AIF   ('&CHARVAR'(1,1) EQ '''').QCID                    00002500
          CLC   PSCBUSER(&L),=C'&CHARVAR'  IS THE USERID VALID?   00002600
          BE    &P.IDOK                     YES, BRANCH OUT       00002700
          AGO   .NID                                              00002800
.QCID     ANOP                                                    00002900
&L        SETA  &L-2                                              00003000
          CLC   PSCBUSER(&L),=C&CHARVAR    IS THE USERID VALID?   00003100
          BE    &P.IDOK                     YES, BRANCH OUT       00003200
          AGO   .NID                                              00003300
.ENDID    L     R1,CPPLECT              LOAD ECT ADDRESS          00003400
          SPACE 2                                                 00003500
          USING ECT,R1                                            00003600
          MVC   ECTPCMD,&P.EXECN        MOVE IN COMMAND NAME      00003700
          DROP  R1                      KILL ECT ADDRESSABILITY   00003800
          L     R1,CPPLCBUF             LOAD CBUF ADDRESS         00003900
          XC    2(2,R1),2(R1)           ZERO OFFSET FIELD         00004000
          L     R1,&P.CPPL              RELOAD CPPL ADDRESS       00004100
          XCTL  EPLOC=&P.EXECN                                    00004200
&P.EXECN  DC    CL8'EXEC'               NAME OF EXEC PROCESSOR    00004300
&P.IDOK   DS    0H                                                00004400
          MEND                                                    00004500
IEB817I MEMBER NAME (RCPCKID ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDDN
         MACRO                                                  00000100
         RCPDDN &DDN                                            00000200
         GBLC  &DYNP                                            00000300
         SPACE 1                                                00000400
*****************************************************************00000500
**   BUILD THE DDNAME TEXT UNIT                               ** 00000600
*****************************************************************00000700
         AIF   ('&DDN'(K'&DDN,1) EQ '/').BTU                    00000800
         AIF   ('&DDN'(1,1) EQ '''').Q                          00000900
         RCPSR2                                                 00001000
         AIF   ('&DDN'(1,1) EQ '(').R                           00001100
         L     R14,&DDN               LOAD ADDRESS OF DDNAME    00001200
         LH    R2,&DDN+4              LOAD LENGTH OF DDNAME     00001300
         AGO   .STH                                             00001400
.R       L     R14,0&DDN              LOAD ADDRESS OF DDNAME    00001500
         LH    R2,4&DDN               LOAD LENGTH OF DDNAME     00001600
.STH     STH   R2,S99TULNG            STORE DDNAME LENGTH       00001700
         BCTR  R2,0                   DECREMENT FOR EXECUTE     00001800
         EX    R2,&DYNP.MVC           MOVE DDNAME               00001900
         MVI   S99TUKEY+1,DALDDNAM    MOVE IN DDNAME KEY        00002000
         MVI   S99TUNUM+1,1           SET NUMBER FIELD          00002100
         RCPDINC 14                                             00002200
         MEXIT                                                  00002300
.Q       RCPBTU DALDDNAM,1,&DDN                                 00002400
         MEXIT                                                  00002500
.BTU     RCPTUBFR DALDDNAM,14,&DDN                              00002600
         MEND                                                   00002700
IEB817I MEMBER NAME (RCPDDN  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDDNRT
         MACRO                                                   00000100
         RCPDDNRT                                                00000200
         SPACE 1                                                 00000300
*******************************************************************00000400
**    DDNAME RETURN TEXT UNIT                                  ** 00000500
*******************************************************************00000600
         MVI   S99TUKEY+1,DALRTDDN     SET RETURN DDNAME KEY     00000700
         MVI   S99TUNUM+1,1            SET NUMBER FIELD          00000800
         MVI   S99TULNG+1,8            SET LENGTH FIELD          00000900
         MVC   S99TUPAR(8),=CL8' '     INITIALIZE FIELD TO BLANKS 00001000
         RCPDINC 14                                              00001100
         MEND                                                    00001200
IEB817I MEMBER NAME (RCPDDNRT) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDEBUG
         MACRO                                                  00000100
         RCPDEBUG &ON                                           00000200
         GBLA  &RCPBGN#,&RCPSWS(10)                             00000300
         GBLB  &RCPDBUG                                         00000400
         GBLC  &RCPPRE,&RCPWKDS,&RCPWKCS                        00000500
         AIF   ('&ON' EQ '').TSW                                00000600
&RCPDBUG SETB 1                                                 00000700
.TSW     AIF   (&RCPDBUG).DEBUG                                 00000800
         MEXIT                                                  00000900
.DEBUG   MNOTE *,'RCPBGN# IS &RCPBGN#'                          00001000
         MNOTE *,'RCPSWS(1) IS &RCPSWS(1)'                      00001100
         MNOTE *,'RCPSWS(2) IS &RCPSWS(2)'                      00001200
         MNOTE *,'RCPSWS(3) IS &RCPSWS(3)'                      00001300
         MNOTE *,'RCPSWS(4) IS &RCPSWS(4)'                      00001400
         MNOTE *,'RCPSWS(5) IS &RCPSWS(5)'                      00001500
         MNOTE *,'RCPWKCS IS ''&RCPWKCS'''                      00001600
         MNOTE *,'RCPWKDS IS ''&RCPWKDS'''                      00001700
         MNOTE *,'RCPPRE IS ''&RCPPRE'''                        00001800
         MEND                                                   00001900
IEB817I MEMBER NAME (RCPDEBUG) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDFPL
         MACRO                                                  00000100
         RCPDFPL                                                00000200
         GBLC  &RCPPRE                                          00000300
         GBLB  &RCPDFPL(2)                                      00000400
         GBLB  &RCPDFPB(2)                                      00000500
         LCLC  &P,&L,&L1                                        00000600
&P       SETC  '&RCPPRE'                                        00000700
         EJECT                                                  00000800
         AIF   (&RCPDFPL(2)).BYPDFPL                            00000900
&RCPDFPL(2) SETB 1                                              00001000
         IKJDFPL                                                00001100
L#DFPL   EQU   *-DFPL                LENGTH OF DEFAULT PARAM LIST     00001200
         IKJDFPB                                                00001300
L#DFPB   EQU   *-DFPB                LENGTH OF DEFAULT PARAM BLOCK    00001400
&SYSECT  CSECT                       RESUME PROGRAM CSECT             00001500
         SPACE 3                                                00001600
.BYPDFPL RCPDS                                                  00001700
&P.DFPL  DS    CL(L#DFPL)            RESERVE SPACE FOR DFPL           00001800
&P.DFPB  DS    CL(L#DFPB)            RESERVE SPACE FOR DFPB           00001900
&P.DSNB  DS    CL48                  RESERVE SPACE FOR DSNAME BUFFER  00002000
         RCPDS                                                  00002100
         EJECT                                                  00002200
*********************************************************************** 00002300
***   THIS CODE GENERATES AN DEFAULT SERVICE ROUTINE PARAMETER LIST *** 00002400
***       AND PARAMETER BLOCK                                   *** 00002500
*********************************************************************** 00002600
         LA    R1,&P.DFPL             LOAD DFPL ADDRESS                00002700
         USING DFPL,R1                DFPL ADDRESSABLE                 00002800
         MVC   DFPLUPT,CPPLUPT        MOVE IN ADDRESS OF UPT           00002900
         MVC   DFPLECT,CPPLECT        MOVE IN ADDRESS OF ECT           00003000
         LA    R15,&P.ECB             LOAD ADDRESS OF ATTN ECB         00003100
         ST    R15,DFPLECB            AND STORE IN DFPL                00003200
         LA    R15,&P.DFPB            LOAD DFBP ADDRESS                00003300
         ST    R15,DFPLDFPB            AND STORE IT IN DFPB            00003400
         DROP  R1                                                00003500
         USING DFPB,R15               ADDRESS DFPB DSECT               00003600
         XC    DFPB(L#DFPB),DFPB      CLEAR DEFAULT PARAMETER BLOCK    00003700
         MVC   DFPBPSCB,CPPLPSCB      MOVE IN ADDRESS OF PSCB          00003900
         LA    R1,&P.DSNB             LOAD DSNAME BUFFER ADDRESS       00004000
         ST    R1,DFPBDSN              AND STORE IT INTO DFPB          00004100
         MVI   DFPBCODE,DFPB04         SET ENTRY CODE                  00004200
         DROP  R15                    DFPB NO LONGER ADDRESSABLE       00004300
         EJECT                                                  00004400
         MEND                                                   00004500
IEB817I MEMBER NAME (RCPDFPL ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDINC
         MACRO                                                    00000100
         RCPDINC &L1                                              00000200
         GBLA  &DTUO,&DTUPO                                       00000300
         GBLC  &DYNP                                              00000400
         AIF   ('&L1' EQ '').T2                                   00000500
         ST    R15,&DYNP.TUP+&DTUPO    STORE TEXT UNIT ADDRESS    00000600
         LA    R15,&L1.(R15)           BUMP TEXT UNIT PTR TO NEXT SLOT  00000700
&DTUPO   SETA  &DTUPO+4                                           00000800
&DTUO    SETA  &DTUO+&L1                                          00000900
         MEXIT                                                    00001000
.T2      ST    R14,&DYNP.TUP+&DTUPO    STORE TEXT UNIT ADDRESS    00001100
&DTUPO   SETA  &DTUPO+4                                           00001200
         MEND                                                     00001300
IEB817I MEMBER NAME (RCPDINC ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDISP
         MACRO                                                  00000100
         RCPDISP &DISP                                          00000200
         LCLA  &I                                               00000300
         LCLB  &B(4)                                            00000400
         AIF   ('&DISP(1)' EQ '').TD2                           00000500
         SPACE                                                  00000600
*********************************************************************00000700
**     DATA SET INITIAL STATUS                                  **00000800
*********************************************************************00000900
&B(1)    SETB  ('&DISP(1)' EQ 'SHR')                            00001000
&B(2)    SETB  ('&DISP(1)' EQ 'NEW')                            00001100
&B(3)    SETB  ('&DISP(1)' EQ 'MOD')                            00001200
&B(4)    SETB  ('&DISP(1)' EQ 'OLD')                            00001300
         AIF   (&B(1) OR &B(2) OR &B(3) OR &B(4)).OK1           00001400
         MNOTE 8,'&DISP(1) IS INVALID, DISP=SHR USED'           00001500
&B(1)    SETB  1                                                00001600
.OK1     ANOP                                                   00001700
&I       SETA  8*&B(1)+4*&B(2)+2*&B(3)+&B(4)                    00001800
         MVC   S99TUKEY(8),=Y(DALSTATS,1,1,X'0&I.00')           00001900
         RCPDINC 8                                              00002000
.TD2     AIF   ('&DISP(2)' EQ '').TD3                           00002100
         SPACE                                                  00002200
*********************************************************************00002300
**    DATA SET NORMAL DISPOSITION                               **00002400
*********************************************************************00002500
&B(1)    SETB  ('&DISP(2)' EQ 'KEEP')                           00002600
&B(2)    SETB  ('&DISP(2)' EQ 'DELETE')                         00002700
&B(3)    SETB  ('&DISP(2)' EQ 'CATLG')                          00002800
&B(4)    SETB  ('&DISP(2)' EQ 'UNCATLG')                        00002900
         AIF   (&B(1) OR &B(2) OR &B(3) OR &B(4)).OK2           00003000
         MNOTE 8,'&DISP(2) IS INVALID, DISP=(,KEEP) USED'       00003100
&B(1)    SETB  1                                                00003200
.OK2     ANOP                                                   00003300
&I       SETA  8*&B(1)+4*&B(2)+2*&B(3)+&B(4)                    00003400
         MVC   S99TUKEY(8),=Y(DALNDISP,1,1,X'0&I.00')           00003500
         RCPDINC 8                                              00003600
.TD3     AIF   ('&DISP(3)' EQ '').EXIT                          00003700
         SPACE                                                  00003900
*********************************************************************00004000
**   DATASET CONDITIONAL DISPOSITION                            **00004100
*********************************************************************00004200
&B(1)    SETB  ('&DISP(3)' EQ 'KEEP')                           00004300
&B(2)    SETB  ('&DISP(3)' EQ 'DELETE')                         00004400
&B(3)    SETB  ('&DISP(3)' EQ 'CATLG')                          00004500
&B(4)    SETB  ('&DISP(3)' EQ 'UNCATLG')                        00004600
         AIF   (&B(1) OR &B(2) OR &B(3) OR &B(4)).OK3           00004700
         MNOTE 8,'&DISP(3) IS INVALID, DISP=(,,KEEP) USED'      00004800
&B(1)    SETB  1                                                00004900
.OK3     ANOP                                                   00005000
&I       SETA  8*&B(1)+4*&B(2)+2*&B(3)+&B(4)                    00005100
         MVI   S99TUKEY(8),=Y(DALCDISP,1,1,X'0&I.00')           00005200
```

```
                RCPDINC 8                                                 00005300
       .EXIT    MEND                                                      00005400
IEB817I MEMBER NAME (RCPDISP ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDS
         MACRO                                                  00000100
         RCPDS                                                  00000200
         GBLB  &RCPDSBR                                         00000300
         GBLC  &RCPWKDS,&RCPWKCS,&RCPDS                         00000400
         AIF   ('&RCPDS' NE '').RESUME                          00000500
&RCPDS   SETC  '&SYSECT'                                        00000600
         AIF   ('&RCPWKDS' EQ '').CSECT                         00000700
&RCPWKDS DSECT                        ENTER WORKAREA DSECT     00000800
         MEXIT                                                  00000900
.CSECT   AIF   ('&RCPWKCS' EQ '').BRANCH                        00001000
&RCPWKCS CSECT                        ENTER WORKAREA CSECT     00001100
         MEXIT                                                  00001200
.RESUME  AIF   (&RCPDSBR).BRTO                                  00001300
&RCPDS   CSECT                        RESUME PROGRAM CSECT     00001400
&RCPDS   SETC  ''                                               00001500
         MEXIT                                                  00001600
.BRANCH  ANOP                                                   00001700
&RCPDS   SETC  'RCP&SYSNDX'                                     00001800
&RCPDSBR SETB  1                                                00001900
         B     &RCPDS                 BRANCH AROUND CONSTANTS  00002000
         MEXIT                                                  00002100
.BRTO    ANOP                                                   00002200
&RCPDS   DS    0H                                               00002300
&RCPDSBR SETB  0                                                00002400
&RCPDS   SETC  ''                                               00002500
         MEND                                                   00002600
IEB817I MEMBER NAME (RCPDS   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDSECT
         MACRO                                                  00000100
&NAME    RCPDSECT &LTORG=YES                                    00000200
         AIF   ('&LTORG' NE 'YES').RCPDS                        00000300
*********************************************************************** 00000400
****                 LITERALS                                  **** 00000500
*********************************************************************** 00000600
         SPACE 3                                                00000700
         LTORG                                                  00000800
         EJECT                                                  00000900
.RCPDS   RCPDS                                                  00001000
         MEND                                                   00001100
IEB817I MEMBER NAME (RCPDSECT) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDSN
         MACRO                                                   00000100
         RCPDSN &DSN,&MEM                                        00000200
         LCLC  &MEMBER                                           00000300
         GBLC  &DYNP                                             00000400
         SPACE                                                   00000500
*****************************************************************00000600
**   BUILD THE DSNAME TEXT UNIT                                ** 00000700
*****************************************************************00000800
         AIF   ('&DSN'(1,1) EQ '''').Q                           00000900
         AIF   ('&DSN'(K'&DSN,1) EQ '/').BD                      00001000
         AIF   ('&DSN'(1,1) EQ '(').REG                          00001100
         AIF   ('&DSN'  EQ '*').TERM                             00001200
         RCPSR2                                                  00001300
         L     R14,&DSN                LOAD ADDRESS OF DSNAME    00001400
         LH    R2,&DSN+4               LOAD LENGTH OF DSNAME     00001500
.STH     STH   R2,S99TULNG             STORE DSNAME LENGTH       00001600
         BCTR  R2,0                    DECREMENT FOR EXECUTE     00001700
         EX    R2,&DYNP.MVC            MOVE DSNAME               00001800
         MVI   S99TUKEY+1,DALDSNAM     MOVE IN DSNAME KEY        00001900
         MVI   S99TUNUM+1,1            SET NUMBER FIELD          00002000
         RCPDINC 50                                              00002100
         AGO   .TMEMBER                                          00002200
.REG     L     R14,0&DSN               LOAD ADDRESS OF DSNAME    00002300
         RCPSR2                                                  00002400
         LH    R2,4&DSN                LOAD LENGTH OF DSNAME     00002500
         AGO   .STH                                              00002600
.TERM    MVI   S99TUKEY+1,DALTERM                                00002700
         RCPDINC 4                                               00002800
         MEXIT                                                   00002900
.BD      RCPTUBFR DALDSNAM,50,&DSN                               00003000
         AGO   .TMEMBER                                          00003100
.Q       RCPBTU DALDSNAM,1,&DSN                                  00003200
.TMEMBER AIF   ('&MEM' EQ '').EXIT                               00003300
         SPACE                                                   00003400
*****************************************************************00003500
**   BUILD THE MEMBER NAME TEXT UNIT                           ** 00003600
*****************************************************************00003700
&MEMBER  SETC  '&MEM'                                            00003800
         AIF   ('&MEM' NE '*').MOK                               00003900
         AIF   ('&DSN'(1,1) NE '''').MAST                        00004000
         MNOTE 8,'MEMBER=* INVALID WITH QUOTED DSNAME'           00004100
         MEXIT                                                   00004200
.MAST    ANOP                                                    00004300
&MEMBER  SETC  '8+&DSN'                                          00004400
.MOK     ANOP                                                    00004500
         AIF   ('&MEMBER'(K'&MEMBER,1) EQ '/').BM                00004600
         RCPSR2                                                  00004700
         AIF   ('&MEMBER'(1,1) EQ '(').RM                        00004800
         LH    R2,4+&MEMBER            LOAD LENGTH OF MEMBER NAME 00004900
         LTR   R2,R2                   TEST FOR ZERO             00005000
         BZ    *+30                    IF NO MEMBER, SKIP        00005100
```

```
                L     R14,&MEMBER             LOAD ADDRESS OF MEMBER          00005200
                AGO   .STHM                                                   00005300
        .RM     LH    R2,4&MEMBER             LOAD LENGTH OF MEMBER           00005400
                LTR   R2,R2                   AND TEST FOR ZERO               00005500
                BZ    *+30                    IF NO MEMBER, SKIP              00005600
                L     R14,0&MEMBER            LOAD ADDRESS OF MEMBER          00005700
        .STHM   STH   R2,S99TULNG             STORE LENGTH OF MEMBER          00005800
                BCTR  R2,0                    DECREMENT FOR EXECUTE           00005900
                EX    R2,&DYNP.MVC            MOVE IN MEMBER NAME             00006000
                MVI   S99TUKEY+1,DALMEMBR     MOVE IN MEMBER KEY              00006100
                MVI   S99TUNUM+1,1            SET NUMBER FIELD                00006200
                RCPDINC 14                                                    00006300
                MEXIT                                                         00006400
        .BM     RCPTUBFR DALMEMBR,14,&MEMBER                                  00006500
                MEXIT                                                         00006600
        .QM     RCPBTU DALMEMBR,1,&MEMBER                                     00006700
        .EXIT   MEND                                                          00006800
IEB817I MEMBER NAME (RCPDSN  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDSNPD
         MACRO                                                  00000100
         RCPDSNPD &PDE                                          00000200
         AIF   ('&PDE'(1,1) EQ '(').RPDE                        00000300
         RCPDSN &PDE,8+&PDE                                     00000400
         RCPPSWD 16+&PDE                                        00000500
         MEXIT                                                  00000600
.RPDE    RCPDSN &PDE,8&PDE                                      00000700
         RCPPSWD 16(&PDE)                                       00000800
         MEND                                                   00000900
IEB817I MEMBER NAME (RCPDSNPD) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDSNRT
         MACRO                                                    00000100
         RCPDSNRT                                                 00000200
         SPACE                                                    00000300
*********************************************************************00000400
**    DSNAME RETURN TEXT UNIT                                    ** 00000500
*********************************************************************00000600
         MVI   S99TUKEY+1,DALRTDSN     SET RETURN DSNAME KEY      00000700
         MVI   S99TUNUM+1,1            SET NUMBER FIELD           00000800
         MVI   S99TULNG+1,44           SET LENGTH FIELD           00000900
         RCPDINC 50                                               00001000
         MEND                                                     00001100
IEB817I MEMBER NAME (RCPDSNRT) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDSRGR
         MACRO                                                      00000100
         RCPDSRGR                                                   00000200
         SPACE                                                      00000300
*********************************************************************00000400
**    DSORG RETURN TEXT UNIT                                      ** 00000500
*********************************************************************00000600
         MVI   S99TUKEY+1,DALRTORG     SET RETURN DSORG KEY         00000700
         MVI   S99TUNUM+1,1            SET NUMBER FIELD             00000800
         MVI   S99TULNG+1,2            SET LENGTH FIELD             00000900
         XC    S99TUPAR(2),S99TUPAR    INITIALIZE FIELD TO ZERO     00001000
         RCPDINC 8                                                  00001100
         MEND                                                       00001200
IEB817I MEMBER NAME (RCPDSRGR) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPDUMMY
         MACRO                                                    00000100
         RCPDUMMY &DUMMY                                          00000200
         SPACE                                                    00000300
*****************************************************************00000400
**      DUMMY DATASET TEXT UNIT                                 **00000500
*****************************************************************00000600
         MVI   S99TUPAR+1,DALDUMMY     MOVE IN DUMMY DS TEXT UNIT KEY   00000700
         RCPDINC 4                                                00000800
         MEND                                                     00000900
IEB817I MEMBER NAME (RCPDUMMY) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=RCPENDD
          MACRO                                                   00000100
&NAME     RCPENDD                                                 00000200
          GBLB  &RCPECT(2),&RCPUPT(2),&RCPPSCB(2),&RCPS99(2)      00000300
          GBLC  &RCPPRE,&RCPWKDS,&RCPDS                           00000400
          LCLC  &P,&CS                                            00000500
&CS       SETC  '&RCPDS'                PROGRAM CSECT             00000600
          AIF   (NOT &RCPS99(1)).TDS                              00000700
          DYNSPACE                                                00000800
.TDS      AIF   ('&RCPWKDS' EQ '').RCPDS                          00000900
          DS    0D                      ALIGN TO DOUBLEWORD       00001000
&P        SETC  '&RCPPRE'                                         00001100
&P.WKLEN  EQU   *-&RCPWKDS                LENGTH OF WORK AREA     00001200
.RCPDS    RCPDS                                                   00001300
          EJECT                                                   00001400
          AIF   (NOT &RCPECT(1) OR &RCPECT(2)).TRYUPT             00001500
          IKJECT                                                  00001600
&CS       CSECT                         REENTER MAIN CSECT        00001700
          EJECT                                                   00001800
&RCPECT(2)     SETB           1                                   00001900
.TRYUPT   AIF   (NOT &RCPUPT(1) OR &RCPUPT(2)).TRYPSCB            00002000
          IKJUPT                                                  00002100
&CS       CSECT                         REENTER MAIN CSECT        00002200
          EJECT                                                   00002300
&RCPUPT(2) SETB  1                                                00002400
.TRYPSCB  AIF   (NOT &RCPPSCB(1) OR &RCPPSCB(2)).TRYS99           00002500
          IKJPSCB                                                 00002600
&CS       CSECT                         REENTER MAIN CSECT        00002700
          EJECT                                                   00002800
&RCPPSCB(2) SETB  1                                               00002900
.TRYS99   AIF   (NOT &RCPS99(1) OR &RCPS99(2)).TRYREST            00003000
          IEFZB4D0                                                00003100
          EJECT                                                   00003200
          IEFZB4D2                                                00003300
&CS       CSECT                         REENTER MAIN CSECT        00003400
          EJECT                                                   00003500
&RCPS99(2) SETB  1                                                00003600
.TRYREST MEND                                                     00003700
IEB817I MEMBER NAME (RCPENDD ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFDDN
         MACRO                                                      00000100
         RCPFDDN &DDN                                               00000200
         GBLC &DYNP                                                 00000300
         SPACE                                                      00000400
******************************************************************* 00000500
**        FREE DDNAME TEXT UNIT                                  ** 00000600
******************************************************************* 00000700
         AIF   ('&DDN'(1,1) EQ '''').Q                              00000800
         AIF   ('&DDN'(K'&DDN,1) EQ '/').B                          00000900
         RCPSR2                                                     00001000
         AIF   ('&DDN'(1,1) EQ '(').R                               00001100
         L     R14,&DDN                LOAD ADDRESS OF DDNAME       00001200
         LH    R2,&DDN+4               LOAD LENGTH OF DDNAME        00001300
         AGO   .STH                                                 00001400
.R       L     R14,0&DDN               LOAD ADDRESS OF DDNAME       00001500
         LH    R2,4&DDN                LOAD LENGTH OF DDNAME        00001600
.STH     STH   R2,S99TULNG             STORE DDNAME LENGTH          00001700
         BCTR  R2,0                    DECREMENT FOR EXECUTE        00001800
         EX    R2,&DYNP.MVC            MOVE DDNAME                  00001900
         MVI   S99TUKEY+1,DUNDDNAM     MOVE IN DDNAME KEY           00002000
         MVI   S99TUNUM+1,1            SET NUMBER FIELD             00002100
         RCPDINC 14                                                 00002200
         MEXIT                                                      00002300
.Q       RCPBTU DUNDDNAM,1,&DDN                                     00002400
         MEXIT                                                      00002500
.B       RCPTUBFR DUNDDNAM,14,&DDN                                  00002600
         MEND                                                       00002700
IEB817I MEMBER NAME (RCPFDDN ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFDISP
         MACRO                                                  00000100
         RCPFDISP &DISP                                         00000200
         LCLB  &B(4)                                            00000300
         LCLA  &I                                               00000400
         SPACE                                                  00000500
*****************************************************************00000600
**       OVERRIDING DISPOSITION                               ** 00000700
*****************************************************************00000800
&B(1)    SETB  ('&DISP' EQ 'KEEP')                              00000900
&B(2)    SETB  ('&DISP' EQ 'DELETE')                            00001000
&B(3)    SETB  ('&DISP' EQ 'CATLG')                             00001100
&B(4)    SETB  ('&DISP' EQ 'UNCATLG')                           00001200
         AIF   (&B(1) OR &B(2) OR &B(3) OR &B(4)).OK3           00001300
         MNOTE 8,'&DISP IS INVALID, DISP=KEEP USED'             00001400
&B(1)    SETB  1                                                00001500
.OK3     ANOP                                                   00001600
&I       SETA  8*&B(1)+4*&B(2)+2*&B(3)+&B(4)                    00001700
         MVC   S99TUKEY(8),=Y(DUNOVDSP,1,1,X'0&I.00')           00001800
         RCPDINC 8                                              00001900
.EXIT    MEND                                                   00002000
IEB817I MEMBER NAME (RCPFDISP) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFDSN
         MACRO                                                  00000100
         RCPFDSN &DSN,&MEM                                      00000200
         LCLC  &MEMBER                                          00000300
         GBLC  &DYNP                                            00000400
         SPACE                                                  00000500
*****************************************************************00000600
**      FREE DATA SET TEXT UNIT                                ** 00000700
*****************************************************************00000800
         AIF   ('&DSN'(1,1) EQ '''').Q                          00000900
         AIF   ('&DSN'(K'&DSN,1) EQ '/').BD                     00001000
         AIF   ('&DSN'(1,1) EQ '(').REG                         00001100
         RCPSR2                                                 00001200
         L     R14,&DSN                LOAD ADDRESS OF DSNAME   00001300
         LH    R2,&DSN+4               LOAD LENGTH OF DSNAME    00001400
.STH     STH   R2,S99TULNG             STORE DSNAME LENGTH      00001500
         BCTR  R2,0                    DECREMENT FOR EXECUTE    00001600
         EX    R2,&DYNP.MVC            MOVE DSNAME              00001700
         MVI   S99TUKEY+1,DUNDSNAM     MOVE IN DSNAME KEY       00001800
         MVI   S99TUNUM+1,1            SET NUMBER FIELD         00001900
         RCPDINC 50                                             00002000
         AGO   .TMEMBER                                         00002100
.REG     L     R14,0&DSN               LOAD ADDRESS OF DSNAME   00002200
         RCPSR2                                                 00002300
         LH    R2,4&DSN                LOAD LENGTH OF DSNAME    00002400
         AGO   .STH                                             00002500
.BD      RCPTUBFR DUNDSNAM,50,&DSN                              00002600
         AGO   .TMEMBER                                         00002700
.Q       RCPBTU DUNDSNAM,1,&DSN                                 00002800
.TMEMBER AIF   ('&MEM' EQ '').EXIT                              00002900
         SPACE                                                  00003000
*****************************************************************00003100
**       FREE MEMBER NAME TEXT UNIT                            ** 00003200
*****************************************************************00003300
&MEMBER  SETC  '&MEM'                                           00003400
         AIF   ('&MEM' NE '*').MOK                              00003500
         AIF   ('&DSN'(1,1) NE '''').MAST                       00003600
         MNOTE 8,'MEMBER=* INVALID WITH QUOTED DSNAME'          00003700
         MEXIT                                                  00003800
.MAST    ANOP                                                   00003900
&MEMBER  SETC  '8+&DSN'                                         00004000
.MOK     ANOP                                                   00004100
         AIF   ('&MEMBER'(K'&MEMBER,1) EQ '/').BM               00004200
         RCPSR2                                                 00004300
         AIF   ('&MEMBER'(1,1) EQ '(').RM                       00004400
         LH    R2,4+&MEMBER            LOAD LENGTH OF MEMBER NAME 00004500
         LTR   R2,R2                   TEST FOR ZERO            00004600
         BZ    *+30                    IF NO MEMBER, SKIP       00004700
         L     R14,&MEMBER             LOAD ADDRESS OF MEMBER   00004800
         AGO   .STHM                                            00004900
.RM      LH    R2,4&MEMBER             LOAD LENGTH OF MEMBER    00005000
         LTR   R2,R2                   AND TEST FOR ZERO        00005100
```

```
                BZ    *+30                    IF NO MEMBER, SKIP              00005200
                L     R14,0&MEMBER            LOAD ADDRESS OF MEMBER          00005300
       .STHM    STH   R2,S99TULNG             STORE LENGTH OF MEMBER          00005400
                BCTR  R2,0                    DECREMENT FOR EXECUTE           00005500
                EX    R2,&DYNP.MVC            MOVE IN MEMBER NAME             00005600
                MVI   S99TUKEY+1,DUNMEMBR     MOVE IN MEMBER KEY              00005700
                MVI   S99TUNUM+1,1            SET NUMBER FIELD                00005800
                RCPDINC 14                                                    00005900
                MEXIT                                                         00006000
       .BM      RCPTUBFR DUNMEMBR,14,&MEMBER                                  00006100
                MEXIT                                                         00006200
       .QM      RCPBTU DUNMEMBR,1,&MEMBER                                     00006300
       .EXIT    MEND                                                          00006400
IEB817I MEMBER NAME (RCPFDSN ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFHOLD
         MACRO                                                  00000100
         RCPFHOLD &H                                            00000200
         AIF   ('&H' EQ 'YES').YES                              00000300
         AIF   ('&H' EQ 'NO').NO                                00000400
         MNOTE 4,'HOLD PARMETER VALUE INCORRECT - IGNORED'      00000500
         MEXIT                                                  00000600
.YES     ANOP                                                   00000700
         SPACE 1                                                00000800
*********************************************************************00000900
**       OVERIDING SYSOUT HOLD TEXT UNIT                       **00001000
*********************************************************************00001100
         SPACE 1                                                00001200
         MVI   S99TUKEY+1,DUNOVSHQ MOVE IN TEXT UNIT KEY        00001300
         RCPDINC 4                                              00001400
         MEXIT                                                  00001500
.NO      ANOP                                                   00001600
         SPACE 1                                                00001700
*********************************************************************00001800
**       OVERIDING SYSOUT NO HOLD TEXT UNIT                    **00001900
*********************************************************************00002000
         SPACE 1                                                00002100
         MVI   S99TUKEY+1,DUNOVSHQ MOVE IN TEXT UNIT KEY        00002200
         RCPDINC 4                                              00002300
         MEND                                                   00002400
IEB817I MEMBER NAME (RCPFHOLD) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFORUS
         MACRO - TO SET UP SVC 99 TEXT UNIT 'FOR USER'                 00000100
         RCPFORUS &T                                                   00000200
         SPACE 1                                                       00000300
*****************************************************************      00000400
**       'FOR USER' TEXT UNIT                                     **   00000500
*****************************************************************      00000600
         RCPVCHAR 0,5,&T,N=X'7701'                                     00000700
         MEND                                                          00000800
IEB817I MEMBER NAME (RCPFORUS) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPFREE
         MACRO                                                    00000100
         RCPFREE &FREE                                            00000200
         SPACE                                                    00000300
*****************************************************************00000400
**      UNALLOC AT CLOSE TEXT UNIT                              ** 00000500
*****************************************************************00000600
         MVI   S99TUPAR+1,DALCLOSE     MOVE IN CLOSE TEXT UNIT KEY 00000700
         RCPDINC 4                                                00000800
         MEND                                                     00000900
IEB817I MEMBER NAME (RCPFREE ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPIOPL
         MACRO                                                   00000100
&NAME    RCPIOPL                                                 00000200
         GBLC  &RCPPRE                                           00000300
         GBLB  &RCPIOPL(2)                                       00000400
         GBLB  &RCPSTPB(2),&RCPPTPB(2),&RCPPGPB(2),&RCPGTPB(2)   00000500
         LCLC  &P,&L,&L1                                         00000600
&P       SETC  '&RCPPRE'                                         00000700
         EJECT                                                   00000800
         AIF   (&RCPIOPL(2)).BYPIOPL                             00000900
&RCPIOPL(2) SETB 1                                               00001000
         IKJIOPL                                                 00001100
L#IOPL   EQU   *-IOPL                 LENGTH OF IO PARAM LIST    00001200
&SYSECT  CSECT                        RESUME PROGRAM CSECT       00001300
         SPACE 3                                                 00001400
.BYPIOPL RCPDS                                                   00001500
&P.IOPL  DS    CL(L#IOPL)             RESERVE SPACE FOR IOPL     00001600
         RCPDS                                                   00001700
         SPACE 5                                                 00001800
*********************************************************************00001900
***   THIS CODE GENERATES AN I/O SERVICE ROUTINE PARAMETER LIST     ***00002000
*********************************************************************00002100
         LA    R1,&P.IOPL              LOAD IOPL ADDRESS          00002200
         USING IOPL,R1                 IOPL ADDRESSABLE           00002300
         MVC   IOPLUPT,CPPLUPT         MOVE IN ADDRESS OF UPT     00002400
         MVC   IOPLECT,CPPLECT         MOVE IN ADDRESS OF ECT     00002500
         LA    R15,&P.ECB              LOAD ADDRESS OF ATTN ECB   00002600
         ST    R15,IOPLECB             AND STORE IN IOPL          00002700
         DROP  R1                                                 00002800
  AIF (&RCPSTPB(1) OR &RCPGTPB(1) OR &RCPPGPB(1) OR &RCPPTPB(1)).I 00002900
         MEXIT                                                   00003000
.I       EJECT                                                   00003100
         AIF   (NOT &RCPSTPB(1) OR &RCPSTPB(2)).TPT              00003200
         IKJSTPB                                                 00003300
&RCPSTPB(2) SETB 1                                               00003400
L#STPB   EQU   *-STPB         LENGTH OF STPB                     00003500
&SYSECT  CSECT                                                   00003600
.TPT     AIF   (NOT &RCPPTPB(1) OR &RCPPTPB(2)).TGT              00003700
         IKJPTPB                                                 00003800
&RCPPTPB(2) SETB 1                                               00003900
L#PTPB   EQU   *-PTPB         LENGTH OF PTPB                     00004000
&SYSECT  CSECT                                                   00004100
.TGT     AIF   (NOT &RCPGTPB(1) OR &RCPGTPB(2)).TPG              00004200
         IKJGTPB                                                 00004300
&RCPGTPB(2) SETB 1                                               00004400
L#GTPB   EQU   *-GTPB         LENGTH OF GTPB                     00004500
&SYSECT  CSECT                                                   00004600
.TPG     AIF   (NOT &RCPPGPB(1) OR &RCPPGPB(2)).STO              00004700
         IKJPGPB                                                 00004800
&RCPPGPB(2) SETB 1                                               00004900
L#PGPB   EQU   *-PGPB         LENGTH OF PGPB                     00005000
&SYSECT  CSECT                                                   00005100
```

```
       .STO     SPACE 3                                                  00005200
       &L       SETC  ''                                                 00005300
                RCPDS                                                    00005400
                AIF   (NOT &RCPSTPB(1)).XPT                              00005500
       &P.STPB  DS    CL(L#STPB)              RESERVE SPACE FOR STPB    00005600
       &L       SETC  '&L.+L#STPB'                                       00005700
       .XPT     AIF   (NOT &RCPPTPB(1)).XGT                              00005800
       &P.PTPB  DS    CL(L#PTPB)              RESERVE SPACE FOR PTPB    00005900
       &L       SETC  '&L.+L#PTPB'                                       00006000
       .XGT     AIF   (NOT &RCPGTPB(1)).XPG                              00006100
       &P.GTPB  DS    CL(L#GTPB)              RESERVE SPACE FOR GTPB    00006200
       &L       SETC  '&L.+L#GTPB'                                       00006300
       .XPG     AIF   (NOT &RCPPGPB(1)).XC                               00006400
       &P.PGPB  DS    CL(L#PGPB)              RESERVE SPACE FOR PGPB    00006500
       &L       SETC  '&L.+L#PGPB'                                       00006600
       .XC      RCPDS                                                    00006700
       &L1      SETC  '&L'(2,K'&L-1)                                     00006800
       &L       SETC  '&P'.'&L1'(3,4)                                    00006900
                XC    &L.(&L1.),&L            CLEAR IOPB AREA            00007000
                MEND                                                     00007100
IEB817I MEMBER NAME (RCPIOPL ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=RCPLINK
          MACRO                                                   00000100
&NAME     RCPLINK &MODULE                                         00000200
          LCLC  &OFFSET,&C                                        00000300
          AIF   ('&MODULE' EQ '').ERROR                           00000400
          AIF   ('&MODULE' NE 'IKJPARS').T1                       00000500
&OFFSET   SETC  '524'                                             00000600
          AGO   .START                                            00000700
.T1       AIF   ('&MODULE' NE 'IKJDAIR').T2                       00000800
&OFFSET   SETC  '732'                                             00000900
          AGO   .START                                            00001000
.T2       AIF   ('&MODULE' NE 'IKJEHDEF').T3                      00001100
&OFFSET   SETC  '736'                                             00001200
          AGO   .START                                            00001300
.T3       AIF   ('&MODULE' NE 'IKJEHCIR').T4                      00001400
&OFFSET   SETC  '740'                                             00001500
          AGO   .START                                            00001600
.T4       AIF   ('&MODULE' NE 'IKJPUTL').T5                       00001700
&OFFSET   SETC  '444'                                             00001800
          AGO   .START                                            00001900
.T5       AIF   ('&MODULE' NE 'IKJGETL').T6                       00002000
&OFFSET   SETC  '348'                                             00002000
          AGO   .START                                            00002100
.T6       AIF   ('&MODULE' NE 'IKJSCAN').T7                       00002200
&OFFSET   SETC  '480'                                             00002300
          AGO   .START                                            00002400
.T7       AIF   ('&MODULE' NE 'IKJPTGT').T8                       00002500
&OFFSET   SETC  '464'                                             00002600
          AGO   .START                                            00002700
.T8       AIF   ('&MODULE' NE 'IKJSTCK').T9                       00002800
&OFFSET   SETC  '472'                                             00002900
          AGO   .START                                            00003000
.T9       ANOP                                                    00003000
&NAME     DS    0H                                                00003100
*                                                                 00003200
 MNOTE *,' EP OF &MODULE. NOT IN CVT. STANDARD LINK USED'         00003300
*                                                                 00003400
          AGO   .LINK                                             00003500
.START    ANOP                                                    00003600
&NAME     L     R15,16                 LOAD CVT ADDRESS           00003700
          L     R15,&OFFSET.(R15)      LOAD MODULE ADDRESS        00003800
          LTR   R15,R15                IS MODULE ADDRESS THERE?   00003900
&C        SETC  'RCP&SYSNDX'                                      00004000
          BNM   &C.L                    IF NOT, BRANCH TO LINK    00004000
          BALR  R14,R15                 ELSE BALR TO IT           00004100
          B     &C.B                     AND BYPASS LINK          00004200
&C.L      LINK  EP=&MODULE                                        00004300
&C.B      DS    0H                     BRANCHED TO IF LINK BYPASSED 00004400
          MEXIT                                                   00004500
.LINK     ANOP                                                    00004600
&NAME     LINK  EP=&MODULE                                        00004700
          MEXIT                                                   00004800
```

```
       .ERROR   MNOTE 4,'NO MODULE NAME SPECIFIED'                          00004900
                MEND                                                        00005000
IEB817I MEMBER NAME (RCPLINK ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=RCPLOAD
          MACRO                                                   00000100
&NAME     RCPLOAD &MOD,&EP1                                       00000200
          GBLC  &RCPPTEP,&RCPGTEP,&RCPPGEP                        00000300
          GBLC  &RCPDFEP,&RCPSTEP,&RCPPREP                        00000400
          GBLC  &RCPPRE                                           00000500
          LCLA  &I,&J                                             00000600
          LCLB  &EPXISTS                                          00000700
          LCLC  &OFFSET,&C,&EP,&MODULE                            00000800
&EP       SETC  '&EP1'                                            00000900
&MODULE   SETC  '&MOD'                                            00001000
          AIF   ('&MODULE' EQ '').ERROR                           00001100
          AIF   ('&MODULE'(K'&MOD,1) NE ')').NOBR                 00001200
&I        SETA  K'&MOD                                            00001300
.LOOP     ANOP                                                    00001400
&I        SETA  &I-1                                              00001500
          AIF   (&I LT 2).NOLB                                    00001600
          AIF   ('&MOD'(&I,1) NE '(').LOOP                        00001700
&MODULE   SETC  '&MOD'(1,&I-1)                                    00001800
&J        SETA  K'&MOD-1-&I                                       00001900
&EP       SETC  '&MOD'(&I+1,&J)                                   00002000
          RCPDS                                                   00002100
&EP       DS    F                      TO STORE MODULE ADDRESS    00002200
          RCPDS                                                   00002300
.NOBR     ANOP                                                    00002400
&EPXISTS   SETB  ('&EP' NE '')                                    00002500
          AIF   ('&MODULE' NE 'IKJPARS').T1                       00002600
&OFFSET   SETC  '524'                                             00002700
&RCPPREP SETC '&EP'                                               00002800
          AIF   (&EPXISTS).START                                  00002900
          RCPDS                                                   00003000
&RCPPREP SETC '&RCPPRE.PREP'                                      00003100
&EP       SETC  '&RCPPREP'                                        00003200
&RCPPREP DS    F                      TO HOLD ADDRESS OF IKJPARS  00003300
          RCPDS                                                   00003400
          AGO   .START                                            00003500
.T1       AIF   ('&MODULE' NE 'IKJDAIR').T2                       00003600
&OFFSET   SETC  '732'                                             00003700
          AGO   .START                                            00003800
.T2       AIF   ('&MODULE' NE 'IKJEHDEF').T3                      00003900
&RCPDFEP SETC  '&EP'                                              00004000
&OFFSET   SETC  '736'                                             00004100
          AIF   (&EPXISTS).START                                  00004200
&RCPDFEP SETC  '&RCPPRE.DFEP'                                     00004300
          RCPDS                                                   00004400
&RCPDFEP DS    F                      ADDR OF DEFAULT SERVICE ROUTINE 00004500
          RCPDS                                                   00004600
&EP       SETC  '&RCPDFEP'                                        00004700
          AGO   .START                                            00004800
.T3       AIF   ('&MODULE' NE 'IKJEHCIR').T4                      00004900
&OFFSET   SETC  '740'                                             00005000
          AGO   .START                                            00005100
```

```
.T4      AIF   ('&MODULE' NE 'IKJPUTL').T5                          00005200
&RCPPTEP SETC  '&EP'                                                00005300
&OFFSET  SETC  '444'                                                00005400
         AIF   (&EPXISTS).START                                     00005500
&RCPPTEP SETC  '&RCPPRE.PTEP'                                       00005600
&EP      SETC  '&RCPPTEP'                                           00005700
         RCPDS                                                      00005800
&RCPPTEP DS    F                      ADDR OF PUTLINE ROUTINE      00005900
         RCPDS                                                      00006000
         AGO   .START                                               00006100
.T5      AIF   ('&MODULE' NE 'IKJGETL').T6                          00006200
&RCPGTEP SETC  '&EP'                                                00006300
&OFFSET  SETC  '348'                                                00006400
         AIF   (&EPXISTS).START                                     00006500
&RCPGTEP SETC  '&RCPPRE.GTEP'                                       00006600
&EP      SETC  '&RCPGTEP'                                           00006700
         RCPDS                                                      00006800
&RCPGTEP DS    F                      ADDR OF GETLINE ROUTINE      00006900
         RCPDS                                                      00007000
         AGO   .START                                               00007100
.T6      AIF   ('&MODULE' NE 'IKJSCAN').T7                          00007200
&OFFSET  SETC  '480'                                                00007300
         AGO   .START                                               00007400
.T7      AIF   ('&MODULE' NE 'IKJPTGT').T8                          00007500
&RCPPGEP SETC  '&EP'                                                00007600
&OFFSET  SETC  '464'                                                00007700
         AIF   (&EPXISTS).START                                     00007800
&RCPPGEP SETC  '&RCPPRE.PGEP'                                       00007900
&EP      SETC  '&RCPPGEP'                                           00008000
         RCPDS                                                      00008100
&RCPPGEP DS    F                      ADDR OF PUTGET ROUTINE       00008200
         RCPDS                                                      00008300
         AGO   .START                                               00008400
.T8      AIF   ('&MODULE' NE 'IKJSTCK').T9                          00008500
&RCPSTEP SETC  '&EP'                                                00008600
&OFFSET  SETC  '472'                                                00008700
         AIF   (&EPXISTS).START                                     00008800
&RCPSTEP SETC  '&RCPPRE.STEP'                                       00008900
&EP      SETC  '&RCPSTEP'                                           00009000
         RCPDS                                                      00009100
&RCPSTEP DS    F                      ADDR OF STACK ROUTINE        00009200
         RCPDS                                                      00009300
         AGO   .START                                               00009400
.T9      ANOP                                                       00009500
&NAME    DS    0H                                                   00009600
*                                                                   00009700
 MNOTE *,' EP OF &MODULE. NOT IN CVT. STANDARD LOAD USED'           00009800
*                                                                   00009900
         AGO   .LOAD                                                00010000
.START   ANOP                                                       00010100
&NAME    L     R15,16                 LOAD CVT ADDRESS             00010200
         L     R0,&OFFSET.(R15)       LOAD MODULE ADDRESS          00010300
```

```
         LTR   R0,R0                  IS MODULE LOADED?                00010400
&C       SETC  'RCP&SYSNDX'                                            00010500
         BM    &C                     IF SO, BYPASS LOAD MACRO         00010600
.LOAD    LOAD EP=&MODULE.                                              00010700
         AIF   ('&EP' EQ '').EPERR                                     00010800
&C       ST    R0,&EP                 STORE ENTRY POINT ADDRESS        00010900
         MEXIT                                                         00011000
.EPERR   MNOTE 4,'EP RETURN FIELD NOT SPECIFIED'                       00011100
         MEXIT                                                         00011200
.ERROR   MNOTE 4,'NO MODULE NAME SPECIFIED'                            00011300
         MEXIT                                                         00011400
.NOLB    MNOTE 4,'INVALID MODULE NAME ''&MOD'''                        00011500
         MEND                                                          00011600
IEB817I MEMBER NAME (RCPLOAD ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPLOCSW
*23456789*12345*78921234567893123456789*                                00000100
         MACRO                                                          00000200
         RCPLOCSW &SW                                                   00000300
.*****************************************************************     00000400
.*                                                               *     00000500
.*       INNER MACRO USED BY GOIF, SET, RESET AND FLIP.          *     00000600
.*       THE PARM PASSED IS THE SWITCH OR LIST OF SWITCHES.      *     00000700
.*       RCPLOCSW SCANS THE ARRAYS SET UP BY DCLSW TO SEE IF THE *     00000800
.*       SWITCH BIT NAMES WERE DECLARED, AND IF A LIST WAS PASSED, *   00000900
.*       WHETHER ALL THE SWITCH BITS BELONG TO THE SAME BYTE.    *     00001000
.*       RCPLOCSW PASSES BACH THE SWITCH BYTE NAME IN GLOBAL SETC *    00001100
.*       VARIABLE &RCPDSW1 AND THE SWITCH BIT NAME IN GLOBAL SETC *    00001200
.*       &RCPDSW2. IF A LIST OF SWITCHES WAS PASSED, &RCPDSW2    *     00001300
.*       CONTAINS THE SWITCH NAMES SEPARATED BY PLUS SIGNS.      *     00001400
.*       IF THE FIRST OR ONLY SWITCH WAS NOT FOUND, &RCPDSW1 IS SET *  00001500
.*       TO NULL. IF A LIST OF SWITCHES IS PASSED AND ANY SWITCH IS *  00001600
.*       NOT DECLARED IN THE SAME SWITCH BYTE AS THE FIRST, AN MNOTE*  00001700
.*       IS ISSUED WARNING OF POSSIBLE ERROR, BUT &RCPDSW1 IS SET *    00001800
.*       TO THE NAME OF THE SWITCH BYTE CONTAINING THE FIRST SWITCH *  00001900
.*       BIT IN THE LIST.                                        *     00002000
.*                                                               *     00002100
.*****************************************************************     00002200
         GBLA  &RCPDSW#,&RCPGSW#       COUNTER FOR DECLARED SWITCHES   00002300
         GBLA  &RCPDSW0                NO OF SWS FOUND BY RCPLOCSW     00002400
         GBLB  &RCPDSWD(99)            DEFER DECLARE INDICATORS        00002500
         GBLB  &RCPDSW3(20)   INVERT INDICATOR                         00002600
         GBLC  &RCPDSWN(99)            SWITCH BYTE NAMES               00002700
         GBLC  &RCPDSWB(800)           SWITCH BIT NAMES                00002800
         GBLC  &RCPGSWN(99)            GENERIC SWITCH BYTE NAMES       00002900
         GBLC  &RCPGSWB(99)            GENERIC SWITCH BIT PREFIXES     00003000
         GBLC  &RCPDSW1(20)            SWITCH BYTE NAMES               00003100
         GBLC  &RCPDSW2(20)            SWITCH BIT NAME(S)              00003200
         LCLA  &I,&J,&K,&L,&M,&N                                       00003300
         LCLB  &NOT                                                    00003400
         LCLC  &C,&SW1,&SW2                                            00003500
&RCPDSW0 SETA  0                       INITIALIZE                      00003600
&N       SETA  N'&SW                   NO OF SWITCHES ENTERED          00003700
&J       SETA  &RCPDSW#*8+8            INDEX TO LAST DECLARED SW BIT   00003800
.LOOP1   AIF   (&M GE &N).EXIT        LOOP FOR EACH SW                 00003900
&M       SETA  &M+1                                                    00004000
&SW2     SETC  '&SW(&M)'               SWITCH TO SEARCH FOR            00004100
         AIF   ('&SW2' EQ '').LOOP1    SKIP IF NULL                    00004200
&I       SETA  8                       INDEX TO FIRST DECLARED SW - 1  00004300
&NOT     SETB  0                                                       00004400
         AIF   ('&SW2'(1,1) NE ' ' AND '&SW2'(1,1) NE '-').TNOT2        00004500
&SW2     SETC  '&SW2'(2,K'&SW2-1)       REMOVE NOT SIGN                00004600
&NOT     SETB  1                       INDICATE INVERT FUNCTION        00004600
         AGO   .LOOP1A                 CONTINUE                        00004700
.TNOT2   AIF   (K'&SW2 LT 5).LOOP1A    CHECK LENGTH                    00004800
         AIF   ('&SW2'(1,4) NE 'NOT-').LOOP1A  WAS SWITCH INVERTED?    00004900
&SW2     SETC  '&SW2'(5,K'&SW2-4)      STRIP OFF 'NOT-'                00005000
```

```
&NOT     SETB  1                        INDICATE INVERTED                00005100
.LOOP1A  AIF   (&I GE &J).TGEN          SEARCH NAME ARRAY                00005200
&I       SETA  &I+1                                                      00005300
         AIF   ('&RCPDSWB(&I)' NE '&SW2').LOOP1A                         00005400
.*                                                                       00005500
.*   WE FOUND IT                                                         00005600
.*                                                                       00005700
&L       SETA  (&I-1)/8                 INDEX TO BYTE NAME               00005800
&SW1     SETC  '&RCPDSWN(&L)'           GET BYTE NAME                    00005900
.FOUNDSW ANOP                           HAVE WE HAD IT BEFORE?           00006000
&K       SETA  0                                                         00006100
.SWL1    AIF   (&K GE &RCPDSW0).NEWSW1                                   00006200
&K       SETA  &K+1                                                      00006300
         AIF   ('&RCPDSW1(&K)' NE '&SW1').SWL1                           00006400
         AIF   (&RCPDSW3(&K) NE &NOT).SWL1  ENSURE INVERT BIT THE SAME   00006500
.*                                                                       00006600
.* WE FOUND IT                                                           00006700
.*                                                                       00006800
&RCPDSW2(&K) SETC '&RCPDSW2(&K)+&SW2'  CONCATENATE CURRENT SW            00006900
         AGO   .LOOP1                   GO DO NEXT                       00007000
.NEWSW1  ANOP                                                            00007100
&RCPDSW0 SETA  &K+1                     NEXT SW BYTE INDEX               00007200
&RCPDSW1(&RCPDSW0) SETC '&SW1'          BYTE NAME                        00007300
&RCPDSW2(&RCPDSW0) SETC '&SW2'          BIT NAME                         00007400
&RCPDSW3(&RCPDSW0) SETB (&NOT)          SET INVERT INDICATOR             00007500
         AGO   .LOOP1                   GO DO NEXT                       00007600
.TGEN    ANOP  SEARCH GENERIC NAME ARRAY                                 00007700
&I       SETA  0                                                         00007800
&L       SETA  K'&SW2                                                    00007900
.LOOP2   ANOP                                                            00008000
&I       SETA  &I+1                                                      00008100
         AIF   (&I GT &RCPGSW#).NOTFND                                   00008200
&C       SETC  '&RCPGSWB(&I)'                                            00008300
         AIF   (&L LT K'&C).LOOP2                                        00008400
         AIF   ('&SW2'(1,K'&C) NE '&C').LOOP2                            00008500
&SW1     SETC  '&RCPGSWN(&I)'                                            00008600
         AGO   .FOUNDSW                 EUREKA                           00008700
.NOTFND  MNOTE 4,'SWITCH ''&SW2'' NOT DECLARED'                          00008800
         AGO   .LOOP1                                                    00008900
.EXIT    MEND                                                            00009000
IEB817I MEMBER NAME (RCPLOCSW) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPLOCS1
*23456789*12345*789212345678931234567 89*                                00000100
         MACRO                                                           00000200
         RCPLOCSW &SW                                                    00000300
.*****************************************************************      00000400
.*                                                               *      00000500
.*       INNER MACRO USED BY GOIF, SET, RESET AND FLIP.          *      00000600
.*       THE PARM PASSED IS THE SWITCH OR LIST OF SWITCHES.      *      00000700
.*       RCPLOCSW SCANS THE ARRAYS SET UP BY DCLSW TO SEE IF THE *      00000800
.*       SWITCH BIT NAMES WERE DECLARED, AND IF A LIST WAS PASSED, *    00000900
.*       WHETHER ALL THE SWITCH BITS BELONG TO THE SAME BYTE.    *      00001000
.*       RCPLOCSW PASSES BACH THE SWITCH BYTE NAME IN GLOBAL SETC *     00001100
.*       VARIABLE &RCPDSW1 AND THE SWITCH BIT NAME IN GLOBAL SETC *     00001200
.*       &RCPDSW2. IF A LIST OF SWITCHES WAS PASSED, &RCPDSW2    *      00001300
.*       CONTAINS THE SWITCH NAMES SEPARATED BY PLUS SIGNS.      *      00001400
.*       IF THE FIRST OR ONLY SWITCH WAS NOT FOUND, &RCPDSW1 IS SET *   00001500
.*       TO NULL. IF A LIST OF SWITCHES IS PASSED AND ANY SWITCH IS *   00001600
.*       NOT DECLARED IN THE SAME SWITCH BYTE AS THE FIRST, AN MNOTE*   00001700
.*       IS ISSUED WARNING OF POSSIBLE ERROR, BUT &RCPDSW1 IS SET *     00001800
.*       TO THE NAME OF THE SWITCH BYTE CONTAINING THE FIRST SWITCH *   00001900
.*       BIT IN THE LIST.                                        *      00002000
.*                                                               *      00002100
.*****************************************************************      00002200
         GBLA  &RCPDSW#,&RCPGSW#       COUNTER FOR DECLARED SWITCHES    00002300
         GBLA  &RCPDSW0                NO OF SWS FOUND BY RCPLOCSW      00002400
         GBLB  &RCPDSWD(99)            DEFER DECLARE INDICATORS         00002500
         GBLC  &RCPDSWN(99)            SWITCH BYTE NAMES                00002600
         GBLC  &RCPDSWB(800)           SWITCH BIT NAMES                 00002700
         GBLC  &RCPGSWN(99)            GENERIC SWITCH BYTE NAMES        00002800
         GBLC  &RCPGSWB(99)            GENERIC SWITCH BIT PREFIXES      00002900
         GBLC  &RCPDSW1(20)            SWITCH BYTE NAMES                00003000
         GBLC  &RCPDSW2(20)            SWITCH BIT NAME(S)               00003100
         LCLA  &I,&J,&K,&L,&M,&N       LOCAL COUNTERS                   00003200
         LCLC  &C,&SW1,&SW2                                             00003300
&RCPDSW0 SETA  0                       INITIALIZE                       00003400
&N       SETA  N'&SW                   NO OF SWITCHES ENTERED           00003500
&J       SETA  &RCPDSW#*8              INDEX TO LAST DECLARED SW BIT    00003600
.LOOP1   AIF   (&M GE &N).EXIT        LOOP FOR EACH SW                  00003700
&M       SETA  &M+1                                                     00003800
&SW2     SETC  '&SW(&M)'               SWITCH TO SEARCH FOR             00003900
         AIF   ('&SW2' EQ '').LOOP1    SKIP IF NULL                     00004000
&I       SETA  8                       INDEX TO FIRST DECLARED SW - 1   00004100
.LOOP1A  AIF   (&I GE &J).TGEN         SEARCH NAME ARRAY                00004200
&I       SETA  &I+1                                                     00004300
         AIF   ('&RCPDSWB(&I)' NE '&SW2').LOOP1A                        00004400
.*                                                                      00004500
.*   WE FOUND IT                                                        00004600
.*                                                                      00004700
&L       SETA  (&I-1)/8                INDEX TO BYTE NAME               00004800
&SW1     SETC  '&RCPDSWN(&L)'          GET BYTE NAME                    00004900
.FOUNDSW ANOP                          HAVE WE HAD IT BEFORE?           00005000
&K       SETA  0                                                        00005100
```

```
.SWL1    AIF   (&K GE &RCPDSW0).NEWSW1                                00005200
&K       SETA  &K+1                                                  00005300
         AIF   ('&RCPDSW1(&K)' NE '&SW1').SWL1                       00005400
.*                                                                   00005500
.* WE FOUND IT                                                       00005600
.*                                                                   00005700
&RCPDSW2(&K) SETC '&RCPDSW2(&K)+&SW2'  CONCATENATE CURRENT SW        00005800
         AGO   .LOOP1                  GO DO NEXT                    00005900
.NENSW1  ANOP                                                        00006000
&RCPDSW0 SETA  &K+1                    NEXT SW BYTE INDEX            00006100
&RCPDSW1(&RCPDSW0) SETC '&SW1'         BYTE NAME                     00006200
&RCPDSW2(&RCPDSW0) SETC '&SW2'         BIT NAME                      00006300
         AGO   .LOOP1                  GO DO NEXT                    00006400
.TGEN    ANOP  SEARCH GENERIC NAME ARRAY                             00006500
&I       SETA  0                                                     00006600
&L       SETA  K'&SW2                                                00006700
.LOOP2   ANOP                                                        00006800
&I       SETA  &I+1                                                  00006900
         AIF   (&I GT &RCPGSW#).NOTFND                               00007000
&SW1     SETC  '&RCPGSWN(&I)'                                        00007100
         AIF   (&L LT K'&SW1).LOOP2                                  00007200
         AIF   ('&SW1'(1,&L) NE '&SW2').LOOP2                        00007300
         AGO   .FOUNDSW                EUREKA                        00007400
.NOTFND  MNOTE 4,'SWITCH ''&SW2'' NOT DECLARED'                      00007500
         AGO   .LOOP1                                                00007600
.EXIT    MEND                                                        00007700
IEB817I MEMBER NAME (RCPLOCS1) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPLOCS2
*23456789*12345*789212345678931234567 89*                                00000100
         MACRO                                                           00000200
         RCPLOCSW &SW                                                    00000300
.*****************************************************************      00000400
.*                                                               *      00000500
.*       INNER MACRO USED BY GOIF, SET, RESET AND FLIP.          *      00000600
.*       THE PARM PASSED IS THE SWITCH OR LIST OF SWITCHES.      *      00000700
.*       RCPLOCSW SCANS THE ARRAYS SET UP BY DCLSW TO SEE IF THE *      00000800
.*       SWITCH BIT NAMES WERE DECLARED, AND IF A LIST WAS PASSED, *    00000900
.*       WHETHER ALL THE SWITCH BITS BELONG TO THE SAME BYTE.    *      00001000
.*       RCPLOCSW PASSES BACH THE SWITCH BYTE NAME IN GLOBAL SETC *     00001100
.*       VARIABLE &RCPDSW1 AND THE SWITCH BIT NAME IN GLOBAL SETC *     00001200
.*       &RCPDSW2. IF A LIST OF SWITCHES WAS PASSED, &RCPDSW2    *      00001300
.*       CONTAINS THE SWITCH NAMES SEPARATED BY PLUS SIGNS.      *      00001400
.*       IF THE FIRST OR ONLY SWITCH WAS NOT FOUND, &RCPDSW1 IS SET *   00001500
.*       TO NULL. IF A LIST OF SWITCHES IS PASSED AND ANY SWITCH IS *   00001600
.*       NOT DECLARED IN THE SAME SWITCH BYTE AS THE FIRST, AN MNOTE*   00001700
.*       IS ISSUED WARNING OF POSSIBLE ERROR, BUT &RCPDSW1 IS SET *     00001800
.*       TO THE NAME OF THE SWITCH BYTE CONTAINING THE FIRST SWITCH *   00001900
.*       BIT IN THE LIST.                                        *      00002000
.*                                                               *      00002100
.*****************************************************************      00002200
         GBLA  &RCPDSW#,&RCPGSW#       COUNTER FOR DECLARED SWITCHES    00002300
         GBLB  &RCPDSWD(99)            DEFER DECLARE INDICATORS         00002400
         GBLC  &RCPDSWN(99)            SWITCH BYTE NAMES                00002500
         GBLC  &RCPDSWB(800)           SWITCH BIT NAMES                 00002600
         GBLC  &RCPGSWN(99)            GENERIC SWITCH BYTE NAMES        00002700
         GBLC  &RCPGSWB(99)            GENERIC SWITCH BIT PREFIXES      00008800
         GBLC  &RCPDSW1                SWITCH BYTE NAME                 00002900
         GBLC  &RCPDSW2                SWITCH BIT NAME(S)               00003000
         LCLA  &I,&J,&K,&L,&M,&N       LOCAL COUNTERS                   00003100
         LCLC  &C                                                       00003200
&RCPDSW2 SETC  '&SW(1)'                EXTRACT 1ST SWITCH BIT           00003300
&J       SETA  &RCPDSW#*8+8            ARRAY POS OF LAST SW BIT         00003400
&I       SETA  8                       ARRAY POS-1 OF 1ST SW BIT        00003500
.LOOP1   AIF   (&I GE &J).TGEN         IF SW NOT FOUND IN 1ST ARRAY,    00003600
.*                                      GO SEARCH GENERIC NAME ARRAY    00003700
&I       SETA  &I+1                                                     00003800
         AIF   ('&RCPDSWB(&I)' NE '&RCPDSW2').LOOP1  LOOK FOR MATCH     00003900
.*                                                                      00004000
.*       OK, WE'VE FOUND A MATCH.                                       00004100
.*                                                                      00004200
&I       SETA  (&I-1)/8               GET POS OF SWITCH BYTE            00004300
&RCPDSW1 SETC  '&RCPDSWN(&I)'         MOVE IT TO EXIT PARM VAR          00004400
&I       SETA  &I*8+1                 POINT TO 1ST SW BIT IN IT         00004500
&J       SETA  &I+8                   POINT TO LAST SW BIT IN IT        00004600
&M       SETA  N'&SW                  GET NO OF SWITCHES                00004700
&L       SETA  1                                                        00004800
.*                                                                      00004900
.*       NOW WE PROCESS SUBSEQUENT SWITCHES IN THE LIST                 00005000
.*                                                                      00005100
```

```
.LOOP2   AIF   (&L GE &M).EXIT        EXIT WHEN FINISHED                00005200
&L       SETA  &L+1                   POINT TO NEXT SW IN LIST          00005300
&C       SETC  '&SW(&L)'               EXTRACT IT                       00005400
&RCPDSW2 SETC  '&RCPDSW2.+&C'           THEN APPEND TO PREVIOUS         00005500
.*                                                                       00005600
.*       NOW WE CHECK THAT THE SWITCH IS DECLARED IN THE SAME            00005700
.*       BYTE AS THE FIRST.                                              00005800
.*                                                                       00005900
&N       SETA  &I-1                     POINT TO 1ST BIT POS MINUS 1    00006000
.LOOP3   AIF   (&N GE &J).NM            IF SW NOT FOUND, ISSUE MNOTE    00006100
&N       SETA  &N+1                     POINT TO NEXT                   00006200
         AIF   ('&C' NE '&RCPDSWB(&N)').LOOP3  SEARCH FOR MATCH         00006300
         AGO   .LOOP2                   IF FOUND, GO PROCESS NEXT       00006400
.NM      MNOTE 4,'WARNING: SWITCH ''&C'' NOT DECLARED IN SAME BYTE AS  X00006500
               SWITCH ''&SW(1)'' - LOGIC ERROR MAY OCCUR'               00006600
         AGO   .LOOP2            CONTINUE FOR NEXT SWITCH BIT           00006700
.*                                                                       00006800
.*       IF THE SWITCH WAS NOT LOCATED IN THE EXPLICIT NAME ARRAY,       00006900
.*       THE GENERIC NAME ARRAY IS SEARCHED.                             00007000
.*                                                                       00007100
.TGEN    ANOP                                                            00007200
&I       SETA  0                                                         00007300
&RCPDSW2 SETC  '&SW(1)'                EXTRACT 1ST SWITCH                00007400
&L       SETA  K'&RCPDSW2              GET LENGTH OF 1ST SW              00007500
.LOOP4   AIF   (&I GE &RCPGSW#).ERROR  IF NOT SW NOT DECLARED, ERROR    00007600
&I       SETA  &I+1                                                      00007700
&C       SETC  '&RCPGSWB(&I)'          GET GENERIC PREFIX                00007800
&K       SETA  K'&C                    GET LENGTH OF GENERIC PREFIX      00007900
         AIF   (&L LT &K).LOOP4         AND SKIP IF LEN OF SWITCH NAME   00008000
.*                                          < LEN OF GENERIC PREFIX      00008100
         AIF   ('&RCPDSW2'(1,&K) NE '&C').LOOP4  ALSO SKIP IF NO MATCH   00008200
&RCPDSW1 SETC  '&RCPGSWN(&I)'          SAVE SWITCH BYTE NAME             00008300
&I       SETA   1                                                        00008400
&J       SETA   N'&SW                                                    00008500
.LOOP5   AIF   (&I GE &J).EXIT         EXIT WHEN FINISHED                00008600
&I       SETA   &I+1                                                     00008700
&RCPDSW2 SETC   '&RCPDSW2.+&SW(&I)'     APPEND THIS SWITCH               00008800
         AIF    ('&SW(&I)    '(1,&K) EQ '&C').LOOP5 CHECK PREFIX         00008900
         MNOTE 4,'WARNING: SWITCH ''&SW(&I)'' NOT GENERICALLY EQUAL TO X00009000
               SWITCH ''&SW(1)'''                                        00009100
         AGO   .LOOP5                                                    00009200
.ERROR   MNOTE 8,'SWITCH ''&SW(1)'' NOT DECLARED'                        00009300
&RCPDSW1 SETC  ''              INDICATE ERROR                            00009400
.EXIT    MEND                                                            00009500
IEB817I MEMBER NAME (RCPLOCS2) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPMCA
         MACRO                                                  00000100
         RCPMCA &DSECT=YES                                      00000200
         GBLC  &RCPPRE                                          00000300
         GBLA  &RCPSWS(10)                                      00000400
         LCLC  &P                                               00000500
     RCPDEBUG                                                   00000600
&P       SETC  '&RCPPRE'                                        00000700
         AIF   (&RCPSWS(2) NE 2).DSECT                          00000800
&P.MCA   DS    0F                     MODULE COMMUNICATIONS AREA 00000900
         AGO   .MCA2                                            00001000
.DSECT   ANOP                                                   00001100
&P.MCA   DSECT                        MODULE COMMUNICATIONS AREA 00001200
.MCA2    ANOP                                                   00001300
&P.XDS   DS    F                      ADDR OF EXTERNAL DUMMY SECTION 00001400
         AIF   (&RCPSWS(3) LT 1).EXIT                           00001500
&P.A#GET DS    F                      ADDRESS OF LIFO GET ROUTINE 00001600
&P.A#FRE DS    F                      ADDRESS OF LIFO FREE ROUTINE 00001700
&P.#S    DS    F                      ADDRESS OF CURRENT LIFO STACK 00001800
&P.#E    DS    F                      ADDRESS OF END OF LIFO STACK 00001900
&P.#N    DS    F                      ADDRESS OF NEXT FREE AREA 00002000
&P.#C    DS    F                      ADDRESS OF NEXT LIFO STACK 00002100
&P.#L    DS    F                      LENGTH OF CURRENT LIFO STACK 00002200
.EXIT    MEND                                                   00002300
IEB817I MEMBER NAME (RCPMCA  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPNTU
         MACRO                                                  00000100
         RCPNTU &KEY,&LEN,&PAR                                  00000200
.*                                                              00000300
.*     THIS IS AN ALLOC/FREE MACRO TEXT UNIT PROCESSOR SUBROUTINE 00000400
.*     MACRO. IT BUILDS NUMERIC TYPE TEXT UNITS.                00000500
.*                                                              00000600
         LCLA  &L,&R                                            00000700
         LCLC  &C                                               00000800
         GBLC  &RCPTYPE                                         00000900
.*  ALLOC/FREE INNER MACRO TO SET UP NUMERIC TEXT UNITS         00001000
&L       SETA  1                      DEFAULT LENGTH            00001100
         AIF   ('&LEN' EQ '').NL                                00001200
&L       SETA  &LEN                                             00001300
.NL      MVI   S99TUKEY+1,&KEY        SET KEY FIELD             00001400
         MVI   S99TUNUM+1,1           SET NUMBER FIELD          00001500
         MVI   S99TULNG+1,&L          SET LENGTH FIELD          00001600
         AIF   ('&PAR'(1,1) EQ '(').REG                         00001700
         RCPTYPE &PAR                 ANALYSE PARAMETER         00001800
         AIF   ('&RCPTYPE' EQ 'N').NUMERIC                      00001900
&R       SETA  4-&L                                             00002000
         MVC   S99TUPAR(&L),&R+&PAR   MOVE IN QUANTITY          00002100
         RCPDINC 10                                             00002200
         MEXIT                                                  00002300
.NUMERIC AIF   (&L EQ 1).NL1                                    00002400
         MVC   S99TUPAR(&L.),=AL&L.(&PAR) MOVE IN QUANTITY      00002500
&R       SETA  &L+6                                             00002600
         AIF   (&R/2 EQ (&R+1)/2).LOK ENSURE LENGTH EVEN        00002700
&R       SETA  &R+1                                             00002800
.LOK     RCPDINC &R                                             00002900
         MEXIT                                                  00003000
.NL1     MVI   S99TUPAR,&PAR          MOVE IN QUANTITY          00003100
         RCPDINC 8                                              00003200
         MEXIT                                                  00003300
.REG     ANOP                                                   00003400
&C       SETC  '&PAR'(2,K'&PAR-2)                               00003500
         AIF   (&L EQ 3).STCM                                   00003600
         AIF   (&L EQ 2).STH                                    00003700
         AIF   (&L EQ 1).STC                                    00003800
         ST    &C,S99TUPAR            STORE TEXT UNIT QUANTITY  00003900
         AGO   .RCPDINC                                         00004000
.STH     STH   &C,S99TUPAR            STORE TEXT UNIT QUANTITY  00004100
         AGO   .RCPDINC                                         00004200
.STC     STC   &C,S99TUPAR            STORE TEXT UNIT QUANTITY  00004300
         AGO   .RCPDINC                                         00004400
.STCM    STCM  &C,7,S99TUPAR          STORE TEXT UNIT QUANTITY  00004500
.RCPDINC RCPDINC 10                                             00004600
         MEND                                                   00004600
IEB817I MEMBER NAME (RCPNTU  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPPERM
         MACRO                                                    00000100
         RCPPERM                                                  00000200
         SPACE                                                    00000300
*********************************************************************** 00000400
**     PERMANENTLY ALLOCATED ATTRIBUTE TEXT UNIT                  ** 00000500
*********************************************************************** 00000600
         MVI   S99TUKEY+1,DALPERMA     SET TEXT UNIT KEY          00000700
         RCPDINC  4                                               00000800
         MEND                                                     00000900
IEB817I MEMBER NAME (RCPPERM ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=RCPPPL
          MACRO                                                   00000100
&NAME     RCPPPL &PCL=,&NOPARM=,&PARSERR=,&PDLREG=R11,           X00000200
                 &PDLNAME=,&PARSEP=,&PARSWKA=                     00000300
          GBLB  &RCPPPL(2),&RCPECT(2)                             00000400
          GBLC  &RCPPRE,&RCPPREP                                  00000500
          LCLC  &P                                                00000600
&P        SETC  '&RCPPRE'                                         00000700
          AIF   (&RCPPPL(2)).BPPL                                 00000800
          EJECT                                                   00000900
          IKJPPL                                                  00001000
L#PPL     EQU   *-PPL                  LENGTH OF PPL              00001100
&SYSECT   CSECT                                                   00001200
          SPACE 1                                                 00001300
&RCPPPL(2) SETB 1                                                 00001400
.BPPL     RCPDS                                                   00001500
&P.PPL    DS    CL(L#PPL)              RESERVE SPACE FOR PPL      00001600
&P.PDLP   DS    F                      POINTER TO PDL             00001700
          RCPDS                                                   00001800
          SPACE 6                                                 00001900
*********************************************************************** 00002000
***   THIS CODE GENERATES A PARSE PARAMETER LIST                 *** 00002100
*********************************************************************** 00002200
          XC    &P.PDLP,&P.PDLP        ZERO PDL POINTER           00002300
          AIF   ('&NOPARM(1)' EQ '' OR '&NOPARM(2)' NE '').PB2     00002400
          L     R1,CPPLECT             LOAD ECT ADDRESS           00002500
&RCPECT(1) SETB 1                                                 00002600
          USING ECT,R1                 ECT ADDRESSABLE            00002700
          TM    ECTSWS,ECTNOPD         WERE ANY OPERANDS SUPPLIED? 00002800
          BO    &NOPARM(1)             NO, BRANCH OUT             00002900
          SPACE                                                   00003000
.PB2      LA    R1,&P.PPL              LOAD PPL ADDRESS           00003100
          USING PPL,R1                                            00003200
          MVC   PPLUPT,CPPLUPT         MOVE IN UPT ADDRESS        00003300
          MVC   PPLECT,CPPLECT         MOVE IN ECT ADDRESS        00003400
          MVC   PPLCBUF,CPPLCBUF       MOVE IN CBUF ADDRESS       00003500
          LA    R15,&P.ECB             LOAD ATTN ECB ADDRESS      00003600
          ST    R15,PPLECB             AND STORE IN PPL           00003700
          LA    R15,&P.PDLP            LOAD PDL POINTER ADDRESS   00003800
          ST    R15,PPLANS              AND STORE IN PPL          00003900
          AIF   ('&PARSWKA' EQ '').PB3                            00004000
          AIF   ('&PARSWKA'(1,1) EQ '').PB4                       00004100
          LA    R15,&PARSWKA           LOAD ADDRESS OF WORK AREA  00004200
          ST    R15,PPLUWA              AND STORE IN PPL          00004300
          AGO   .PB3                                              00004400
.PB4      ST    &PARSWKA(1),PPLUWA     STORE ADDRESS OF WORKAREA  00004500
.PB3      AIF   ('&PCL' EQ '').EXIT                               00004600
          L     R15,=V(&PCL)           LOAD PCL ADDRESS           00004700
          ST    R15,PPLPCL             AND STORE IN PPL           00004800
          SPACE 2                                                 00004900
          AIF   ('&NOPARM(1)' EQ '' OR '&NOPARM(2)' EQ '').PB5    00005000
          L     R1,CPPLECT             LOAD ECT ADDRESS           00005100
```

```
&RCPECT(1) SETB 1                                                  00005200
         USING ECT,R1                                              00005300
         TM    ECTSWS,ECTNOPD          WERE ANY OPERANDS SUPPLIED? 00005400
         BO    &NOPARM(1)               NO, BRANCH OUT             00005500
         SPACE                                                     00005600
.PB5     AIF   ('&SYSPARM' EQ 'MVT').MVTBYP                        00005700
         AIF   ('&RCPPREP' EQ '').NOPREP                           00005800
         L     R15,&RCPPREP            LOAD EP OF IKJPARS          00005900
         BALR  R14,R15                  AND ENTER IT               00006000
         AGO   .PRET                                               00006100
.NOPREP  ANOP                                                      00006200
         L     R15,16                  LOAD CVT ADDRESS            00006300
         TM    524(R15),X'80'          IS IKJPARS LOADED?          00006400
         AIF   ('&PARSEP' EQ '').PBL1                              00006500
         BZ    &P.LOAD                  NO, BRANCH TO LOAD SVC     00006600
         L     R15,524(15)             LOAD EP OF IKJPARS          00006700
         ST    R15,&PARSEP             SAVE ITS ADDRESS            00006800
         BALR  R14,R15                 THEN BALR TO IT             00006900
         B     &P.PLNKB                BYPASS LOAD SVC             00007000
&P.LOAD  LOAD  EP=IKJPARS                                          00007100
         LR    R15,R0                  LOAD EP OF IKJPARS          00007200
         ST    R15,&PARSEP             SAVE IT                     00007300
         BALR  R14,R15                 THEN BALR TO IT             00007400
&P.PLNKB DS    0H                                                  00007500
         AGO   .PRET                                               00007600
.PBL1    BZ    &P.PLINK                 NO, BRANCH TO LINK SVC     00007700
         L     R15,524(R15)            ELSE LOAD ITS ADDRESS       00007800
         BALR  R14,R15                  AND BALR TO IT             00007900
         B     &P.PLNKB                BYPASS LINK SVC             00008000
.MVTBYP  ANOP                                                      00008100
&P.PLINK LINK  EP=IKJPARS                                          00008200
&P.PLNKB DS    0H                                                  00008300
.PRET    AIF   ('&PARSERR' EQ '').EXIT                             00008400
         SPACE                                                     00008500
         LTR   R15,R15                 TEST RETURN CODE            00008600
         BNZ   &PARSERR                 AND BRANCH ON NON-ZERO     00008700
         SPACE                                                     00008800
         AIF   ('&PDLREG' EQ '' OR '&PDLNAME' EQ '').EXIT          00008900
         L     &PDLREG,&P.PDLP         LOAD PDL ADDRESS            00009000
         USING &PDLNAME,&PDLREG        PDL DSECT ADDRESSABLE       00009100
.EXIT    MEND                                                      00009200
IEB817I MEMBER NAME (RCPPPL  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPPROC
         MACRO                                                  00000100
         RCPPROC &WKCSECT=,&WKDSECT=,                          X00000200
               &REG1=,&REG0=,&ISA=,&SAVEPRE=,                  X00000300
               &SAVESUF=,&SP=                                   00000400
         GBLA  &RCPSWS(10)                                      00000500
         GBLC  &RCPPRE,&RCPWKCS,&RCPWKDS                        00000600
         GBLC  &RCPSPN                                          00000700
         LCLC  &P,&C                                            00000800
         RCPDEBUG                                               00000900
&P       SETC  '&RCPPRE'                                        00001000
         AIF   ('&WKCSECT' EQ '').TDS                           00001100
         SPACE                                                  00001200
         MNOTE 4,'WKCSECT= OPTION INVALID WITH PROC OPTION, '   00001300
         MNOTE *,'    WKDSECT=  USED INSTEAD'                   00001400
&RCPWKDS SETC  '&WKCSECT'                                       00001500
         AGO   .SETCS                                           00001600
.TDS     AIF   ('&WKDSECT' EQ '').SYSECT                        00001700
&RCPWKDS SETC  '&WKDSECT'                                       00001800
         AGO   .SETCS                                           00001900
.SYSECT  ANOP                                                   00002000
&RCPWKDS SETC  '&SYSECT'                                        00002100
.SET1    AIF   (K'&RCPWKDS LT 8).LOK                            00002200
&RCPWKDS SETC  '&RCPWKDS'(1,4)'&RCPWKDS'(6,3)'1'                00002300
         AGO   .SETCS                                           00002400
.LOK     ANOP                                                   00002500
&RCPWKDS SETC  '&RCPWKDS.1'                                     00002600
.SETCS   ANOP                                                   00002700
&RCPWKCS SETC  ''                                               00002800
&RCPSWS(4) SETA &RCPSWS(2)-1 SET W/A TO BE FREED OPT IF PROC(MAIN)  00002900
         AIF   ('&ISA' EQ '').NISA                              00003000
&RCPSWS(3) SETA 1                    SET LIFO FLAG IF ISA SPEC  00003100
.NISA    ANOP                                                   00003200
         SPACE 2                                                00003300
         RCPDS                                                  00003400
         DS    9D                     SAVE AREA                 00003500
&P.RCODE DS    F                      RETURN CODE               00003600
         RCPMCA                                                 00003700
         RCPDS                                                  00003800
         SPACE 2                                                00003900
         AIF   ('&REG1' EQ '').TR0                              00004000
         LR    &REG1,R1               SAVE CONTENTS OF REG 1    00004100
.TR0     AIF   ('&REG0' EQ '').TP                               00004200
         LR    &REG0,R0               SAVE CONTENTS OF REG 0    00004300
.TP      AIF   (&RCPSWS(2) EQ 2).PROCMN   PROCMAIN OPTION       00004400
         AIF   (&RCPSWS(3) EQ 1).PL    LIFO OPTION              00004500
         L     R15,0(R13)              R15 -> MODULE COMMUNIC. AREA  00004600
         L     R15,&P.XDS-&P.MCA(R15)  LOAD EXTERNAL DUMMY SECT ADDR 00004700
         AL    R15,&P.QCON             GET OFFSET TO WORK AREA   00004800
         ST    R15,8(R13)              CHAIN SAVE                00004900
         ST    R13,4(R15)               AREAS TOGETHER           00005000
         MVC   0(4,R15),0(R13)         COPY POINTER TO COMM AREA 00005100
```

```
         LR    R13,R15                 LOAD WORK AREA ADDRESS           00005200
         USING &RCPWKDS,R13              ESTABLISH ADDRESSABLITY TO IT  00005300
         MEXIT                                                          00005400
.PL      ANOP                                                           00005500
*****************************************************************      00005600
*        GET WORKAREA FROM LIFO STACK                                 * 00005700
*****************************************************************      00005800
         #GET  LV=&P.WKLEN                                              00005900
         ST    R1,8(R13)               CHAIN SAVE                       00006000
         ST    R13,4(R1)                AREAS TOGETHER                  00006100
         MVC   0(4,R1),0(R13)          PROPAGATE MODULE COMM. AREA ADDR 00006200
         LR    R13,R1                  LOAD WORK AREA ADDRESS           00006300
         USING &RCPWKDS,R13             ESTABLISH ADDRESSABILITY TO IT  00006400
         MEXIT                                                          00006500
.PROCMN  L     R0,&P.CXD               LOAD WORK AREA LENGTH            00006600
         AIF   ('&SYSPARM' EQ 'MVT').MVT                                00006700
 MNOTE *,'      GETMAIN RU,LV=(0),SP=&SP,BNDRY=PAGE'                    00006800
         GETMAIN RU,LV=(0),SP=&SP,BNDRY=PAGE                            00006900
         AGO   .CONT                                                    00007000
.MVT     AIF   ('&SP' EQ '').NOSP                                       00007100
         ICM   R0,8,=AL1(&SP)          INSERT SUBPOOL NUMBER            00007200
.NOSP    ANOP                                                           00007300
*        GETMAIN R,LV=(0)              OBTAIN A WORK AREA               00007400
.CONT    ANOP                                                           00007500
&RCPSPN  SETC  '&SP'                                                    00007600
         LR    R15,R13                 SAVE CALLER'S SAVE AREA ADDR     00007700
         LR    R13,R1                  LOAD EXT DUMMY SECTION ADDR      00007800
         AL    R13,&P.QCON              ADD OFFSET TO WORK AREA         00007900
         ST    R13,8(R15)              CHAIN SAVE                       00008000
         ST    R15,4(R13)               AREAS TOGETHER                  00008100
         USING &RCPWKDS,R13            GET WORKAREA ADDRESSABILITY      00008200
         ST    R1,&P.XDS               STORE DUMMY SECTION ADDR IN     X00008300
                                         MODULE COMMUNICATIONS AREA     00008400
         LA    R15,&P.MCA              STORE COMMUNICATIONS AREA ADDR   00008500
         ST    R15,0(R13)               IN WORD 1 OF SAVE AREA          00008600
         AIF   (&RCPSWS(3) EQ 0 AND '&ISA' EQ '').EXIT                  00008700
&RCPSWS(3) SETA 1                      SET LIFO IN CASE ONLY ISA SPEC   00008800
&C       SETC  '&ISA'                                                   00008900
         AIF   ('&ISA' NE '').TK                                        00009000
&C       SETC  '8192'                                                   00009100
         AGO   .NK                                                      00009200
.TK      AIF   ('&C'(K'&C,1) NE 'K').NK                                 00009300
&C       SETC  '&C'(1,K'&C-1)'*1024'                                    00009400
.NK      EJECT                                                          00009500
*****************************************************************      00009600
**       INITIALIZE MODULE COMMUNICATIONS AREA WITH POINTERS         ** 00009700
**       TO LIFO STACK AND LIFO GET/FREE ROUTINES                    ** 00009800
*****************************************************************      00009900
         SPACE 1                                                        00010000
         MVC   &P.A#GET,=V(#####GET)   MOVE LIFO GET AND FREE           00010100
         MVC   &P.A#FRE,=V(####FREE)    ROUTINE ADDRESSES TO MCA        00010200
         L     R15,=Q(#####ISA)        COMPUTE LIFO STACK               00010300
```

```
         AL    R15,&P.XDS                PSEUDO REGISTER OFFSET          00010400
         ST    R15,&P.#S                  AND INITIALIZE POINTERS        00010500
         ST    R15,&P.#N                   IN MODULE COMMUNICATIONS AREA 00010600
         L     R14,=A(&C)               LOAD SIZE OF INITIAL STACK AREA  00010700
         ST    R14,&P.#L                STORE THIS IN MCA                00010800
         ALR   R15,R14                   THEN COMPUTE STACK END ADDRESS  00010900
         ST    R15,&P.#E                  AND STORE THIS INTO MCA        00011000
         EJECT                                                           00011100
*********************************************************************** 00011200
**       LIFO STACK GET/FREE ROUTINES                                 ** 00011300
*********************************************************************** 00011400
         SPACE 1                                                         00011500
#####ISA DXD   CL(&C)                   DEFINE PSEUDO REGISTER FOR ISA   00011600
         SPACE 1                                                         00011700
#####GET CSECT                          LIFO GET ROUTINE                00011800
         USING *,R15                                                     00011900
         USING &P.MCA,R1                                                 00012000
         A     R0,&P.F7                 ROUND LENGTH UP TO               00012100
         N     R0,&P.F8                  A MULTIPLE OF 8                 00012200
         AL    R0,&P.#N                 COMPUTE NEXT FREE LIFO SLOT ADDR 00012300
         CL    R0,&P.#E                 COMPARE TO STACK END ADDRESS     00012400
         BH    &P.GA                     AND IF TOO BIG, BRANCH         00012500
         LR    R15,R1                   PRESERVE MCA ADDRESS             00012600
         USING &P.MCA,R15               NEW BASE                         00012700
         L     R1,&P.#N                 LOAD ADDRESS OF SLOT             00012800
         ST    R0,&P.#N                  AND STORE ADDRESS OF NEXT SLOT  00012900
         BR    R14                      RETURN TO CALLER                 00013000
         SPACE 1                                                         00013100
&P.GA    EQU   *                        IF CURRENT SLOT TOO SMALL        00013200
*        ABEND 1000,DUMP                 ABEND FOR NOW                   00013300
         ABEND 1000,DUMP                                                 00013400
         SPACE 2                                                         00013500
####FREE DS    0H                       LIFO FREE ROUTINE                00013600
         ENTRY ####FREE                                                  00013700
         USING *,R15                    BASE ADDRESS                     00013800
         USING &P.MCA,R1                MCA ADDRESS                      00013900
         CL    R0,&P.#S                 CHECK THAT                       00014000
         BL    &P.FA                     ADDRESS TO BE                  00014100
         CL    R0,&P.#E                   FREED IS WITHIN               00014200
         BH    &P.FA                       BOUND OF CURRENT STACK       00014300
         AL    R0,&P.F7                 GET UPPER DOUBLE                 00014400
         N     R0,&P.F8                  WORD BOUNDARY                  00014500
         ST    R0,&P.#N                   AND UPDATE MCA                00014600
         BR    R14                      RETURN TO CALLER                 00014700
         SPACE 1                                                         00014800
&P.FA    EQU   *                        IF ADDRESS NOT WITHIN THIS STACK 00014900
*        ABEND 1001,DUMP                ABEND                            00015000
         ABEND 1001,DUMP                                                 00015100
         SPACE 2                                                         00015200
&P.F7    DC    F'7'                     CONSTANTS                        00015300
&P.F8    DC    F'-8'                     TO ROUND UP TO DOUBLEWORD SIZE  00015400
         DROP  R1,R15                   KILL ADDRESSABILITY              00015500
```

```
       &SYSECT  CSECT                        RESUME MAIN PROGRAM CSECT        00015600
       .EXIT    MEND                                                          00015700
IEB817I MEMBER NAME (RCPPROC ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPPSWD
         MACRO                                                  00000100
         RCPPSWD &PASSW                                         00000200
         GBLC  &DYNP                                            00000300
         SPACE                                                  00000400
*********************************************************************** 00000500
**   BUILD THE PASSWORD TEXT UNIT                                   ** 00000600
*********************************************************************** 00000700
         RCPVCHAR DALPASSW,14,&PASSW                            00000800
         MEND                                                   00000900
IEB817I MEMBER NAME (RCPPSWD ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPQNAME
         MACRO                                                  00000100
         RCPQNAME &QNAME                                        00000200
         GBLC  &DYNP                                            00000300
         SPACE                                                  00000400
*****************************************************************00000500
**   BUILD THE QNAME TEXT UNIT                                 ** 00000600
*****************************************************************00000700
         RCPVCHAR DALQNAME,14,&QNAME                            00000800
         MEND                                                   00000900
IEB817I MEMBER NAME (RCPQNAME) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPRNGE
         MACRO - BREAK A RANGE PARAMETER INTO TWO                    00000100
         RCPRNGE &P                                                  00000200
         GBLC  &RCPRNGE(2)                                           00000300
         LCLA  &I,&J,&K                                              00000400
&K       SETA  K'&P                                                  00000500
&RCPRNGE(1) SETC ''                                                  00000600
&RCPRNGE(2) SETC ''                                                  00000700
.LOOP    ANOP                                                        00000800
&I       SETA  &I+1                                                  00000900
         AIF   (&I GT &K).NR                                         00001000
         AIF   ('&P'(&I,1) NE '-' AND '&P'(&I,1) NE ':').LOOP        00001100
&RCPRNGE(1) SETC '&P'(1,&I-1)                                        00001200
&RCPRNGE(2) SETC '&P'(&I+1,&K-&I)                                    00001300
         MEXIT                                                       00001400
.NR      ANOP                                                        00001500
&RCPRNGE(1) SETC '&P'                                                00001600
         MEND                                                        00001700
IEB817I MEMBER NAME (RCPRNGE ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSPACE
         MACRO                                                   00000100
         RCPSPACE &SPACE                                         00000200
         GBLA  &RCPSUB#               NO OF SUBLIST ELEMENTS     00000300
         GBLC  &RCPSUBL(100)          SUBLIST ELEMENTS           00000400
.*****************************************************************00000500
.*    THIS IS AN ALLOC INNER MACRO TO BUILD THE ALLOCATION SPACE  00000600
.*    QUANTITY TEXT UNIT. IT SHOULD BE SPECIFIED AS:-             00000700
.*     SPACE=(TYPE,(PRIMARY,SECONDARY,DIRECTORY),RLSE,CONTIG,ROUND) 00000800
.*   WHERE TYPE IS 'TRK', 'CYL', 'ABSTR' OR A BLOCK QUANTITY      00000900
.*     'CYL' OR 'TRK' SHOULD NOT BE ENTERED IN QUOTES. THE BLOCK   00001000
.*     QUANTITY CAN BE A NUMBER, A REGISTER (IN BRACKETS), OR THE  00001100
.*     NAME OF A FULLWORD CONTAINING THE BLOCK SIZE.               00001200
.*****************************************************************00001300
         AIF   ('&SPACE(1)' EQ '' OR '&SPACE(1)' EQ 'TRK').TRK     00001400
         AIF   ('&SPACE(1)' EQ 'CYL').CYL                          00001500
*****************************************************************00001600
**        SPACE UNIT IN BLOCKS                                  ** 00001700
*****************************************************************00001800
         RCPNTU DALBLKLN,3,&SPACE(1)  GENERATE BLOCK UNIT TU       00001900
         AGO   .TPRIME        GO TEST PRIME QUANTITY               00002000
.TRK     ANOP  TRACK SPEC REQ OR DEFAULTED                         00002100
         SPACE                                                     00002200
*****************************************************************00002300
**       SPACE QUANTITY IN TRACKS                               ** 00002400
*****************************************************************00002500
         MVI   S99TUKEY+1,DALTRK      SET TEXT UNIT KEY            00002600
         RCPDINC 4                                                 00002700
         AGO   .TPRIME                                             00002800
.CYL     ANOP  CYL QUANTITY                                        00002900
         SPACE 1                                                   00003000
*****************************************************************00003100
**      SPACE UNIT IN CYLINDERS                                 ** 00003200
*****************************************************************00003300
         MVI   S99TUKEY+1,DALCYL      SET TEXT UNIT KEY            00003400
         RCPDINC 4                    STORE TEXT UNIT ADDR         00003500
.TPRIME  RCPSUBL &SPACE(2)            BREAK UP SUBLIST             00003600
         AIF   (&RCPSUB# EQ 0).TCONTIG                             00003700
         AIF   ('&RCPSUBL(1)' EQ '').TSP2                          00003800
         SPACE                                                     00003900
*****************************************************************00004000
**       PRIMARY SPACE QUANTITY                                 ** 00004100
*****************************************************************00004200
         RCPNTU DALPRIME,3,&RCPSUBL(1)                             00004300
.TSP2    AIF   (&RCPSUB# LT 2).TCONTIG                             00004400
         AIF   ('&RCPSUBL(2)' EQ '').TSP3                          00004500
         SPACE                                                     00004600
*****************************************************************00004700
**       SECONDARY SPACE QUANTITY                               ** 00004800
*****************************************************************00004900
         RCPNTU DALSECND,3,&RCPSUBL(2)                             00005000
.TSP3    AIF   (&RCPSUB# LT 3).TCONTIG                             00005100
```

```
         AIF   ('&RCPSUBL(3)' EQ '').TCONTIG                            00005200
         SPACE                                                          00005300
*********************************************************************** 00005400
**       DIRECTORY BLOCK QUANTITY                                     ** 00005500
*********************************************************************** 00005600
         RCPNTU DALDIR,3,&RCPSUBL(3)                                    00005700
.TCONTIG AIF  ('&SPACE(3)' EQ 'CONTIG' OR '&SPACE(4)' EQ 'CONTIG').CON  00005800
         AIF   ('&SPACE(3)' EQ 'MXIG' OR '&SPACE(4)' EQ 'MXIG').MXIG    00005900
         AIF   ('&SPACE(3)' EQ 'ALX' OR '&SPACE(4)' EQ 'ALX').ALX       00006000
.TRLSE   AIF   ('&SPACE(3)' EQ 'RLSE' OR '&SPACE(4)' EQ 'RLSE').RLSE    00006100
.TROUND  AIF   ('&SPACE(4)'EQ'ROUND'OR'&SPACE(5)'EQ'ROUND').ROUND       00006200
         MEXIT                                                          00006300
.CON     ANOP                                                           00006400
*********************************************************************** 00006500
**      CONTIGUOUS SPACE TEXT UNIT                                    ** 00006600
*********************************************************************** 00006700
         RCPNTU DALSPFRM,1,8                                            00006800
         AGO   .TRLSE                                                   00006900
.MXIG    ANOP                                                           00007000
*********************************************************************** 00007100
**       MAXIMUM CONTIGUOUS SPACE TEXT UNIT                           ** 00007200
*********************************************************************** 00007300
         RCPNTU DALSPFRM,1,4                                            00007400
         AGO   .TRLSE                                                   00007500
.ALX     ANOP                                                           00007600
*********************************************************************** 00007700
**       'ALX' SPACE TEXT UNIT                                        ** 00007800
*********************************************************************** 00007900
         RCPNTU DALSPFRM,1,2                                            00008000
         AGO   .TRLSE                                                   00008100
.RLSE    ANOP                                                           00008200
*********************************************************************** 00008300
**      RELEASE UNUSED SPACE TEXT UNIT                                ** 00008400
*********************************************************************** 00008500
         MVI   S99TUKEY+1,DALRLSE      SET TEXT UNIT KEY                00008600
         RCPDINC 4                                                      00008700
         AGO   .TROUND                                                  00008800
.ROUND   ANOP                                                           00008900
*********************************************************************** 00009000
**      RELEASE UNUSED SPACE TEXT UNIT                                ** 00009100
*********************************************************************** 00009200
         MVI   S99TUKEY+1,DALROUND     MOVE IN TEXT UNIT KEY            00009300
         RCPDINC 4                                                      00009400
         MEND                                                           00005500
IEB817I MEMBER NAME (RCPSPACE) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSPEC
         MACRO - SET UP USER DEFINED TEXT UNIT                        00000100
         RCPSPEC &T                                                   00000200
         LCLA  &I,&J                                                  00000300
&I       SETA  1                                                      00000400
&J       SETA  K'&T                                                   00000500
         SPACE                                                        00000600
******************************************************************* 00000700
**       PROCESS SPECIAL TEXT UNITS                                ** 00000800
******************************************************************* 00000900
.LOOP    RCPVCHAR &T(&I),&T(&I+2),&T(&I+3),N=&T(&I+1)                 00001000
&I       SETA  &I+4                                                   00001100
         AIF   (&I LE &J).LOOP                                        00001200
         MEND                                                         00001300
IEB817I MEMBER NAME (RCPSPEC ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSR2
         MACRO                                                    00000100
         RCPSR2 &A                                                00000200
         GBLB  &RCPSR2                                            00000300
         GBLC  &DYNP                                              00000400
         LCLC  &C                                                 00000500
.*   TO SAVE REG 2 IN REG 0 FOR ALLOC INNER MACROS FIRST TIME ONLY 00000600
.*    IF OPERAND SUPPLIED AND SAVE DONE, RESTORES REG 2 AND       00000700
.*    GENERATES MOVE INSTRUCTION FOR EXECUTE                      00000800
         AIF   ('&A' NE '').UNSAVE                                00000900
         AIF   (&RCPSR2).EXIT                                     00001000
&RCPSR2  SETB  1                                                  00001100
         LR    R0,R2                  SAVE CONTENTS OF REGISTER 2 00001200
         MEXIT                                                    00001300
.UNSAVE  AIF   (NOT &RCPSR2).EXIT                                 00001400
         B     *+10                   SKIP NEXT INSTRUCTION       00001500
&C       SETC  '&DYNP.MVC'                                        00001600
&C       MVC   S99TUPAR(0),0(R14)     EXECUTED MOVE               00001700
         LR    R2,R0                  RESTORE CONTENTS OF REGISTER 2 00001800
&RCPSR2  SETB  0                                                  00001900
.EXIT    MEND                                                     00002000
IEB817I MEMBER NAME (RCPSR2  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSSREQ
         MACRO                                                    00000100
         RCPSSREQ                                                 00000200
         SPACE 1                                                  00000300
******************************************************************* 00000400
**       SUBSYSTEM REQUEST TEXT UNIT                           ** 00000500
******************************************************************* 00000600
         SPACE 1                                                  00000700
         MVI   S99TUKEY+1,DALSSREQ MOVE IN TEXT UNIT KEY          00000800
         RCPDINC                  4                               00000900
         MEND                                                     00001000
IEB817I MEMBER NAME (RCPSSREQ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSUBL
         MACRO - BREAK DOWN A SUBLIST                                  00000100
         RCPSUBL &L                                                    00000200
         GBLA  &RCPSUB#                NO OF ELEMENTS FOUND            00000300
         GBLC  &RCPSUBL(100)           ELEMENTS                        00000400
         LCLA  &I,&J,&K                                                00000500
&RCPSUB# SETA  0                       INITIALIZE                      00000600
         AIF   ('&L' EQ '').EXIT       EXIT IF NULL STRING             00000700
         AIF   ('&L'(1,1) NE '(').NOSUB                                00000800
&K       SETA  K'&L-1                                                  00000900
&I       SETA  2                                                       00001000
&J       SETA  1                                                       00001100
.LOOP    ANOP                                                          00001200
&J       SETA  &J+1                                                    00001300
         AIF   (&J  GT &K).LAST                                        00001400
         AIF   ('&L'(&J,1) NE ',').LOOP                                00001500
&RCPSUB# SETA &RCPSUB#+1                                               00001600
         AIF   (&J EQ &I).NULL                                         00001700
&RCPSUBL(&RCPSUB#) SETC '&L'(&I,&J-&I)                                 00001800
&I       SETA  &J+1                                                    00001900
         AGO   .LOOP                                                   00002000
.NULL    ANOP                                                          00002100
&RCPSUBL(&RCPSUB#) SETC ''                                             00002200
&I       SETA  &J+1                                                    00002300
         AGO   .LOOP                                                   00002400
.LAST    AIF   (&J EQ &I).LASTNUL                                      00002500
&RCPSUB# SETA  &RCPSUB#+1                                              00002600
&RCPSUBL(&RCPSUB#) SETC '&L'(&I,&J-&I)                                 00002700
         AGO   .EXIT                                                   00002800
.LASTNUL ANOP                                                          00002900
&RCPSUB# SETA  &RCPSUB#+1                                              00003000
&RCPSUBL(&RCPSUB#) SETC ''                                             00003100
         AGO   .EXIT                                                   00003200
.NOSUB   ANOP                                                          00003300
&RCPSUBL(1) SETC '&L'                                                  00003400
&RCPSUB# SETA 1                                                        00003500
.EXIT    MEND                                                          00003600
IEB817I MEMBER NAME (RCPSUBL ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPSYSOU
         MACRO                                                   00000100
         RCPSYSOU &CLASS,&COPIES=,&FREE=,&DEST=,&FORMS=          00000200
         GBLC  &DYNP                                             00000300
         LCLC  &C                                                00000400
         AIF   ('&CLASS(1)' EQ '').TPGN                          00000500
&C       SETC  '&CLASS(1)'                                       00000600
         SPACE                                                   00000700
*****************************************************************00000800
**       SYSOUT CLASS TEXT UNIT                                **00000900
*****************************************************************00001000
         AIF   ('&C'(1,1) EQ '''').Q                             00001100
         AIF   ('&C'(K'&C,1) EQ '/').BS                          00001200
         AIF   ('&C'(1,1) EQ '(').REG                            00001300
         L     R14,&C                  LOAD ADDRESS OF SYSOUT CLASS     00001400
         MVC   S99TUPAR(1),0(R14)       AND MOVE IT TO TEXT UNIT        00001500
         AGO   .SKEY                                             00001600
.REG     MVC   S99TUPAR(1),0&C         MOVE SYSOUT CLASS TO TEXT UNIT   00001700
.SKEY    MVI   S99TUKEY+1,DALSYSOU     SET SYSOUT KEY                   00001800
         MVI   S99TUNUM+1,1            SET NUMBER FIELD                 00001900
         MVI   S99TULNG+1,1            SET LENGTH FIELD                 00002000
         RCPDINC 8                                               00002100
         AGO   .TPGN                                             00002200
.BS      RCPTUBFR DALSYSOU,14,&C                                 00002300
         AGO   .TPGN                                             00002400
.Q       RCPBTU DALSYSOU,1,&C                                    00002500
.TPGN    AIF   ('&CLASS(2)' EQ '').TCOP                          00002600
         SPACE                                                   00002700
*****************************************************************00002800
**   SYSOUT PROGRAM NAME TEXT UNIT                             **00002900
*****************************************************************00003000
&C       SETC  '&CLASS(2)'                                       00003100
         RCPVCHAR DALSPGNM,14,&C                                 00003200
.TCOP    AIF   ('&COPIES' EQ '').TFREE                           00003300
         SPACE                                                   00003400
*****************************************************************00003500
**    SYSOUT COPIES TEXT UNIT                                  **00003600
*****************************************************************00003700
         RCPNTU DALCOPYS,1,&COPIES                               00003800
.TFREE   AIF   ('&FREE' EQ '').TDEST                              00003900
         SPACE                                                   00004000
*****************************************************************00004100
**     FREE = CLOSE TEXT UNIT                                   **00004200
*****************************************************************00004300
         AIF   ('&FREE' EQ 'CLOSE').CLOSEOK                      00004400
         MNOTE 4,' **** FREE=&FREE INVALID, FREE=CLOSE USED'     00004500
.CLOSEOK MVI   S99TUKEY+1,DALCLOSE     MOVE IN TEXT UNIT KEY     00004600
         RCPDINC 4                                               00004700
.TDEST   AIF   ('&DEST' EQ '').TFORMS                             00004800
         SPACE                                                   00004900
*****************************************************************00005000
**       SYSOUT DESTINATION TEXT UNIT                          **00005100
```

```
       ******************************************************************** 00005200
                RCPVCHAR DALSUSER,14,&DEST                                  00005300
       .TFORMS  AIF   ('&FORMS' EQ '').EXIT                                 00005400
                SPACE                                                       00005500
       ******************************************************************** 00005600
       **     SYSOUT FORMS NUMBER TEXT UNIT                              ** 00005700
       ******************************************************************** 00005800
                RCPVCHAR DALSFMNO,14,&FORMS                                 00005900
       .EXIT    MEND                                                        00006000
IEB817I MEMBER NAME (RCPSYSOU) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPTU
         MACRO                                                    00000100
         RCPTU &TU            TEXT UNIT LIST                      00000200
         GBLA  &DTUPO         TEXT UNIT POINTER OFFSET            00000300
         GBLC  &DYNP          ALLOC SYMBOL PREFIX                 00000400
         LCLA  &I,&J                                              00000500
         LCLC  &C                                                 00000600
         SPACE 1                                                  00000700
*****************************************************************00000800
**       ADD SPECIAL TEXT UNITS                                 **00000900
*****************************************************************00001000
&J       SETA  N'&SYSLIST                                         00001100
.LOOP    ANOP                                                     00001200
&I       SETA  &I+1                                               00001300
         AIF   (&I GT &J).EXIT                                    00001400
         AIF   ('&TU(&I)'(1,1) EQ '(').R                          00001500
         LA    R15,&TU(&I)            LOAD TEXT UNIT ADDRESS      00001600
         ST    R15,&DYNP.TUP+&DTUPO     AND STORE IT IN POINTER LIST 00001700
&DTUPO   SETA  &DTUPO+4                                           00001800
         AGO   .LOOP                                              00001900
.R       ANOP                                                     00002000
&C       SETC  '&TU(&I)'(2,K'&TU(&I)-2)                           00002100
         ST    &C,&DYNP.TUP+&DTUPO     STORE TEXT UNIT ADDR IN PTR LIST 00002200
&DTUPO   SETA  &DTUPO+4                                           00002300
         AGO   .LOOP                                              00002400
.EXIT    MEND                                                     00002500
IEB817I MEMBER NAME (RCPTU   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPTUBFR
         MACRO  - BUILD TEXT UNIT FROM BUFFER                    00000100
         RCPTUBFR &KEY,                TEXT UNIT KEY            X00000200
               &L,                     MAXIMUM LENGTH VALUE     X00000300
               &C,                     TEXT UNIT                X00000400
               &N=1                    TEXT UNIT NUMBER          00000500
         GBLC  &EXECNAM                                          00000600
         LCLC  &C1,&C2                                           00000700
         LCLA  &I,&K                                             00000800
         MVI   S99TUKEY+1,&KEY         SET TEXT UNIT KEY         00000900
         AIF   ('&N' EQ '' OR '&N' EQ '1').N1                    00001000
         LA    R14,&N                  LOAD TEXT UNIT NUMBER     00001100
         STH   R14,S99TUNUM             AND STORE INTO TEXT UNIT 00001200
         AGO   .ENDN                                             00001300
.N1      MVI   S99TUNUM+1,1            SET TEXT UNIT NUMBER      00001400
.ENDN    ANOP                                                    00001500
&K       SETA  K'&C                                              00001600
&I       SETA  &K-1                                              00001700
.LOOP1   ANOP                                                    00001800
&K       SETA  &K-1                                              00001900
         AIF   (&K LE 0).STD                                     00002000
         AIF   ('&C'(&K,1) NE '/').LOOP1                         00002100
&C2      SETC  '&C'(&K+1,&I-&K)                                  00002200
&C1      SETC  '&C'(1,&K-1)                                      00002300
         AIF   ('&C1'(1,1) NE '(').TC2                           00002400
&C1      SETC  '0&C1'                                            00002500
.TC2     AIF   ('&C2' EQ '0000').V2B                             00002600
         AIF   ('&C2' EQ '00').V1B                               00002700
         AIF   ('&C2' EQ '0').V0B                                00002800
         AIF   ('&C2'(1,1) EQ '(').RL                            00002900
         MVI   S99TULNG+1,&C2          SET LENGTH FIELD          00003000
         MVC   S99TUPAR(&C2.),&C1      MOVE IN TEXT UNIT         00003100
         RCPDINC &L                                              00003200
         MEXIT                                                   00003300
.STD     ANOP                                                    00003400
&K       SETA  &L-6                                              00003500
         MVI   S99TULNG+1,&K           SET TEXT UNIT LENGTH      00003600
&C1      SETC  '&C'(1,&I)              REMOVE TRAILING SLASH     00003700
         MVC   S99TUPAR(&K),&C1        MOVE IN TEXT UNIT         00003800
         RCPDINC &L                                              00003900
         MEXIT                                                   00004000
.V2B     LH    R14,&C1                 LOAD TEXT UNIT LENGTH     00004100
         S     R14,=A(4)               EXCLUDE LENGTH OF HEADER  00004200
&C1      SETC  '4+&C1'                                           00004300
         AGO   .MOVE                                             00004400
.V1B     LH    R14,&C1                 LOAD TEXT UNIT LENGTH     00004500
&C1      SETC  '2+&C1'                                           00004600
         AGO   .MOVE                                             00004700
.V0B     SLR   R14,R14                 CLEAR FOR IC              00004800
         IC    R14,&C1                 INSERT TEXT UNIT LENGTH   00004900
&C1      SETC  '1+&C1'                                           00005000
         AGO   .MOVE                                             00005100
```

```
       .RL      ANOP                                                    00005200
       &C2      SETC  '&C2'(2,K'&C2-2)                                   00005300
                LR    R14,&C2                 LOAD TEXT UNIT LENGTH      00005400
       .MOVE    STH   R14,S99TULNG             AND STORE INTO LENGTH FIELD 00005500
                BCTR  R14,0                   GET MACHINE LENGTH         00005600
                EXECUTE ,MVC,S99TUPAR-S99TUNIT(0,R15),&C1                00005700
                EX    R14,&EXECNAM            MOVE IN TEXT UNIT          00005800
                RCPDINC &L                                               00005900
                MEND                                                     00006000
IEB817I MEMBER NAME (RCPTUBFR) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPTXTL
         MACRO - TO COUNT CHARACTERS IN A STRING                    00000100
         RCPTXTL &S                                                 00000200
         GBLA  &RCPTXTL                                             00000300
         LCLA  &I,&K,&L                                             00000400
&RCPTXTL SETA  0                                                    00000500
         AIF   (K'&S LT 3).MEND                                     00000600
&RCPTXTL SETA  K'&S-2                                               00000700
&L       SETA  &RCPTXTL                                             00000800
&I       SETA  1                                                    00000900
.LOOP    ANOP                                                       00001000
&I       SETA  &I+1                                                 00001100
.LOOP2   AIF   (&I GT &L).MEND                                      00001200
         AIF   ('&S'(&I,2) NE '''''' AND '&S'(&I,2) NE '&&').LOOP   00001300
&I       SETA  &I+2                                                 00001400
&RCPTXTL SETA  &RCPTXTL-1                                           00001500
         AGO   .LOOP2                                               00001600
.MEND    MEND                                                       00001700
IEB817I MEMBER NAME (RCPTXTL ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPTYPE
         MACRO                                                  00000100
         RCPTYPE &T                                             00000200
         GBLC  &RCPTYPE                                         00000300
         LCLA  &I,&K                                            00000400
&K       SETA  K'&T                                             00000500
&RCPTYPE SETC  ''                                               00000600
         AIF   (&K EQ 0).EXIT                                   00000700
&RCPTYPE SETC  'C'                                              00000800
.LOOP    ANOP                                                   00000900
&I       SETA  &I+1                                             00001000
         AIF   ('&T'(&I,1) LT '0' OR '&T'(&I,1) GT '9').EXIT    00001100
         AIF   (&I LT &K).LOOP                                  00001200
&RCPTYPE SETC  'N'                                              00001300
.EXIT    MEND                                                   00001400
IEB817I MEMBER NAME (RCPTYPE ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPUNALC
         MACRO                                                    00000100
         RCPUNALC                                                 00000200
         SPACE 1                                                  00000300
*********************************************************************** 00000400
**     FREE EVEN IF PERMANENTLY ALLOCATED                         ** 00000500
*********************************************************************** 00000600
         MVI   S99TUKEY+1,DUNUNALC     SET TEXT UNIT KEY          00000700
         RCPDINC  4                                               00000800
         MEND                                                     00000900
IEB817I MEMBER NAME (RCPUNALC) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPUNIT
         MACRO                                                  00000100
         RCPUNIT &U,&V                                          00000200
         GBLC  &DYNP                                            00000300
         AIF   ('&U' EQ '').TVOL                                00000400
         SPACE 1                                                00000500
*****************************************************************00000600
**       UNIT NAME TEXT UNIT                                  ** 00000700
*****************************************************************00000800
         RCPVCHAR DALUNIT,14,&U                                 00000900
.TVOL    AIF   ('&V' EQ '').EXIT                                00001000
         SPACE 1                                                00001100
*****************************************************************00001200
**       VOLUME SERIAL TEXT UNIT                              ** 00001300
*****************************************************************00001400
         RCPVCHAR DALVLSER,14,&V                                00001500
.EXIT    MEND                                                   00001600
IEB817I MEMBER NAME (RCPUNIT ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPVCHAR
         MACRO                                                  00000100
         RCPVCHAR &KEY,&LEN,&C,&N=1                             00000200
         GBLC  &DYNP                                            00000300
         AIF   ('&C'(K'&C,1) EQ '/').BM                         00000400
         AIF   ('&C'(1,1) EQ '''').QM                           00000500
         RCPSR2                                                 00000600
         AIF   ('&C'(1,1) EQ '(').RM                            00000700
         LH    R2,&C+4                 LOAD LENGTH OF TEXT UNIT 00000800
         LTR   R2,R2                   TEST FOR ZERO            00000900
         BZ    *+30                    IF NO TEXT UNIT, SKIP    00001000
         L     R14,&C                  LOAD ADDRESS OF TEXT UNIT 00001100
         AGO   .STHM                                            00001200
.RM      LH    R2,4&C                  LOAD LENGTH OF TEXT UNIT 00001300
         LTR   R2,R2                   AND TEST FOR ZERO        00001400
         BZ    *+30                    IF NO TEXT UNIT, SKIP    00001500
         L     R14,0&C                 LOAD ADDRESS OF TEXT UNIT 00001600
.STHM    STH   R2,S99TULNG             STORE LENGTH OF TEXT UNIT 00001700
         BCTR  R2,0                    DECREMENT FOR EXECUTE    00001800
         EX    R2,&DYNP.MVC            MOVE IN TEXT UNIT        00001900
         MVI   S99TUKEY+1,&KEY         MOVE IN TEXT UNIT KEY    00002000
         AIF   ('&N' EQ '1' OR '&N' EQ '').N1                   00002100
         LA    R14,&N                  LOAD TEXT UNIT NUMBER    00002200
         STH   R14,S99TUNUM             AND STORE IT IN TEXT UNIT 00002300
         AGO   .ENDN                                            00002400
.N1      MVI   S99TUNUM+1,1            SET NUMBER FIELD         00002500
.ENDN    RCPDINC &LEN                                           00002600
         MEXIT                                                  00002700
.BM      RCPTUBFR &KEY,&LEN,&C                                  00002800
         MEXIT                                                  00002900
.QM      RCPBTU &KEY,&N,&C                                      00003000
         MEND                                                   00003100
IEB817I MEMBER NAME (RCPVCHAR) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=RCPVOLRT
         MACRO                                                   00000100
         RCPVOLRT                                                00000200
         SPACE 1                                                 00000300
*****************************************************************00000400
**    VOLUME SERIAL RETURN TEXT UNIT                           **00000500
*****************************************************************00000600
         MVI   S99TUKEY+1,DALRTVOL     SET RETURN VOLUME SERIAL KEY     00000700
         MVI   S99TUNUM+1,1            SET NUMBER FIELD                 00000800
         MVI   S99TULNG+1,8            SET LENGTH FIELD                 00000900
         MVC   S99TUPAR(8),=CL8' '     INITIALIZE FIELD TO BLANKS       00001000
         RCPDINC 14                                              00001100
         MEND                                                    00001200
IEB817I MEMBER NAME (RCPVOLRT) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=REGS
R0       EQU   0        *USED BY O.S.                                  00000100
R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST     00000200
R2       EQU   2                                                       00000300
R3       EQU   3                                                       00000400
R4       EQU   4                                                       00000500
R5       EQU   5                                                       00000600
R6       EQU   6                                                       00000700
R7       EQU   7                                                       00000880
R8       EQU   8                                                       00000900
R9       EQU   9                                                       00001000
R10      EQU   10                                                      00001100
R11      EQU   11                                                      00001200
R12      EQU   12                                                      00001300
R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS             00001400
R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                00001500
R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE    00001600
IEB817I MEMBER NAME (REGS    ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./        ADD   NAME=S99FAIL
          MACRO                                                   00000100
&NAME     S99FAIL &RB=(R14),&RC=(R15),&CPPL=,&MF=G,&CP=           00000200
          GBLB  &RCPCPPL(2)             CP INDICATOR              00000300
          GBLC  &RCPPRE                                           00000400
          LCLB  &GEN                                              00000500
          LCLC  &C                                                00000600
&NAME     DS    0H                                                00000700
          AIF   ('&MF(1)' EQ 'G').GEN                             00000800
          AIF   ('&MF(1)' EQ 'E').EXEC                            00000900
          MNOTE 4,'&MF(1) IS AN INVALID MF, MF=G USED'            00001000
.GEN      LA    R1,FAIL&SYSNDX     LOAD PLIST ADDRESS             00001100
&GEN      SETB  1                                                 00001200
          AGO   .L                                                00001300
.EXEC     AIF   ('&MF(2)' NE '').LISTOK                           00001400
          MNOTE 8,'LIST ADDRESS NOT SPECIFIED'                    00001500
          MEXIT                                                   00001600
.LISTOK   AIF   ('&MF(3)' EQ '').TMF2                             00001700
&MF(3)    EQU   24                      LENGTH OF PARAMETER LIST  00001800
.TMF2     AIF   ('&MF(2)' EQ '(R1)' OR '&MF(2)' EQ '(1)').L       00001900
          AIF   ('&MF(2)'(1,1) EQ '(').REG                        00002000
          LA    R1,&MF(2)          LOAD DAIRFAIL PARAM LIST ADDRESS 00002100
          AGO   .L                                                00002200
.REG      ANOP                                                    00002300
&C        SETC  '&MF(2)'(2,K'&MF(2)-2)                            00002400
          LR    R1,&C              LOAD DAIRFAIL PARAM LIST ADDR  00002500
.L        AIF   ('&RB'(1,1) EQ '(').RBR                           00002600
          AIF   ('&RB' NE '').RBA                                 00002700
          MNOTE 8,'REQ BLOCK ADDRESS NOT SPECIFIED'               00002800
          MEXIT                                                   00002900
.RBR      ST    &RB(1),0(R1)       STORE S99 RB ADDRESS           00003000
          AGO   .RC                                               00003100
.RBA      LA    R14,&RB            LOAD ADDRESS OF REQ BLOCK      00003200
          ST    R14,0(R1)          AND STORE IN PLIST             00003300
.RC       AIF   ('&RC'(1,1) EQ '(').RCR                           00003400
          LA    R14,&RC            LOAD ADDRESS OF RET CODE       00003500
          ST    R14,4(R1)          AND STORE IN PLIST             00003600
          AGO   .EFF02                                            00003700
.RCR      ANOP                                                    00003800
.GRC      LA    R14,20(R1)         LOAD ADDR RET CODE FLD         00003900
          ST    &RC(1),0(R14)      STORE RET CODE                 00004000
          ST    R14,4(R1)          AND STORE ITS ADDRESS          00004100
.EFF02    LA    R14,=A(0)          LOAD ADDR OF FULLWORD OF 0     00004200
          ST    R14,8(R1)          STORE IT.                      00004300
          AIF   ('&CP' EQ 'YES' OR &RCPCPPL(1)).CPID              00004400
          LA    R14,=X'8032'       LOAD ADDRESS OF CALLERID       00004500
          ST    R14,12(R1)          AND STORE IT                  00004600
          XC    16(4,R1),16(R1)    CLEAR CPPL POINTER             00004700
          AGO   .GO                                               00004800
.CPID     LA    R14,=Y(50)         LOAD ADDRESS OF CALLERID       00004900
          ST    R14,12(R1)         AND STORE IT                   00005000
          AIF   ('&CPPL' EQ '').DCPPL                             00005100
```

```
         AIF   ('&CPPL'(1,1) EQ '(').RCPPL                          00005200
         LA    R14,&CPPL          LOAD CPPL ADDRESS                 00005300
         ST    R14,16(R1)          AND STORE IT                     00005400
         AGO   .GO                                                  00005500
.DCPPL   MVC   16(4,R1),&RCPPRE.CPPL MOVE IN CPPL ADDRESS           00005600
         AGO   .GO                                                  00005700
.RCPPL   ST    &CPPL(1),16(R1)    STORE ADDRESS OF CPPL             00005800
.GO      LINK  EP=IKJEFF18                                         00005900
         AIF   (NOT &GEN).EXIT                                      00006000
         SPACE 1                                                    00006100
         RCPDS                                                      00006200
&C SETC 'FAIL&SYSNDX'                                               00006330
&C       DS    6F             RESERVE SPACE FOR PARAM LIST         00006400
         RCPDS                                                      00006500
.EXIT    MEND                                                       00006600
IEB817I MEMBER NAME (S99FAIL ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=VTCALL
         MACRO                                                  00000100
&LAB     VTCALL &RTN,&TEST                                      00000200
&LAB     LA    R1,VTOCOM      POINT TO THE COMMON AREA          00000300
         L     R15,VAD&RTN    POINT TO THE ROUTINE              00000400
         AIF ('&TEST' NE 'TEST').NOTEST                         00000500
         LTR   R15,R15       SEE IF THE ROUTINE IS PRESENT      00000600
         BZ    *+6           DON'T CALL IT IF IT'S NOT THERE    00000700
.NOTEST  ANOP                                                   00000800
         BALR  R14,R15        THEN CALL IT                      00000900
         MEND                                                   00001000
IEB817I MEMBER NAME (VTCALL  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=VTFMT
         MACRO                                                   00000100
         VTFMT                                                   00000200
.*       ADD VTFUNIT TO DISPLAY UNIT TYPE                     RPRIN1 00000210
*                                                                 00000300
*        THIS DSECT DESCRIBES THE FORMATTED DSCB                  00000400
*                                                                 00000500
VTFMT    DSECT                                                   00000600
VTFNEXT  DS    A              POINTER TO NEXT DSCB                00000700
VTFALLOC DS    F              ALLOCATION IN UNITS AS DEFINED BY THE 00000800
*                               COMMAND.  KBYTES, MBYTES, TRACKS, OR 00000900
*                               CYLS MAY BE THE UNIT.             00001000
VTFUSED  DS    F                AMOUNT USED, SAME UNIT           00001100
VTFUNUSD DS    F                AMOUNT UNUSED, SAME UNIT         00001200
VTFPCT   DS    H                PERCENT USED,  0-100             00001300
VTFVOLUM DS    CL6            VOLUME SERIAL NUMBER               00001400
VTFUNIT  DS    CL4            UCB UNIT TYPE                    RPRIN1 00001410
VTFCREDT DS    XL3            CREATION DATE YYDDD                00001500
VTFEXPDT DS    XL3            EXPIRATION DATE YYDDD              00001600
VTFLSTAC DS    XL3            LAST ACCESS DATE YYDDD             00001700
VTFNOEPV DS    AL1            NUMBER OF EXTENTS PER VOLUME       00001800
VTFDSORG DS    CL3            DATA SET ORGANIZATION              00001900
*                               PS, PO, DA, VS, IS, PERHAPS U    00002000
VTFRECFM DS    CL5            RECORD FORMAT                      00002000
*                               F,V, OR U, B, T, S, A, M         00002100
VTFLRECL DS    H              LOGICAL RECORD LENTGH              00002200
VTFBLKSZ DS    H              BLOCK SIZE                         00002300
VTFROUND DS    C            R IF ROUND WAS SPECIFIED             00002400
VTFPROT  DS    C              PASSWORD PROTECTION FLAG           00002500
VTFRACF  DS    C              RACF INDICATOR FLAG            TANSKY 00002600
VTFUPD   DS    C              UPDATE FLAG (UPDATED SINCE BACKUP) TANSKY 00002700
VTFCATLG DS    C              CATALOG INDICATION                 00002800
VTFSECAM DS    XL2          SECONDARY AMOUNT                     00002900
VTFSECAL DS    C              SECONDARY ALLOCATION TYPE          00003000
*                               C FOR CYL, T FOR TRKS, B FOR BLOCKS 00003100
*                               R FOR BLOCKS WITH ROUND           00003200
VTFDSTYP DS    C              DATA SET TYPE, USER MAY DEFINE     00003300
*                               S = SYSTEM TEMPORARY DATA SET     00003400
*                               T = TEST DATA SET                 00003500
*                               P = PRODUCTION DATA SET           00003600
VTFACTON DS    CL8            REQUESTED ACTION OR COMMENT        00003700
VTFDSNL  DS    H              LENGTH OF DSNAME                   00003800
VTFMTL   EQU   *-VTFMT        FIXED LENGTH OF THIS DSECT         00003900
VTFDSN   DS    44C            VARIABLE LENGTH FIELD              00004000
         MEND                                                    00004100
IEB817I MEMBER NAME (VTFMT   ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=VTOCMSG
         MACRO                                                    00000100
&LAB     VTOCMSG &MSG1,&MSG2    FIRST LEVEL MESSAGE, OPTIONAL SECOND    00000200
&LAB     LA    R1,&MSG1       POINT TO THE FIRST MESSAGE          00000300
         AIF   ('&MSG2' EQ '').NOSEC  IF NO SECOND LEVEL MSG       00000400
         LA    R0,&MSG2       POINT TO THE SECOND MESSAGE         00000500
         AGO   .SETMSG        SET UP THE MESSAGES                 00000600
.NOSEC   SR    R0,R0          NO SECOND LEVEL MESSAGE             00000700
.SETMSG  STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES          00000800
*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                00000900
         VTCALL MSG           AWAY WE GO                          00001000
         MEND                                                     00001100
IEB817I MEMBER NAME (VTOCMSG ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=VTOCOM
         MACRO                                                  00000100
         VTOCOM  &TYPE                                          00000200
*                                                               00000300
*        THIS IS THE VTOC COMMAND COMMON AREA                   00000400
*                                                               00000500
         AIF   ('&TYPE' EQ 'NODSECT').NODSECT                   00000600
VTOCOM   DSECT                                                  00000700
         AGO   .NODS                                            00000800
.NODSECT ANOP                                                   00000900
VTOCOM   DS    0D                                               00001000
.NODS    ANOP                                                   00001100
*                                                               00001200
*        WORKING STORAGE AREAS FOR THE VARIOUS ROUTINES         00001300
*                                                               00001400
VTCWMSG  DS    A             WORKING STORAGE FOR THE MSG  ROUTINE  00001500
VTCWEXIT DS    A             WORKING STORAGE FOR THE EXIT ROUTINE  00001600
VTCWEXCP DS    A             WORKING STORAGE FOR THE EXCP ROUTINE  00001700
VTCWCHEK DS    A             WORKING STORAGE FOR THE CHEK ROUTINE  00001800
VTCWFORM DS    A             WORKING STORAGE FOR THE FORM ROUTINE  00001900
VTCWPRNT DS    A             WORKING STORAGE FOR THE PRNT ROUTINE  00002000
VTCWSORT DS    A             WORKING STORAGE FOR THE SORT ROUTINE  00002100
*                                                               00002200
*        ADDRESSES OF THE ROUTINES                              00002300
*                                                               00002400
VADMSG   DC    V(VTOCMSG)    ADDRESS OF THE MESSAGE ROUTINE     00002500
VADEXIT  DC    V(VTOCEXIT)   ADDRESS OF THE EXIT ROUTINE        00002600
VADEXCP  DC    V(VTOCEXIT)   ADDRESS OF THE EXCP ROUTINE        00002700
VADCHEK  DC    V(VTOCEXIT)   ADDRESS OF THE CHECK ROUTINE       00002800
VADFORM  DC    V(VTOCEXIT)   ADDRESS OF THE FORMAT ROUTINE      00002900
VADPRNT  DC    V(VTOCEXIT)   ADDRESS OF THE PRINT ROUTINE       00003000
VADSORT  DC    V(VTOCEXIT)   ADDRESS OF THE SORT ROUTINE        00003100
*                                                               00003200
*        TSO COMMAND PROCESSOR AND PARSE DATA                   00003300
*                                                               00003400
ADDRUPT  DS    A             USER PROFILE TABLE                 00003500
ADDRECT  DS    A             ENVIRONMENT CONTROL TABLE          00003600
ADDRPSCB DS    A             PROTECTED STEP CONTROL BLOCK       00003700
ADDRCBUF DS    A             COMMAND BUFFER                     00003800
         SPACE                                                  00003900
ADDRANSR DS    A             PARSE ANSWER OR PDL ADDRESS        00004000
         SPACE                                                  00004100
PARMLIST DS    8A            INTERNAL PARM AREA ( MSG )         00004200
ATTNECB  DS    F             ECB FOR ATTENTIONS                 00004300
DOUBLE   DS    D                                                00004400
         SPACE                                                  00004500
MSGADDRS DS    2A            ADDRESSES OF MESSAGES FOR VTOCMSG  00004600
MSGTEXT1 DS    XL124                                            00004700
MSGTEXT2 DS    XL124                                            00004800
         SPACE 3                                                00004900
PUTOLD1  DS    3F                                               00005000
PUTOLD2  DS    3F                                               00005100
```

```
*                                                                       00005200
*        PARAMETER LIST FOR THE EXIT ROUTINE                            00005300
*                                                                       00005400
EXITLIST DS    0F                                                       00005500
EXITAREA DS    A       WORKAREA LOCATION                                00005600
DSCBADDR DS    A       ADDRESS OF THE DSCB                              00005700
FORMATAD DS    A       ADDRESS OF THE FORMATTED DSCB                    00005800
CPPLADDR DS    A       ADDRESS OF THE CPPL                              00005900
ACTIONAD DS    A       ADDRESS OF THE RECOMMENDED OR REQUESTED ACTION   00006000
*                                                                       00006100
*        INTER ROUTINE FLAGS                                            00006200
*                                                                       00006300
VTCEFUNC DS    X              VTOCEXCP FUNCTION FLAG                    00006400
VTCFMTCK DS    X              FORMAT IS CALLED BY CHECK RTN             00006500
VTCFMTCD EQU   X'80'          FORMAT WAS CALLED BY CHECK                00006600
VTCFMTCC EQU   X'08'          FORMAT WAS CALLED BY CHECK THIS CALL      00006700
*                                                                       00006800
TABFULL  DS    X             FLAG TABLES FULL, STOP INPUT               00006900
LOCAT    DS    X              FLAG TO PERFORM CATALOG LOCATE            00007000
VTCEPRNT DS    X               PRINT END AND CLEANUP FLAG               00007100
DSNLEN   DS    H              LENGTH OF THE DSNAME (NON-BLANKS)         00007200
ATABTITL DS    A              ADDRESS OF TABLE OF TITLES, LENGTHS       00007300
*                                                                       00007400
*                                                                       00007500
*                                                                       00007600
*        WORKING STORAGE FOR VOLUME UCB SEARCH                          00007700
*                                                                       00007800
ADDR     DS    CL3     UCB ADDRESS IN CHARACTERS                        00007900
VOLSER   DS    CL6     VOLUME SERIAL NUMBER FROM PARSE                  00008000
VOLID    DS    CL6     CURRENT VOLUME SERIAL NUMBER TO PROCESS          00008100
FLAG     DS    X       UCB SEARCH FLAG                                  00008200
LASTADR  DS    F       LAST UCB ADDRESS FOUND ( NO DUP'S )              00008300
UCBDEVT  DS    CL4     PRINTABLE FORM OF DEVICE TYPE             RPRIN1 00008310
*                                                                       00008400
*                                                                       00008500
*                                                                       00008600
SORTTAB  DS    16F                                                      00008700
*                                                                       00008800
* EACH ENTRY CONTAINS A KEY OFFSET (2 BYTES) AND A KEY LENGTH (2 BYTES) 00008900
* THIS TABLE IS BUILT AT PARSE TIME ACCORDING TO THE SORT PARAMETERS    00009000
* SPECIFIED. THE 1ST PARM IS THE HIGH KEY AND SO ON.                    00009100
*                                                                       00009200
*                                                                       00009300
*                                                                       00009400
*        ADDRESSES OF GETMAIN FOR FORMATTED DATA                        00009500
*                                                                       00009600
VTCCURAD DS    A             CURRENT AVAILABLE ADDRESS                 00009700
VTCCURLN DS    A             CURRENT AVAILABLE LENGTH                  00009800
VTCGETMN DS    50A           ADDRESSES OF BLOCKS                       00009900
VTCGETMX EQU  (*-VTCGETMN)/4  NUMBER OF BLOCKS  MAXIMUM                 00010000
VTCGETMS EQU   32768          GETMAIN SIZE                              00010100
*                                                                       00010200
```

```
*        HASH SORT TABLE, POINTERS TO FIRST ENTRIES                    00010300
*                                                                      00010400
VTCSORTH DS    256A           POINT TO FORMATED ENTRIES               00010500
VTCSORTE EQU   *              END OF LIST                             00010600
*                                                                      00010700
*        PRINT ENTRIES - PAGE AND LINE COUNTERS                        00010800
*                                                                      00010900
LINECT   DS    H              LINE COUNT                              00011000
LINEMAX  DS    H              MAXIMUM LINES PER PAGE                  00011100
PAGECT   DS    H              PAGE COUNT                              00011200
LINELEN  DS    H              LENGTH OF THE PRINT LINE                00011300
*                                                                      00011400
*                                                                      00011500
*          VARIOUS ITEMS                                               00011600
*                                                                      00011700
FMT4     DS    XL44           SPACE FOR DSCB NAME                     00011800
         IECSDSL1 4          SAVE EACH FORMAT 4 DSCB                  00011900
         DS    0D                                                      00012000
FMT3     DS    0XL148         SPACE FOR FORMAT3 DSCB                  00012100
         IECSDSL1 3                                                   00012200
         DS    0D                                                      00012300
         MEND                                                          00012400
IEB817I MEMBER NAME (VTOCOM  ) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
```

```
./       ADD   NAME=VTOCPARS
         PUSH  PRINT                                                 00000100
         PRINT NOGEN                                                 00000200
PCLMAIN  IKJPARM DSECT=PDL                                           00000300
         SPACE 2                                                     00000400
VOLS     IKJPOSIT DSNAME,VOLSER,LIST,                               $00000500
               PROMPT='VOLUMES TO SEARCH AND OTHER PARAMETERS',     $00000600
               HELP=('VOLUME SERIAL NUMBERS WHICH ARE TO BE SEARCHED FO$00000700
               DATA SETS TO LIST')                                   00000800
         SPACE 2                                                     00000900
LEVKEY   IKJKEYWD                                                    00001000
         IKJNAME 'LEVEL',SUBFLD=SUBLEV                               00001100
         SPACE 2                                                     00001200
ENDKEY   IKJKEYWD                                                    00001300
         IKJNAME 'ENDING',SUBFLD=SUBEND                              00001400
         SPACE 2                                                     00001500
CONTAINK IKJKEYWD                                                    00001600
         IKJNAME 'CONTAINING',SUBFLD=SUBCONT                         00001700
         SPACE 2                                                     00001800
         SPACE 2                                                     00001900
SPACEK   IKJKEYWD DEFAULT='TRKS'                                     00002000
         IKJNAME 'TRKS'                                              00002100
         SPACE 2                                                     00002200
CATK     IKJKEYWD                                                    00002300
         IKJNAME 'CAT'                                               00002400
         SPACE 2                                                     00002500
SORTK    IKJKEYWD                                                    00002600
         IKJNAME 'SORT',SUBFLD=SUBSORTS                              00002700
         IKJNAME 'NOSORT'                                            00002800
         SPACE 2                                                     00002900
BREAKK   IKJKEYWD                                                    00003000
         IKJNAME 'BREAK',SUBFLD=SUBBREAK                             00003100
         SPACE 2                                                     00003200
LIMITK   IKJKEYWD                                                    00003300
         IKJNAME 'LIMIT',SUBFLD=SUBLIMIT                             00003400
         SPACE 2                                                     00003500
ANDOR1K  IKJKEYWD                                                    00003600
         IKJNAME 'AND1',SUBFLD=SUBAO1,ALIAS='AND'                    00003700
         IKJNAME 'OR1',SUBFLD=SUBAO1,ALIAS='OR'                      00003800
         SPACE 2                                                     00003900
ANDOR2K  IKJKEYWD                                                    00004000
         IKJNAME 'AND2',SUBFLD=SUBAO2                                00004100
         IKJNAME 'OR2',SUBFLD=SUBAO2                                 00004200
         SPACE 2                                                     00004300
ANDOR3K  IKJKEYWD                                                    00004400
         IKJNAME 'AND3',SUBFLD=SUBAO3                                00004500
         IKJNAME 'OR3',SUBFLD=SUBAO3                                 00004600
         SPACE 2                                                     00004700
PRINTK   IKJKEYWD                                                    00004800
         IKJNAME 'PRINT',SUBFLD=SUBPRINT                             00004900
         IKJNAME 'NOPRINT'                                           00005000
         SPACE 2                                                     00005100
```

```
CHARSK   IKJKEYWD                                                00005200
         IKJNAME 'CHARS',SUBFLD=SUBCHARS                         00005300
         SPACE 2                                                 00005400
LINESK   IKJKEYWD                                                00005500
         IKJNAME 'LINES',SUBFLD=SUBLINES                         00005600
         SPACE 2                                                 00005700
HEADK    IKJKEYWD                                                00005800
         IKJNAME 'HEADING',SUBFLD=SUBHEAD                        00005900
         IKJNAME 'NOHEADING'                                     00006000
         SPACE 2                                                 00006100
TOTALK   IKJKEYWD                                                00006200
         IKJNAME 'TOTALS',SUBFLD=SUBTOTAL                        00006300
         SPACE 2                                                 00006400
OUTPUTK  IKJKEYWD                                                00006500
         IKJNAME 'OUTPUT'                                        00006600
         SPACE 2                                                 00006700
FORMATK  IKJKEYWD                                                00006800
         IKJNAME 'FORMAT',SUBFLD=SUBFORMT                        00006900
         SPACE 2                                                 00007000
DSNPLNK  IKJKEYWD                                                00007100
         IKJNAME 'DSNLEN',SUBFLD=SUBDSNLN                        00007200
         SPACE 5                                                 00007300
SUBLEV   IKJSUBF                                                 00007400
LEVEL    IKJPOSIT DSNAME,LIST,                                  X00007500
               PROMPT='BEGINNING CHARACTERS OF DSNAMES TO PROCESS' 00007600
         SPACE 2                                                 00007700
SUBEND   IKJSUBF                                                 00007800
ENDING   IKJPOSIT DSNAME,LIST,                                  X00007900
               PROMPT='ENDING CHARACTERS OF DSNAMES TO PROCESS'  00008000
         SPACE 2                                                 00008100
SUBCONT  IKJSUBF                                                 00008200
* 9/16/85 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO ALLOW    ABL-CONT 00008210
*           CONT(123) OR CONT(.DATA)                            ABL-CONT 00008220
*ONTAIN  IKJPOSIT DSNAME,LIST,                                   00008300
*              PROMPT='CHARACTER STRING CONTAINED IN DSNAMES TO PROCESS 00008400
*              '                                                 00008500
CONTAIN  IKJIDENT 'PARTIAL DSNAME',LIST,MAXLNTH=44,FIRST=ANY,   X00008510
               PROMPT='PARTIAL DSNAME',OTHER=ANY,               X00008520
               HELP=('CHARACTER STRING TO BE SEARCHED FOR IN DSNAMES') 00008530
         SPACE 2                                                 00008600
SUBSORTS IKJSUBF                                                 00008700
SUBSORT  IKJIDENT 'SORT FIELDS',LIST,FIRST=ALPHA,MAXLNTH=6       00008800
         SPACE 2                                                 00008900
SUBBREAK IKJSUBF                                                 00009000
BREAK    IKJIDENT 'NUMBER OF CHARACTERS FOR A BREAK',FIRST=NUMERIC, X00009100
               OTHER=NUMERIC,MAXLNTH=2,DEFAULT='3'               00009200
         SPACE 2                                                 00009300
SUBCHARS IKJSUBF                                                 00009400
CHARSPL  IKJIDENT 'NUMBER OF CHARACTERS PER LINE   ',FIRST=NUMERIC, X00009500
               OTHER=NUMERIC,MAXLNTH=3                           00009600
BLKSZSET IKJIDENT 'PHYSICAL BLOCK SIZE',FIRST=NUMERIC,OTHER=NUMERIC, X00009700
               MAXLNTH=5                                         00009800
```

```
         SPACE 2                                                    00009900
SUBLINES IKJSUBF                                                    00010000
LINESPP  IKJIDENT 'NUMBER OF LINES PER PAGE        ',FIRST=NUMERIC,X00010100
               OTHER=NUMERIC,MAXLNTH=3                              00010200
         SPACE 2                                                    00010300
SUBPRINT IKJSUBF                                                    00010400
SUBPRTKY IKJIDENT 'ADD, REP, NEW, OR DEL',                          X00010500
               FIRST=ALPHA,OTHER=ALPHA,MAXLNTH=3                    00010600
SUBPRTIT IKJIDENT 'ITEMS TO PRINT',LIST,FIRST=ALPHA,MAXLNTH=6       00010700
         SPACE 2                                                    00010800
SUBHEAD  IKJSUBF                                                    00010900
HEADING  IKJPOSIT QSTRING                                           00011000
         SPACE 2                                                    00011100
SUBTOTAL IKJSUBF                                                    00011200
TOTALN   IKJIDENT 'NUMBER OF CHARACTERS FOR TOTALS',FIRST=NUMERIC,  X00011300
               OTHER=NUMERIC,MAXLNTH=2,DEFAULT='0'                  00011400
         SPACE 3                                                    00011500
SUBLIMIT IKJSUBF                                                    00011600
SUBLKEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',      X00011700
               FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                 00011800
         SPACE 2                                                    00011900
SUBLOPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,X00012000
               MAXLNTH=2,                                           X00012100
               PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'   00012200
         SPACE 2                                                    00012300
SUBLVALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                X00012400
               OTHER=ALPHANUM,                                      X00012500
               PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'      00012600
         SPACE 3                                                    00012700
SUBAO1   IKJSUBF                                                    00012800
SUB1KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',      X00012900
               FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                 00013000
         SPACE 2                                                    00013100
SUB1OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,X00013200
               MAXLNTH=2,                                           X00013300
               PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'   00013400
         SPACE 2                                                    00013500
SUB1VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                X00013600
               OTHER=ALPHANUM,                                      X00013700
               PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'      00013800
         SPACE 2                                                    00013900
SUBAO2   IKJSUBF                                                    00014000
SUB2KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',      X00014100
               FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                 00014200
         SPACE 2                                                    00014300
SUB2OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,X00014400
               MAXLNTH=2,                                           X00014500
               PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'   00014600
         SPACE 2                                                    00014700
SUB2VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                X00014800
               OTHER=ALPHANUM,                                      X00014900
               PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'      00015000
```

```
         SPACE 2                                                    00015100
SUBAO3   IKJSUBF                                                    00015200
SUB3KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',     X00015300
               FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                 00015400
         SPACE 2                                                    00015500
SUB3OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA, X00015600
               MAXLNTH=2,                                          X00015700
               PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'   00015800
         SPACE 2                                                    00015900
SUB3VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,               X00016000
               OTHER=ALPHANUM,                                     X00016100
               PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'      00016200
         SPACE 2                                                    00016300
SUBFORMT IKJSUBF                                                    00016400
FORMATSP IKJIDENT 'FORMAT TYPES TO OUTPUT',LIST,FIRST=NUMERIC,     X00016500
               MAXLNTH=1,DEFAULT='1'                                00016600
         SPACE 2                                                    00016700
SUBDSNLN IKJSUBF                                                    00016800
DSNPLN   IKJIDENT 'LENGTH OF DSNAME TO PRINT',FIRST=NUMERIC,       X00016900
               OTHER=NUMERIC,MAXLNTH=2,DEFAULT='44'                 00017000
DSNLNTYP IKJKEYWD DEFAULT='TRUNCATE'                                00017100
         IKJNAME 'TRUNCATE'                                         00017200
         IKJNAME 'MULTILINE'                                        00017300
         IKJENDP                                                    00017400
         SPACE 2                                                    00017500
         POP   PRINT                                                00017600
ACTION   EQU   1                                                    00017700
VOLUME   EQU   2                                                    00017800
CDATE    EQU   3                                                    00017900
LSTUS    EQU   4                                                    00018000
EXPDT    EQU   5                                                    00018100
ALLOC    EQU   6                                                    00018200
UNUSED   EQU   7                                                    00018300
PCT      EQU   8                                                    00018400
EXT      EQU   9                                                    00018500
DSORG    EQU   10                                                   00018600
RECFM    EQU   11                                                   00018700
BLKSZ    EQU   12                                                   00018800
LRECL    EQU   13                                                   00018900
PASS     EQU   14                                                   00019000
CAT      EQU   15                                                   00019100
SECT     EQU   16                                                   00019200
SECQ     EQU   17                                                   00019300
UNIT     EQU   18                                                   00019400
ROUND    EQU   19                                                   00019500
TYPE     EQU   20                                                   00019600
USED     EQU   21                                                   00019700
CCHH     EQU   22                                                   00019800
UPD      EQU   23                                          TANSKY 00019900
RACF     EQU   24                                          TANSKY 00020000
DUMMY5   EQU   25                                                   00020100
DSNAME   EQU   26                                                   00020200
```

```
       ./ ENDUP
IEB817I MEMBER NAME (VTOCPARS) NOT FOUND IN NM DIRECTORY.  STOWED WITH TTR.
IEB818I HIGHEST CONDITION CODE WAS 00000000
IEB819I END OF JOB IEBUPDTE.
```

```
./       ADD   NAME=VTOC
)F FUNCTION -
  THE VTOC COMMAND DISPLAYS SELECTED DATA SETS ON A DISK OR SET OF
  DISKS.  EACH DISK HAS A VOLUME TABLE OF CONTENTS ( VTOC ).  THIS
  TABLE IS SEARCHED FOR DATA SETS THAT MEET THE SPECIFICATIONS.
)X SYNTAX -
         VTOC     'VOLUME-LIST'           LEVEL('DSNAME-START')
                                          EXLEVEL('DSNAME-START')
                                          CONTAINING('DSNAME-STRING')
                                          ENDING('DSNAME-END')
                                          BREAK('BREAK-CHARS')
                  CAT
                  ENQ
                  TRK/CYL/KB/MB
                  NOSORT/SORT('SORT-FIELDS')
                  NOPRINT/PRINT('PRINT-OP' ('PRINT-ITEM-LIST'))
                  LIMIT('KEYWORD' 'OPER' 'VALUE')
                  AND1/OR1('KEYWORD' 'OPER' 'VALUE')
                  AND2/OR2('KEYWORD' 'OPER' 'VALUE')
                  AND3/OR3('KEYWORD' 'OPER' 'VALUE')
                  CHARS('CHARS-PER-LINE')
                  LINES('LINES-PER-PAGE')
                  NOHEADING/HEADING('TEXT')
                  DSNLEN('LENGTH')
  REQUIRED - 'VOLUME-LIST'
  DEFAULTS - LIST ALL DATA SETS ON THE VOLUME(S) SELECTED.
             SORT, PRINT, TRK
)O OPERANDS -
))'VOLUME-LIST'     - A VOLUME SERIAL NUMBER OR A LIST OF VOLUMES.
                IF THE FIRST ONE TO FIVE CHARACTERS OF A VOLUME
                SERIAL NUMBER ARE ENTERED, ALL VOLUMES THAT ARE
                MOUNTED ON THE MACHINE WHICH START WITH THOSE
                CHARACTERS WILL BE LISTED.
                IF 'ALL' IS SPECIFIED, ALL NON-VIRTUAL VOLUMES
                WHICH ARE ONLINE AND READY WILL BE PROCESSED.
                IF 'ALV' IS SPECIFIED, ALL VIRTUAL VOLUMES
                WHICH ARE ONLINE AND READY WILL BE PROCESSED,
                IF THEY ARE MOUNTED PRIVATE/RESERVED OR
                PRIVATE/RESIDENT.
))LEVEL('DSNAME-START')  - SPECIFIES THE HIGH LEVEL QUALIFIERS TO BE
         SEARCHED.  THIS WILL NOT BE PREFIXED BY YOUR USERID OR
         PREFIX.  ONLY DATA SETS STARTING WITH THESE PREFIXES WILL
         BE LISTED.
))EXLEVEL('DSNAME-START')  - SPECIFIES THE HIGH LEVEL QUALIFIERS TO
         BE OMITTED.  THIS WILL NOT BE PREFIXED BY YOUR USERID OR
         PREFIX.  DATA SETS STARTING WITH THESE PREFIXES WILL NOT
         BE LISTED.
))CONTAINING('DSNAME-STRING') - SPECIFIES A CHARACTER STRING CONTAINED
         IN THE DATA SET NAME.  AT LEAST ONE OF THE STRINGS MUST
         BE IN THE DSNAME FOR THE DATA SET TO BE LISTED.
         THESE STRINGS NEED NOT CONFORM TO DSNAME STANDARDS.
         THEY CAN BEGIN WITH A PERIOD OR A NUMBER.
```

```
))ENDING('DSNAME-END')  - SPECIFIES THE ENDING CHARACTERS OF THE
         DSNAME.  THE FINAL NONBLANK CHARACTERS OF THE DSNAME MUST
         BE ONE OF THESE STRINGS TO ALLOW THE DATA SET TO BE LISTED.
         THESE STRINGS MUST CONFORM TO DSNAME STANDARDS.
))CAT      -  A LOCATE IS DONE FOR EACH DSNAME ON THE VOLUMES LISTED
         AND STATUS IS INDICATED.  NOTE -  THIS OPTION USES A
         CONSIDERABLE AMOUNT OF PROCESSING TIME.
         C -  CATALOGED ON THIS VOLUME
         N -  NOT CATALOGED
         W -  CATALOGED ON ANOTHER VOLUME
         E -  CATALOG PROCESSING ERROR
))ENQ      -  A TEST IS PERFORMED FOR AN ENQ WITH A MAJOR NAME OF
         SYSDSN AND A MINOR NAME OF THE DATASET NAME TO FIND OUT
         IF THE DATASET IS IN USE. IF THE DATASET IS VSAM THE CLUSTER
         NAME IS LOCATED AND USED FOR THE ENQ TEST.
         NOTE -  THIS OPTION USES A  LOT OF PROCESSING TIME.
         N -  NOT ENQUEUED
         S -  ALLOCATED WITH DISP=SHR
         E -  EXCLUSIVELY ALLOCATED
         ? -  CATALOG PROCESSING ERROR
         * -  ENQUEUE PROCESSING ERROR
))TRK      -  SPACE IS TO BE REPORTED IN TRACK UNITS.
))CYL      -  SPACE IS TO BE REPORTED IN CYLINDER UNITS.
))KB       -  SPACE IS TO BE REPORTED IN KILOBYTE UNITS.
))MB       -  SPACE IS TO BE REPORTED IN MEGABYTE UNITS.
))NOSORT   -  THE DATA SETS ARE NOT SORTED.  THEY ARE OUTPUT AS THEY
              ARE FOUND.
))SORT('SORT-FIELDS') DATA SETS ARE SORTED INTO ALPHABETICAL ORDER,
              BASED UPON THE SORT FIELDS SPECIFIED.
              DSNAME,VOLUME,ALLOC,USED,UNUSED,PCT,EX,DSO,RFM,
              LRECL,BLKSZ,CDATE,EXPDT,REFDT ARE VALID SORT FIELDS.
              'A/D'   IS REQUIRED AFTER EACH SORT FIELD TO INDICATE
              ASCENDING/DESCENDING SEQUENCE.
))BREAK('BREAK-CHARS') - THE LISTING WILL CONTAIN A NEW HEADER,
              ( ON A NEW PAGE IF THE VTOCOUT DD CARD OPTION IS USED ),
              WHENEVER THE SPECIFIED NUMBER OF CHARACTERS DIFFERS
              FROM THE PRECEDING DATA SET.  THIS OPTION FUNCTIONS
              ONLY WITH THE SORT OPTION.
))CHARS('CHARS-PER-LINE') - SPECIFIES THE NUMBER OF CHARACTERS ON EACH
              LINE OF OUTPUT.  THE DEFAULT IS 150 FOR PRINT AND THE
              LINESIZE OF THE TERMINAL FOR TSO SESSIONS.
              YOU CAN GET MORE INFORMATION BY SPECIFYING A LARGER
              NUMBER OF CHARACTERS PER LINE OR YOU CAN LIMIT THE
              PRINTING BY SETTING A SMALLER NUMBER OF CHARACTERS
              PER LINE OF OUTPUT.
))LINES('LINES-PER-PAGE') - SPECIFIES THE NUMBER OF LINES BEFORE A NEW
              TITLE LINE IS PRODUCED.  IT DEFAULTS TO 60 FOR PRINT
              AND TO THE SCREEN SIZE FOR TSO SESSIONS.
))NOHEADING   - DO NOT PRODUCE A HEADING.  THE HEADING WILL ONLY BE
              OUTPUT IF THE VTOCOUT DD STATEMENT IS PRESENT.
))HEADING('TEXT') - IF A DD STATEMENT WITH A DDNAME OF VTOCOUT IS
              PRESENT, THIS TEXT WILL BE USED TO BEGIN EVERY PAGE.
```

```
                CARRIAGE CONTROL SHOULD BE INCLUDED ( ASA ).  THE
                DEFAULT HEADER CONSISTS OF VTOC COMMAND VERSION 02
                AND THE COMMAND THAT WAS ENTERED.
))NOTOTALS      - DO NOT PRODUCE A TOTALS LINE. THE TOTALS LINE WILL BE
                OMITTED EVEN IF THE VTOCOUT DD STATEMENT IS PRESENT. THE
                DEFAULT IS TO PRODUCE ONE FINAL TOTAL LINE.
))DSNLEN('LENGTH') - SPECIFIES THE LENGTH OF THE DSNAME TO PRINT.
                THE REST OF THE DSNAME IS TRUNCATED.  THE CHARS PARAMETER
                WILL ALSO CAUSE THE DSNAME TO BE TRUNCATED, IF THE NAME
                AND THE PRECEDING INFORMATION EXCEEDS THE PRINT LINE.
))NOPRINT       - SPECIFIES THAT INDIVIDUAL ITEMS ARE NOT TO BE LISTED.
                THE COMMAND CAN BE USED TO CALCULATE TOTALS.
))PRINT('PRINT-OP' ('PRINT-ITEM-LIST')) -
                SPECIFIES THE ITEMS TO PRINT.  THE 'PRINT-OP' IS THE
                OPERATION TO BE DONE.  THEY INCLUDE THE FOLLOWING.
                  NEW - THE 'PRINT-ITEM-LIST' IS A COMPLETE LIST OF WHAT
                        TO PRINT.
                  REP - THE FIRST 'PRINT-ITEM' WILL BE REPLACED WITH THE
                        REST OF THE ITEMS ON THE LIST.
                  ADD - THE REST OF THE 'PRINT-ITEM-LIST' WILL BE ADDED
                        AFTER THE FIRST ITEM ON THE LIST.
                  DEL - THE ITEMS ON THE 'PRINT-ITEM-LIST' WILL NOT BE
                        PRINTED.

                THE 'PRINT-ITEM-LIST' NAMES ARE THE SAME KEYWORDS USED
                IN LIM, AND, AND OR FUNCTIONS AND ARE ALSO THE TITLES
                AS PRINTED.  THESE KEYWORDS CAN BE ALLOC, UNUSED, USED,
                PCT, EX, DSO, RFM, BLKSZ, LRECL, CDATE, EXPDT, REFDT,
                SECT, PASS, ROUND, CCHH, VOLUME, UNIT, DSNAME, ACTION,
                TYPE, RACF OR UPD.

                THE ADD, DEL, AND REP PRINT OPERATIONS REFER TO THE
                DEFAULT PRINT LIST.  THE DEFAULT LIST IS ALLOC, UNUSED,
                PCT, EX, DSO, RFM, BLKSZ, LRECL, REFDT, CDATE, VOLUME,
                DSNAME, EXPDT, SECQ, SECT, ROUND, PASS, ACTION, AND
                TYPE.  AS NOTED UNDER CHARS ABOVE, ONLY THE ITEMS THAT
                WILL FIT ON THE PRINT LINE WILL BE LISTED.

                NOTE: IF CCHH IS CHOOSEN IT DEFAULTS TO THE CCHH RANGE
                OF THE FIRST EXTENT; HOWEVER, IF LIM/AND/OR SELECTION
                IS PERFORMED, THE CCHH RANGE OF THE EXTENT WHICH
                SATISFIES THE SELECTION WILL BE USED INSTEAD.
))LIMIT('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                BE LISTED.  ONLY DATA SETS THAT SATISFY THE RELATION
                ARE LISTED.

                'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                A NUMBER LIKE 51.
```

```
))'KEYWORD'   - IS THE NAME OF A DATA SET FIELD.  THE LIST OF CURRENTLY
                PROVIDED FIELDS FOLLOWS.  THE KEYWORDS AND THEIR VALUES
                ARE THE SAME AS IN THE VTOC OUTPUT.

                      ALLOC      DATA SET ALLOCATION
                                    NUMBER OF KILOBYTES, TRACKS,
                                    CYLINDERS, OR MEGABYTES ALLOCATED.
                                    DEFAULT IS IN TRACKS.
                      UNUSED     AMOUNT OF UNUSED SPACE IN THE DATA
                                    SET.  SAME UNITS AS IN ALLOC.
                      USED       AMOUNT OF SPACE USED IN THE DATA SET.
                                    SAME UNITS AS IN ALLOC.
                      PCT        PERCENTAGE OF SPACE USED IN THE DATA
                                    USED.
                      EX         NUMBER OF EXTENTS IN THE DATA SET.
                      DSO        DATA SET ORGANIZATION
                                    PS = SEQUENTIAL  PO = PARTITIONED
                                    VS = VSAM        PE = PDSE
                                    DA = DIRECT      IS = ISAM
                                    U = UNMOVEABLE   HF = HFS
                                    X = EXTENDED FORMAT
                      RFM        RECORD FORMAT
                                    F  = FIXED        V  = VARIABLE
                                    U  = UNDEFINED    B  = BLOCKED
                                    T  = TRACK OVERFLOW
                                    S  = SPANNED OR STANDARD
                                    A  = ASA CARRIAGE CONTROL
                                    M  = MACHINE CARRIAGE CONTROL
                      BLKSZ      BLOCKSIZE FOR PHYSICAL BLOCKS OF
                                    DATA.
                      LRECL      LOGICAL RECORD LENGTH IN BYTES.
                      CDATE      CREATION DATE IN THE FORM YYDDD,
                                    SOMETIMES CALLED JULIAN.
                      EXPDT      EXPIRATION DATE IN THE SAME FORM.
                                    THIS FIELD IS RARELY USED HERE.
                      REFDT      LAST USE DATE IN THE SAME FORM.
                                    THIS DATE IS WHEN THE DATA SET WAS
                                    LAST OPENED.
                      SECT       TYPE OF ALLOCATION
                                    A  = ABSOLUTE TRACK
                                    B  = BLOCKS
                                    T  = TRACKS
                                    C  = CYLINDERS
                      PASS       PROTECTION INDICATORS
                                    N  = NONE
                                    R  = READ AND WRITE PROTECTION
                                    W  = WRITE PROTECTION
                      ROUND      SPACE ROUNDED UP TO CYLINDERS
                                    R  = ROUND
                                    N  = NO ROUND
                      CCHH       CYLINDER AND HEAD ADDRESS, IN 4 OR 8
                                    HEXADECIMAL DIGITS.  IF 4 DIGITS
```

```
                                   ARE USED, ONLY THE CYLINDER IS USED
                                   FOR COMPARISON, OTHERWISE, THE CYL
                                   AND TRACK ARE COMPARED.
                        VOLUME     VOLUME SERIAL NUMBER OR DISK NAME
                        UNIT       UNIT OR DEVICE TYPE
                        DSNAME     NAME OF THE DATA SET
                        ACTION     SOME ERROR INDICATIONS
                        TYPE       RESERVED FOR EXIT USAGE.
                        RACF       RACF INDICATOR
                                   N  = NOT INDICATED
                                   Y  = INDICATED
                        UPD        UPDATED SINCE LAST BACKUP
                                   N  = NOT UPDATED
                                   Y  = UPDATED
))'OPER'      - IS AN OPERATOR.  THE LIST OF OPERATORS FOLLOWS.
                          EQ       IS EQUAL TO
                          NE       IS NOT EQUAL TO
                          LE       IS LESS THAN OR EQUAL TO
                          LT       IS LESS THAN
                          GE       IS GREATER THAN OR EQUAL TO
                          GT       IS GREATER THAN
))'VALUE'     - GIVES THE VALUE OF THE ITEM FOR COMPARISON, SUCH AS
               FB, PS, R, OR A NUMBER.
))AND1('KEYWORD' 'OPER' 'VALUE') -  SPECIFIES WHICH DATA SETS ARE TO
                  BE LISTED.  BOTH THE LIMIT AND THIS CONDITION MUST
                  BE TRUE TO ALLOW THE LISTING.

                 'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                 BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                 CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                 'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                 'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                 A NUMBER LIKE 51.
))OR1('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                  BE LISTED.  EITHER THE LIMIT OR THIS CONDITION MUST
                  BE TRUE TO ALLOW THE LISTING.

                 'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                 BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                 CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                 'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                 'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                 A NUMBER LIKE 51.
))AND2('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                  BE LISTED.  BOTH THE PREVIOUS RESULT AND THIS
                  CONDITION MUST BE TRUE TO ALLOW THE LISTING.

                 'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                 BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                 CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                 'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                 'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
```

```
                A NUMBER LIKE 51.
))OR2('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                   BE LISTED.  EITHER THE PREVIOUS RESULT OR THIS
                   CONDITION MUST BE TRUE TO ALLOW THE LISTING.

                'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                A NUMBER LIKE 51.
))AND3('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                   BE LISTED.  BOTH THE PREVIOUS RESULT AND THIS
                   CONDITION MUST BE TRUE TO ALLOW THE LISTING.

                'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                A NUMBER LIKE 51.
))OR3('KEYWORD' 'OPER' 'VALUE') - SPECIFIES WHICH DATA SETS ARE TO
                   BE LISTED.  EITHER THE PREVIOUS RESULT OR THIS
                   CONDITION MUST BE TRUE TO ALLOW THE LISTING.

                'KEYWORD' CAN BE ALLOC, UNUSED, USED, PCT, EX, DSO, RFM,
                BLKSZ, LRECL, CDATE, EXPDT, REFDT, SECT, PASS, ROUND,
                CCHH, VOLUME, UNIT, DSNAME, ACTION, TYPE, RACF OR UPD.
                'OPER' CAN BE EQ, NE, LE, LT, GE OR GT.
                'VALUE' CAN BE A COMPARISON VALUE SUCH AS FB, PS, R OR
                A NUMBER LIKE 51.
))EXAMPLES -

 1. LIST ALL DATA SETS ON VOL.
       VTOC VOL

 2. LIST ALL DATA SETS ON ALL VOLUMES.
       VTOC ALL

 3. LIST ALL DATA SETS THAT START WITH XXX ON ANY MVSXX VOLUME.
       VTOC MVS LEV(XXX)

 4. LIST ALL DATA SETS CONTAINING LIST NOT BEGINNING WITH SYS1.
       VTOC VOL CONT(LIST) EXLEV(SYS1)

 5. LIST ALL RECENTLY CREATED DATA SETS.
       VTOC VOL LIM(CDATE GT 94001)

 6. LIST DATA SETS WITH UNUSED SPACE.
       VTOC VOL LIM(PCT LT 50) OR1(UNUSED GT 30)

 7. LIST DATA SETS WITH MULTIPLE EXTENTS.
```

```
      VTOC VOL LIM(EX GT 1)

 8. LIST ALL OF A USER'S DATA SETS ON TSO001.
      VTOC TSO001 LEVEL(TMTCEXX)

 9. LIST ALL DATA SETS OVER 100 TRKS.
      VTOC VOL LIM(ALLOC GT 100)

 10. LIST DATA SETS IN VTOC SEQUENCE.
      VTOC STR902 NOSORT

 11. LIST DATA SETS UNDER THE FIXED HEADS.
      VTOC VOL LIM(CC EQ 0001) OR1(CC EQ 0002)

 12. LIST OLD PDS'S WITH FREE SPACE.
      VTOC VOL LIM(CDATE LT 92001) AND1(DSO EQ PO) AND2(UNUSED GT 30)

 13. LIST USED SPACE INSTEAD OF UNUSED IN TRACKS.
      VTOC VOL PRINT(REP (UNUSED USED)) TRK

 14. LIST CLIST DATA SETS.
      VTOC VOL END(CLIST)

 15. LIST ALL OF THE INFORMATION ABOUT USER'S DATA SETS AT A 3270.
      VTOC VOL CHAR(150)

 16. CHECK IF DATASETS ARE CATALOGED ON THIS VOLUME.
      VTOC VOL CAT PRINT(NEW (ALLOC PCT CAT DSNAME))

 17. LIST ANY DATA SET ON A BAD TRACK.
      VTOC STR902 LIM(CCHH EQ 003C0003) PRINT(REP (REFDT CCHH))

 18. LIST ANY DATA SETS ON A BAD CYLINDER.
      VTOC STR902 LIM(CCHH EQ 003C) PRINT(REP (REFDT CCHH))

 19. LIST ALL DATA SETS ON 335XXX VOLUMES SORTED BY ALLOC IN DESCENDING
     SEQUENCE, VOLUME AND DSNAME IN ASCENDING SEQUENCE.
      VTOC 335 SORT(ALLOC,D,VOLUME,A,DSNAME,A)
./ ENDUP
IEB816I MEMBER NAME (VTOC    ) FOUND IN NM DIRECTORY. TTR IS NOW ALTERED.
IEB818I HIGHEST CONDITION CODE WAS 00000000
IEB819I END OF JOB IEBUPDTE.
```

SYMBOL	TYPE	ID	ADDR	LENGTH	LDID
VTOCCMD	SD	0001	000000	00120C	
VTOCMSG	ER	0002			
VTOCEXCP	ER	0003			
VTOCCHEK	ER	0004			
VTOCFORM	ER	0005			
VTOCPRNT	ER	0006			
VTOCSORT	ER	0007			
PCLMAIN	SD	0008	001210	0007F6	

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25
                                    2 ************************************************************************* 00000200
                                    3 *                                                                       * 00000300
                                    4 *                                                                       * 00000400
                                    5 * TITLE -      VTOC COMMAND - LIST DATA SETS AND ATTRIBUTES             * 00000500
                                    6 *                                                                       * 00000600
                                    7 * FUNCTION -   PROVIDE THE ABILITY FOR A TSO USER OR A BATCH JOB        * 00000700
                                    8 *              TO LIST THE CONTENTS OF VARIOUS VOLUMES, WITH A          * 00000800
                                    9 *              FAIR AMOUNT OF SELECTION.                                * 00000900
                                   10 *                                                                       * 00001000
                                   11 *                                                                       * 00001100
                                   12 * OPERATION -  ACCEPT FROM THE TSO USER OR BATCH JOB A COMMAND          * 00001200
                                   13 *              WITH THE FOLLOWING SYNTAX.  THEN CHECK THE COMMAND       * 00001300
                                   14 *              AND LOOP THROUGH, GETTING A DSCB, FORMATTING IT,         * 00001400
                                   15 *              PERFORMING THE DATA SET NAME AND LIMIT CHECKS, AND       * 00001500
                                   16 *              CALLING AN EXIT ROUTINE IF DESIRED, THEN PUT THE         * 00001600
                                   17 *              ENTRY IN THE CORRECT SORT SEQUENCE.                      * 00001700
                                   18 *              FINALLY CALL THE PRINT ROUTINE TO PRINT THE              * 00001800
                                   19 *              SPECIFIED ITEMS, HEADERS, AND BREAKS, OR JUST            * 00001900
                                   20 *              THE TOTALS.                                              * 00002000
                                   21 *                                                                       * 00002100
                                   22 *                                                                       * 00002200
                                   23 * INPUT -      STANDARD COMMAND PROCESSOR PARAMETER LIST                * 00002300
                                   24 *              POINTED TO BY REGISTER 1                                 * 00002400
                                   25 *                                                                       * 00002500
                                   26 *                                                                       * 00002600
                                   27 * OUTPUT -     TO SYSOUT, A LIST OF THE REQUESTED DATA SETS AND         * 00002700
                                   28 *              THEIR ATTRIBUTES.                                        * 00002800
                                   29 *                                                                       * 00002900
                                   30 *                                                                       * 00003000
                                   31 * ATTRIBUTES - REENTRANT, REUSEABLE, REFRESHABLE.                       * 00003100
                                   32 *                                                                       * 00003200
                                   33 *                                                                       * 00003300
                                   34 *         PROGRAMMED BY R. L. MILLER  (415) 485-6241                    * 00003400
                                   35 *              FIREMAN'S FUND INSURANCE  CPSD 2N                        * 00003500
                                   36 *              ONE LUCAS GREEN                                          * 00003600
                                   37 *              SAN RAFAEL, CA  94911                                    * 00003700
                                   38 *                                                                       * 00003800
                                   39 * Nov 05,2024 RPrins: Add sort field RACF and UNIT. Add the device      * 00003810
                                   40 *                     type (like 3390) in the Unit field (VSFUNIT)      * 00003820
                                   41 *                                                                       * 00003900
                                   42 ************************************************************************* 00004000
                                   43 *                                                                         00004100
                                   44          MACRO                                                            00004200
                                   45 &LABEL   VTOCEXCP  &FUNC                                                  00004300
                                   46          AIF   ('&FUNC' NE 'EQ').CALL                                     00004400
                                   47 VTCOPEN  EQU   1              DEFINE FUNCTION CODES FOR VTOCEXCP          00004500
                                   48 VTCCLOSE EQU   2                                                          00004600
                                   49 VTCREAD  EQU   0                                                          00004700
                                   50          MEXIT                                                            00004800
                                   51 .CALL    ANOP                 CALL VTOCEXCP                               00004900
                                   52 &LABEL   MVI   VTCEFUNC,VTC&FUNC   SET THE FUNCTION CODE                  00005000
                                   53          VTCALL EXCP          GO GET A DSCB                               00005100
                                   54          MEND                                                             00005200
                                   55 *                                                                         00005300
                                   56 *        MACRO FOR INITIALIZING SUBROUTINE WORK AREA ADDRESSES            00005400
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   57 *                                                                        00005500
                                   58          MACRO                                                           00005600
                                   59 &LABEL   WORKADDR &RTN,&PRMADDR                                          00005700
                                   60 &LABEL   L     R1,=A(WORK&RTN-WORKAREA)  GET THE OFFSET ( OVER 4K )      00005800
                                   61          LA    R1,0(R1,R13)   RELOCATE IT                                00005900
                                   62          ST    R1,&PRMADDR   THEN STORE IT FOR THE ROUTINES              00006000
                                   63          MEND                                                            00006100
                                   64 *                                                                        00006200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    66 VTOCCMD  ENTERX 12,(1,LENWORK,C)     DO THE HOUSEKEEPING                 00006400
000000                              67+VTOCCMD  CSECT                                                           00004200
000000 47F0 F00C      0000C         68+         B     12(0,15)                          BRANCH AROUND ID        00450000
000004 07                           69+         DC    AL1(7)                            LENGTH OF IDENTIFIER    00550000
000005 E5E3D6C3C3D4C4               70+         DC    CL7'VTOCCMD'                      IDENTIFIER              00750000
00000C 90EC D00C      0000C         71+         STM   14,12,12(13)                      SAVE REGISTERS          03700000
000010 18CF                         72+         LR    12,15         SET FIRST BASE REG                          00004700
000012 0700                         73+         CNOP  0,4                                                         00004800
                            00000   74+         USING VTOCCMD,12                                                  00008600
000014                              75+         CNOP  0,4          DO A GETMAIN FOR THE AREA                      00011300
000014 4510 C01C      0001C         76+         BAL   1,*+8          POINT THE SP AND LV                          00011400
000018 01                           77+ENT0001    DC  AL1(1)         SUBPOOL FOR THE GETMAIN                      00011500
000019 002370                       78+         DC    AL3(LENWORK)   LENGTH OF THE GETMAIN                        00011600
00001C 5801 0000      00000         79+         L     0,0(1)         GET THE DATA IN REG 1                        00011700
000020 0A0A                         80+         SVC   10             ISSUE THE GETMAIN                            00011800
000022 50D1 0004      00004         81+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE               00012000
000026 501D 0008      00008         82+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                   00012100
00002A 182D                         83+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS           00012200
00002C 18D1                         84+         LR    13,1           THIS IS MY SAVEAREA                          00012300
00002E 414D 000C      0000C         85+         LA    4,12(13)       YES, POINT PAST THE CHAIN                    00012400
000032 5850 C018      00018         86+         L     5,ENT0001      GET THE SIZE                                 00012500
000036 4160 000C      0000C         87+         LA    6,12           MINUS THE CHAIN AREA (12 BYTES )             00012600
00003A 1B56                         88+         SR    5,6            GIVES THE AMOUNT TO CLEAR                    00012700
00003C 1B77                         89+         SR    7,7            CLEAR THE FROM COUNT AND CLEAR BYTE          00012800
00003E 0E46                         90+         MVCL  4,6            WHEE, CLEAR IT OUT                           00012900
000040 9807 2014      00014         91+         LM    0,7,20(2)      RESTORE THE ORIGINAL REGISTERS               00013000
000044 1821                         92          LR    R2,R1          SAVE ADDR OF CPPL                            00006500

                            00000   94          USING WORKAREA,WORKREG                                            00006700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000046 45E0 C43C      0043C          96          BAL   R14,PARSINIT   PERFORM THE PARSING                      00006900
00004A 12FF                          97          LTR   R15,R15        TEST THE RETURN CODE                     00007000
00004C 4770 C396      00396          98          BNZ   RETURN         BAD NEWS, GET OUT                        00007100
                                     99          VTCALL PRNT         INITIALIZE FOR PRINTING                   00007200
000050 4110 D070      00070         100+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000054 58F0 D0A0      000A0         101+         L     R15,VADPRNT    POINT TO THE ROUTINE                     00000400
000058 05EF                         102+         BALR  R14,R15        THEN CALL IT                             00000900
00005A 5890 D0B8      000B8         103          L     R9,ADDRANSR    ADDR OF PARSE DESCRIPTOR LIST            00007300
                            00000   104          USING PDL,R9         RETURNED BY PARSE                        00007400
                                    105 *                                                                      00007500
                                    106 *                                                                      00007600
                                    107 *        SCAN SORT PARSE LIST AND BUILD SORT FIELD TABLE               00007700
                                    108 *                                                                      00007800
                                    109 *                                                                      00007900
00005E 4140 9090      00090         110 SORTPAR  LA    R4,SUBSORT     SORT PARSE LIST                          00008000
000062 4150 D238      00238         111          LA    R5,SORTTAB     SORT FIELD TABLE                         00008100
000066 D73F 5000 5000 00000 00000   112          XC    0(64,R5),0(R5) CLEAR SORT FIELD TABLE                   00008200
00006C D203 5000 C63C 00000 0063C   113          MVC   0(4,R5),SORTTABX DEFAULT TO DSNAME                      00008300

000072 4110 C630      00630         115 SORTPAR1 LA    R1,SORTTABX-12 SORT COMPARE TABLE                        00008500

000076 4110 100C      0000C         117 SORTPAR2 LA    R1,12(0,R1)    POINT TO NEXT COMPARE ENTRY              00008700
00007A D503 1000 C5C0 00000 005C0   118          CLC   0(4,R1),=F'0'  END OF TABLE                             00008800
000080 4780 C0A0      000A0         119          BE    SORTPAR3       ITEM NOT FOUND, IGNORE                   00008900
000084 5860 4000      00000         120          L     R6,0(0,R4)     POINT TO TEXT                            00009000
000088 4830 4004      00004         121          LH    R3,4(0,R4)     TEXT LENGTH                              00009100
00008C 1233                         122          LTR   R3,R3          IGNORE IF ZERO                           00009200
00008E 4780 C0A0      000A0         123          BZ    SORTPAR3                                                00009300
000092 0630                         124          BCTR  R3,0                                                    00009400
000094 4430 C0E6      000E6         125          EX    R3,SORTCOMP    FIELD NAME MATCH                         00009500
000098 4780 C0AC      000AC         126          BE    SORTPAR4       YES                                      00009600
00009C 47F0 C076      00076         127          B     SORTPAR2       NO, TRY NEXT                             00009700

0000A0 BF47 4009      00009         129 SORTPAR3 ICM   R4,7,9(R4)     NEXT ITEM                                00009900
0000A4 4770 C072      00072         130          BNZ   SORTPAR1       CONTINUE IF MORE                         00010000
0000A8 47F0 C0EC      000EC         131          B     SORTPAR5                                                00010100

0000AC D203 5000 1000 00000 00000   133 SORTPAR4 MVC   0(4,R5),0(R1)  SET UP SORT FIELD                         00010300
0000B2 BF47 4009      00009         134          ICM   R4,7,9(R4)     ASCENDING/DESCENDING INDICATOR           00010400
0000B6 4780 C38C      0038C         135          BZ    PARMERR        ERROR IF MISSING                         00010500
0000BA 5860 4000      00000         136          L     R6,0(0,R4)     INDICATOR ADDR                           00010600
0000BE D501 4004 C5C0 00004 005C0   137          CLC   4(2,R4),=F'0'  ERROR IF MISSING                         00010700
0000C4 4780 C38C      0038C         138          BE    PARMERR                                                 00010800
0000C8 D200 5000 6000 00000 00000   139          MVC   0(1,R5),0(R6)  A/D INDICATOR                            00010900
0000CE 4150 5004      00004         140          LA    R5,4(0,R5)                                              00011000
0000D2 95C1 6000      00000         141          CLI   0(R6),C'A'     ASCENDING SORT                           00011100
0000D6 4780 C0A0      000A0         142          BE    SORTPAR3       YES, OK                                  00011200
0000DA 95C4 6000      00000         143          CLI   0(R6),C'D'     DESCENDING SORT                          00011300
0000DE 4770 C38C      0038C         144          BNE   PARMERR        NO, ERROR                                00011400
0000E2 47F0 C0A0      000A0         145          B     SORTPAR3       CHECK IF ANY MORE                        00011500

0000E6 D500 1004 6000 00004 00000   147 SORTCOMP CLC   4(0,R1),0(R6)                                           00011700

0000EC 4130 C7B4      007B4         149 SORTPAR5 LA    R3,SORTKTAB-12 SORT HEADER INDEX TABLE                  00011900
0000F0 4130 300C      0000C         150 SORTK1   LA    R3,12(0,R3)    NEXT ENTRY                               00012000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0000F4 D503 3000 C5C0 00000 005C0   151          CLC   0(4,R3),=F'0'  END OF TABLE                                00012100
0000FA 4780 C14C      0014C         152          BE    SORTK3         YES                                          00012200
0000FE D500 D239 3001 00239 00001   153          CLC   SORTTAB+1(1),1(R3)  ENTRY MATCH                             00012300
000104 4770 C0F0      000F0         154          BNE   SORTK1         NO, CHECK NEXT                               00012400
000108 1B44                         155          SR    R4,R4                                                        00012500
00010A 4850 3002      00002         156          LH    R5,2(0,R3)     LOAD TABLE LENGTH                            00012600
00010E 5D40 C5C4      005C4         157          D     R4,=F'12'      TABLE ENTRIES                                00012700
000112 4150 5001      00001         158          LA    R5,1(0,R5)                                                  00012800
000116 4160 D348      00348         159          LA    R6,VTCSORTH                                                 00012900
00011A 5840 3004      00004         160          L     R4,4(0,R3)     LOAD TABLE BEGIN ADDR                        00013000
00011E 95C4 D238      00238         161          CLI   SORTTAB,C'D'   DESCENDING SORT                              00013100
000122 4780 C12A      0012A         162          BE    SORTK2         YES                                          00013200
000126 5840 3008      00008         163          L     R4,8(0,R3)     LOAD TABLE END ADDR                          00013300
00012A D20B 6000 4000 00000 00000   164 SORTK2   MVC   0(12,R6),0(R4)                                              00013400
000130 4140 400C      0000C         165          LA    R4,12(0,R4)                                                 00013500
000134 4160 600C      0000C         166          LA    R6,12(0,R6)                                                 00013600
000138 95C4 D238      00238         167          CLI   SORTTAB,C'D'   DESCENDING SORT                              00013700
00013C 4780 C144      00144         168          BE    *+8            YES                                          00013800
000140 5B40 C5C8      005C8         169          S     R4,=F'24'                                                   00013900
000144 4650 C12A      0012A         170          BCT   R5,SORTK2                                                   00014000
000148 47F0 C152      00152         171          B     SORTK4                                                      00014100
00014C D20B D348 C5CC 00348 005CC   172 SORTK3   MVC   VTCSORTH(12),=3F'0'                                        00014200
000152 D20B 6000 C5CC 00000 005CC   173 SORTK4   MVC   0(12,R6),=3F'0'                                            00014300
                                    174 *                                                                         00014400
                                    175 *        CHECK THROUGH THE UCB'S TO SELECT THE VOLUMES TO PROCESS         00014500
                                    176 *                                                                         00014600
                                    177 *                                                                         00014700
                                    178 **  FIND A VOLUME SERIAL NUMBER                                           00014800
                                    179 *                                                                         00014900
000158 4130 9008      00008         180          LA    R3,VOLS        POINT TO THE PDL                             00015000
00015C 5853 0000      00000         181 LOOP1    L     R5,0(R3)       GET THE ADDRESS OF THE TEXT                  00015100
000160 4843 0004      00004         182          LH    R4,4(R3)       ALSO GET ITS LENGTH                          00015200
000164 1244                         183          LTR   R4,R4          FOR EXECUTES, GET THE LENGTH                 00015300
000166 4780 C37E      0037E         184          BZ    PHASE2         NO MORE VOLUMES, CONTINUE TO NEXT PHASE      00015400
00016A 0640                         185          BCTR  R4,0           MAKE IT READY FOR THE EX INSTR               00015500
00016C D205 D223 C61C 00223 0061C   186          MVC   VOLSER,BLANKS   INITIALIZE FIELD                           00015600
000172 4440 C630      00630         187          EX    R4,MOVVOL                                                   00015700
                                    188 *                                                                         00015800
                                    189 **  VOLUME FOUND - VERIFY AND CHECK FOR GLOBAL OR SPECIAL REQUESTS         00015900
                                    190 *                                                                         00016000
000176 4940 C628      00628         191          CH    R4,H5          IS THE ENTIRE NAME THERE?                    00016100
00017A 4780 C1AE      001AE         192          BE    VOLSET         YES, IT'S A SPECIFIC VOLUME                  00016200
00017E 9201 D22F      0022F         193          MVI   FLAG,X'01'     IT'S A GENERIC REQUEST                       00016300
000182 4940 C624      00624         194          CH    R4,H2          CHECK FOR THE ALL KEYWORD, FIRST LENGTH      00016400
000186 4770 C1AE      001AE         195          BNE   VOLSET         NOT A GLOBAL REQUEST                         00016500
00018A D502 5000 C62D 00000 0062D   196          CLC   0(3,R5),CHARALV  IS THIS THE KEYWORD 'ALLV'?                00016600
000190 4780 C1A6      001A6         197          BE    VOLSETV        NO, NOT A GLOBAL REQUEST                     00016700
000194 D502 5000 C62A 00000 0062A   198          CLC   0(3,R5),CHARALL  IS THIS THE KEYWORD 'ALL'?                 00016800
00019A 4770 C1AE      001AE         199          BNE   VOLSET         NO, NOT A GLOBAL REQUEST                     00016900
00019E 9202 D22F      0022F         200          MVI   FLAG,X'02'   GLOBAL REQUEST                                00017000
0001A2 47F0 C1AE      001AE         201          B     VOLSET                                                      00017100
                                    202 *                                                                         00017200
                                    203 **  FIND THE A(UCB)                                                       00017300
                                    204 *                                                                         00017400
0001A6 9282 D22F      0022F         205 VOLSETV  MVI   FLAG,X'82'   GLOBAL REQUEST FOR VIRTUAL                   00017500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0001AA 47F0 C1AE      001AE         206          B     VOLSET                                                    00017600
0001AE D703 D230 D230 00230 00230   207 VOLSET   XC    LASTADR,LASTADR CLEAR THE UCB COMPARE ADDRESS             00017700
0001B4 5850 0010      00010         208          L     R5,16   A(CVT)                                            00017800
0001B8 1B66                         209          SR    R6,R6                                                     00017900
0001BA 5855 0028      00028         210          L     R5,40(R5)   A(UCB ADDRESSES)                              00018000
0001BE BF63 5000      00000         211 NEXTUCB  ICM   R6,3,0(R5)   A(A UCB)                                     00018100
0001C2 1266                         212          LTR   R6,R6   CHECK FOR VALID ENTRIES                           00018200
0001C4 4780 C20A      0020A         213          BZ    INCR1   UCB HOLE                                          00018300
0001C8 5960 C618      00618         214          C     R6,FMIN1    CHECK FOR END                                 00018400
0001CC 4780 C212      00212         215          BE    NOTMNT   END OF UCB LIST - VOLUME NOT FOUND               00018500
0001D0 9520 6012      00012         216          CLI   18(R6),X'20'   MUST BE DIRECT ACCESS                      00018600
0001D4 4770 C20A      0020A         217          BNE   INCR1                                                     00018700
0001D8 5960 D230      00230         218          C     R6,LASTADR   UCB ADDRESSES MUST INCREASE                  00018800
0001DC 47D0 C20A      0020A         219          BNH   INCR1        OTHERWISE THEY REPEAT.                       00018900
0001E0 5060 D230      00230         220          ST    R6,LASTADR   NEW ADDRESS                                  00019000
0001E4 9102 D22F      0022F         221          TM    FLAG,X'02'   CHECK FOR GLOBAL                             00019100
0001E8 4710 C25A      0025A         222          BO    FNDGBL   IT IS                                            00019200
0001EC 9101 D22F      0022F         223          TM    FLAG,X'01'   CHECK FOR SPECIAL REQUESTS                   00019300
0001F0 4710 C202      00202         224          BO    SPECUCB   IT IS                                           00019400
0001F4 D505 D223 601C 00223 0001C   225          CLC   VOLSER,28(R6)   COMPARE FULL VOLSER                       00019500
0001FA 4780 C28E      0028E         226          BE    FNDUCB   FOUND IT                                         00019600
0001FE 47F0 C20A      0020A         227          B     INCR1                                                     00019700
000202 4440 C636      00636         228 SPECUCB  EX    R4,CLCVOL   COMPARE FIRST X CHARACTERS ONLY               00019800
000206 4780 C262      00262         229          BE    CHKRDY                                                    00019900
00020A 4155 0002      00002         230 INCR1    LA    R5,2(R5)                                                  00020000
00020E 47F0 C1BE      001BE         231          B     NEXTUCB   TRY NEXT UCB                                    00020100
                                    232 *                                                                        00020200
                                    233 *        VARIOUS ERRORS, LET THE PERSON KNOW                             00020300
                                    234 *                                                                        00020400
000212 9104 D22F      0022F         235 NOTMNT   TM    FLAG,X'04'     WAS A VOLUME  FOUND?                      00020500
000216 4710 C376      00376         236          BO    NEXTVOL        YES, LOOK FOR THE NEXT SPEC               00020600
00021A D27B D16C C730 0016C 00730   237          MVC   MSGTEXT2,MSGNOTMT  NO, GET THE ERROR MESSAGE              00020700
000220 D205 D171 D223 00171 00223   238 SETVOL   MVC   MSGTEXT2+5(6),VOLSER ADD THE VOLUME SERIAL NUMBER         00020800
                                    239          VTOCMSG MSGTEXT2     AND ISSUE THE MESSAGE                       00020900
000226 4110 D16C      0016C         240+         LA    R1,MSGTEXT2    POINT TO THE FIRST MESSAGE                  00000300
00022A 1B00                         241+         SR    R0,R0          NO SECOND LEVEL MESSAGE                     00000700
00022C 9001 D0E8      000E8         242+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                  00000800
                                    243+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                      00000900
000230 4110 D070      00070         244+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                    00000300
000234 58F0 D08C      0008C         245+         L     R15,VADMSG     POINT TO THE ROUTINE                        00000400
000238 05EF                         246+         BALR  R14,R15        THEN CALL IT                                00000900
00023A 47F0 C376      00376         247          B     NEXTVOL       GO GET THE NEXT VOLUME FROM PARSE           00021000
00023E D27B D16C C770 0016C 00770   248 PENDING  MVC   MSGTEXT2,MSGPEND   SET UP THE MESSAGE                    00021100
                                    249 *                                                                        00021200
                                    250 *        SEE IF THIS IS A GENERIC OR GLOBAL REQUEST                      00021300
                                    251 *                                                                        00021400
000244 9103 D22F      0022F         252          TM    FLAG,X'03'    WAS IT ALL OR A PARTIAL VOLUME SERIAL?      00021500
000248 4770 C20A      0020A         253          BNZ   INCR1         IN EITHER CASE, SKIP THE MESSAGE            00021600
                                    254 *                            THEN FIND MORE VOLUMES                      00021700
                                    255 *                                                                        00021800
                                    256 *        OUTPUT THE OFFLINE PENDING MESSAGE                              00021900
00024C 47F0 C220      00220         257          B     SETVOL         THEN ADD THE VOLUME                         00022000
000250 D27B D16C C752 0016C 00752   258 OFFLINE  MVC   MSGTEXT2,MSGOFFLN SET UP THE MESSAGE                      00022100
000256 47F0 C220      00220         259          B     SETVOL         THEN ADD THE VOLUME                         00022200
                                    260 *                                                                        00022300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   261 **  FOR GLOBAL REQUESTS JUST LIST ONLINE PACKS                                00022400
                                   262 *                                                                             00022500
00025A 9180 6003      00003        263 FNDGBL   TM    3(R6),X'80'   ONLINE BIT                                    00022600
00025E 4780 C20A      0020A        264          BZ    INCR1   NOPE                                                00022700
                                   265 *                                                                             00022800
                                   266 **  FOR GLOBAL AND SPECIAL REQUESTS, CHECK FOR DEVICE READY                   00022900
                                   267 *                                                                             00023000
000262 9140 6006      00006        268 CHKRDY   TM    6(R6),X'40'   TEST READY BIT                                 00023100
000266 4710 C20A      0020A        269          BO    INCR1   NOT READY                                           00023200
00026A 9180 D22F      0022F        270          TM    FLAG,X'80'   GLOBAL REQUEST FOR VIRTUAL                     00023300
00026E 4710 C286      00286        271          BO    CHKVIRT                                                     00023400
000272 9102 D22F      0022F        272          TM    FLAG,X'02'   GLOBAL REQUEST                                 00023500
000276 4780 C28E      0028E        273          BZ    FNDUCB                                                      00023600
00027A 9108 6011      00011        274          TM    17(R6),X'08'  VIRTUAL UCB                                   00023700
00027E 4710 C20A      0020A        275          BO    INCR1   YES                                                 00023800
000282 47F0 C28E      0028E        276          B     FNDUCB                                                      00023900
000286 9108 6011      00011        277 CHKVIRT  TM    17(R6),X'08'  VIRTUAL UCB                                   00024000
00028A 4780 C20A      0020A        278          BZ    INCR1   NO                                                  00024100
                                   279 *                                                                             00024200
                                   280 **  MOVE UCB INFORMATION TO OUTPUT LINE                                      00024300
                                   281 *                                                                             00024400
00028E D205 D229 601C 00229 0001C  282 FNDUCB   MVC   VOLID,28(R6)   MOVE VOLID                                    00024500
000294 D202 D220 600D 00220 0000D  283          MVC   ADDR,13(R6)   MOVE UNIT ADDRESS                               00024600
00029A D203 D234 6010 00234 00010  284          MVC   UCBDEVT(4),16(R6)  UCB UNIT TYPE                     RPRIN1 00024610
0002A0 4110 C795      00795        285          LA    R1,DEVTYPS      UCBTYPE, UNIT NAME TABLE             RPRIN1 00024612
0002A4 41E0 0008      00008        286          LA    R14,DEVT#       NUMBER OF DEVICES                    RPRIN1 00024614
0002A8 D500 D237 1000 00237 00000  287 FNDUCB2  CLC   UCBDEVT+3(1),0(R1)                                 RPRIN1 00024618
0002AE 4780 C2C4      002C4        288          BE    FNDUCB3                                              RPRIN1 00024620
0002B2 4110 1005      00005        289          LA    R1,5(,R1)       NEXT DEVICE IN TABLE                 RPRIN1 00024624
0002B6 46E0 C2A8      002A8        290          BCT   R14,FNDUCB2     LOOP UNTIL FOUND                     RPRIN1 00024627
0002BA D203 D234 C5D8 00234 005D8  291          MVC   UCBDEVT(4),=C'UNKN'                                  RPRIN1 00024630
0002C0 47F0 C2CA      002CA        292          B     ENDUNIT                                              RPRIN1 00024635
0002C4 D203 D234 1001 00234 00001  293 FNDUCB3  MVC   UCBDEVT(4),1(R1)  MOVE UNIT NAME                       RPRIN1 00024650
0002CA                             294 ENDUNIT  DS    0H                                                   RPRIN1 00024700
0002CA 9604 D22F      0022F        295          OI    FLAG,X'04'      NOTE THE VOLUME AS FOUND                    00024700
                                   296 *                                                                             00024800
                                   297 **  IF OFFLINE, DO NOT PROCESS                                               00024900
                                   298 *                                                                             00025000
0002CE 9140 6003      00003        299          TM    3(R6),X'40'   PENDING BIT - SHOULD BE OFF                   00025100
0002D2 4710 C23E      0023E        300          BO    PENDING                                                     00025200
0002D6 9180 6003      00003        301          TM    3(R6),X'80'   ONLINE BIT - SHOULD BE ON                     00025300
0002DA 4780 C250      00250        302          BZ    OFFLINE                                                     00025400
                                   303 *                                                                             00025500
                                   304 *        NOW GET DSCB'S FROM THE VOLUME                                      00025600
                                   305 *                                                                             00025700
                                   306 *                                                                             00025800
                                   307 *        SET UP THE PARM LIST FOR VTOCEXCP                                   00025900
                                   308 *                                                                             00026000
                                   309          VTOCEXCP OPEN        OPEN THE VTOC                                  00026100
0002DE 9201 D214      00214        310+         MVI   VTCEFUNC,VTCOPEN    SET THE FUNCTION CODE                  00005000
0002E2 4110 D070      00070        311+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                    00000300
0002E6 58F0 D094      00094        312+         L     R15,VADEXCP    POINT TO THE ROUTINE                        00000400
0002EA 05EF                        313+         BALR  R14,R15        THEN CALL IT                                00000900
0002EC 12FF                        314          LTR   R15,R15        DID IT OPEN OK?                             00026200
0002EE 4770 C396      00396        315          BNE   RETURN         NO, JUST EXIT                               00026300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0002F2 9500 D216      00216         316 READDSCB CLI   TABFULL,0     CHECK FOR FULL TABLES                    00026400
0002F6 4770 C360      00360         317          BNE   ENDVTOC       IF FULL, TRY END OF VTOC TO CLEAR        00026500
                                    318          VTOCEXCP READ        GET A DSCB                               00026600
0002FA 9200 D214      00214         319+         MVI   VTCEFUNC,VTCREAD    SET THE FUNCTION CODE               00005000
0002FE 4110 D070      00070         320+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000302 58F0 D094      00094         321+         L     R15,VADEXCP    POINT TO THE ROUTINE                     00000400
000306 05EF                         322+         BALR  R14,R15        THEN CALL IT                             00000900
000308 49F0 C626      00626         323          CH    R15,H4         CHECK THE RETURN CODE                    00026700
00030C 4780 C360      00360         324          BE    ENDVTOC        END OF VTOC                              00026800
000310 4720 C396      00396         325          BH    RETURN         BAD ERROR, VTOCEXCP GAVE THE MESSAGE     00026900
                                    326 *                                                                      00027000
                                    327 *        CHECK THE DATA SET QUALIFICATIONS, LIMIT, AND, OR             00027100
                                    328 *                                                                      00027200
                                    329          VTCALL CHEK          CALL THE CHECK ROUTINE                   00027300
000314 4110 D070      00070         330+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000318 58F0 D098      00098         331+         L     R15,VADCHEK    POINT TO THE ROUTINE                     00000400
00031C 05EF                         332+         BALR  R14,R15        THEN CALL IT                             00000900
00031E 12FF                         333          LTR   R15,R15        DOES THIS DATA SET GET PASSED ON?        00027400
000320 4770 C2F2      002F2         334          BNZ   READDSCB       NO, GET ANOTHER                          00027500
                                    335 *                             YES, CONTINUE PROCESSING                 00027600
                                    336 *                                                                      00027700
                                    337 *        FORMAT THE DSCB INFORMATION                                   00027800
                                    338 *                                                                      00027900
000324 9180 D215      00215         339          TM    VTCFMTCK,VTCFMTCD WAS FORMAT CALLED BY CHECK?          00028000
000328 4710 C33C      0033C         340          BO    CALLEXIT       YES, DON'T CALL IT AGAIN                 00028100
                                    341          VTCALL FORM          CALL THE FORMATTING ROUTINE              00028200
00032C 4110 D070      00070         342+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000330 58F0 D09C      0009C         343+         L     R15,VADFORM    POINT TO THE ROUTINE                     00000400
000334 05EF                         344+         BALR  R14,R15        THEN CALL IT                             00000900
000336 12FF                         345          LTR   R15,R15        DID IT FUNCTION?                         00028300
000338 4770 C2F2      002F2         346          BNZ   READDSCB       NO, GET ANOTHER DSCB                     00028400
                                    347 *                                                                      00028500
                                    348 *        CALL THE EXIT ROUTINE IF ONE WAS SPECIFIED                    00028600
                                    349 *                                                                      00028700
                                    350 CALLEXIT VTCALL EXIT,TEST     CALL THE EXIT ROUTINE                    00028800
00033C 4110 D070      00070         351+CALLEXIT LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000340 58F0 D090      00090         352+         L     R15,VADEXIT    POINT TO THE ROUTINE                     00000400
000344 12FF                         353+         LTR   R15,R15       SEE IF THE ROUTINE IS PRESENT             00000600
000346 4780 C34C      0034C         354+         BZ    *+6           DON'T CALL IT IF IT'S NOT THERE           00000700
00034A 05EF                         355+         BALR  R14,R15        THEN CALL IT                             00000900
00034C 12FF                         356          LTR   R15,R15        SHOULD THE DATA SET BE PASSED ON?        00028900
00034E 4770 C2F2      002F2         357          BNZ   READDSCB       NO, GET ANOTHER DSCB                     00029000
                                    358 *                                                                      00029100
                                    359 *        SORT THE ENTRIES INTO THE NEW LIST                            00029200
                                    360 *                                                                      00029300
                                    361          VTCALL SORT          CALL THE SORT ROUTINE                    00029400
000352 4110 D070      00070         362+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000356 58F0 D0A4      000A4         363+         L     R15,VADSORT    POINT TO THE ROUTINE                     00000400
00035A 05EF                         364+         BALR  R14,R15        THEN CALL IT                             00000900
00035C 47F0 C2F2      002F2         365          B     READDSCB       GET ANOTHER DSCB                         00029500
                                    366 *                                                                      00029600
                                    367 *        END OF THE VOLUME, CHECK FOR MORE                             00029700
                                    368 *                                                                      00029800
                                    369 ENDVTOC  VTOCEXCP CLOSE FIRST CLOSE THE VTOC                           00029900
000360 9202 D214      00214         370+ENDVTOC  MVI   VTCEFUNC,VTCCLOSE   SET THE FUNCTION CODE               00005000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000364 4110 D070      00070         371+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000368 58F0 D094      00094         372+         L     R15,VADEXCP    POINT TO THE ROUTINE                      00000400
00036C 05EF                         373+         BALR  R14,R15        THEN CALL IT                              00000900
                                    374 *                                                                        00030000
00036E 9103 D22F      0022F         375 ENDVOL   TM    FLAG,X'03'         IS THIS A GENERIC VOLUME SEARCH       00030100
000372 4770 C20A      0020A         376          BNZ   INCR1              YES, SEARCH FOR MORE                  00030200
000376 BF37 3019      00019         377 NEXTVOL  ICM   R3,B'0111',25(R3)  GET THE NEXT VOLUME FROM THE PDL      00030300
00037A 4720 C15C      0015C         378          BP    LOOP1              THERE IS ANOTHER, GET IT              00030400
                                    379 *                                                                        00030500
                                    380 *        PRINT THE SELECTED ITEMS FOR THE SELECTED DATA SETS             00030600
                                    381 *                                                                        00030700
00037E                              382 PHASE2   DS    0H                                                       00030800
                                    383          VTCALL PRNT          CALL THE PRINT ROUTINE                    00030900
00037E 4110 D070      00070         384+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000382 58F0 D0A0      000A0         385+         L     R15,VADPRNT    POINT TO THE ROUTINE                      00000400
000386 05EF                         386+         BALR  R14,R15        THEN CALL IT                              00000900
000388 47F0 C394      00394         387          B     EXIT0                                                    00031000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    389 *                                                                    00031200
                                    390 *        PROCESSING IS COMPLETE, EXEUNT                              00031300
                                    391 *                                                                    00031400
00038C 41F0 0010      00010         392 PARMERR  LA    R15,16                                               00031500
000390 47F0 C396      00396         393          B     RETURN                                               00031600
000394 1BFF                         394 EXIT0    SR    R15,R15                                              00031700


000396 122F                         396 RETURN   LTR   R2,R15         NORMAL EXIT?                          00031900
000398 4780 C400      00400         397          BZ    RETURN1        YES, LEAVE EVERY THING ALONE          00032000


00039C 4110 D0BC      000BC         399          LA    R1,PARMLIST    AREA FOR STACK PARM LIST              00032200
                            00000   400          USING IOPL,R1        AN ERROR WAS FOUND, FLUSH THE STACK   00032300

0003A0 D203 1000 D0A8 00000 000A8   402          MVC   IOPLUPT,ADDRUPT                                    00032500
0003A6 D203 1004 D0AC 00004 000AC   403          MVC   IOPLECT,ADDRECT                                    00032600
0003AC 4100 D0DC      000DC         404          LA    R0,ATTNECB                                         00032700
0003B0 9200 D0DC      000DC         405          MVI   ATTNECB,0                                          00032800
0003B4 5000 1008      00008         406          ST    R0,IOPLECB                                         00032900


                                    408          STACK PARM=PARMLIST+16,DELETE=ALL,MF=(E,(1))             00033100
0003B8 41E0 D0CC      000CC         409+         LA    14,PARMLIST+16 LOAD PARM ADDR                      06250000
0003BC 50E0 100C      0000C         410+         ST    14,12(0,1)    STORE PARM ADDR IN PARM LIST         06300000
0003C0 9210 E000      00000         411+         MVI   0(14),X'10'    SET OPERATION FIELD                 09050000
0003C4 58F0 0010      00010         412+         L     15,16(0,0)          LOAD CVT POINTER               09361100
0003C8 9180 F1D8      001D8         413+         TM    472(15),B'10000000'   IS STACK ADDR HERE ?         09372200
0003CC 47E0 C3DA      003DA         414+         BNO   IKJ@0017             NO- BRANCH TO LINK             09383300
0003D0 58FF 01D8      001D8         415+         L     15,472(15)            YES- BALR TO STACK             09394400
0003D4 05EF                         416+         BALR  14,15                                              09405500
0003D6 47F0 C3F2      003F2         417+         B     IKJ$0017            BRANCH AROUND LINK             09416600
0003DA                              418+IKJ@0017 DS    0H                                               30000000
0003DA 0700                         419+         CNOP  0,4                                              04900000
0003DC 45F0 C3F0      003F0         420+         BAL   15,*+20            BRANCH AROUND CONSTANTS         04950000
0003E0 000003E8                     421+         DC    A(*+8)             ADDR. OF PARM. LIST             05050000
0003E4 00000000                     422+         DC    A(0)                DCB ADDRESS PARAMETER          06650000
0003E8 C9D2D1E2E3C3D240             423+         DC    CL8'IKJSTCK'        EP PARAMETER                   06750000
0003F0 0A06                         424+         SVC   6                   ISSUE LINK SVC                 48000000
0003F2                              425+IKJ$0017    DS    0H                                               09438800


                                    427          TCLEARQ INPUT        CLEAR INPUT BUFFERS                  00033300
0003F2 4100 0001      00001         428+         LA    0,1                     SET ENTRY CODE             58000020
0003F6 4110 0080      00080         429+         LA    1,X'80'                 INDICATE INPUT             62000020
0003FA 8D00 0018      00018         430+         SLDL  0,24                    MOVE TO HI-ORDER BYTES     68000020
0003FE 0A5E                         431+         SVC   94                      ISSUE SVC                  70000020


000400                              433 RETURN1  DS    0H                                               00033500
000400 45E0 C588      00588         434          BAL   R14,FREEPDL    FREE THE PARSE STROAGE              00033600
000404 920F D218      00218         435          MVI   VTCEPRNT,15    TELL PRINT TO CLEAN UP HIS ACT      00033700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   436 *                              CLOSE DATA SETS AND FREE MAIN STORAGE  00033800
                                   437          VTCALL PRNT          CALL THE PRINT ROUTINE                 00033900
000408 4110 D070      00070        438+         LA    R1,VTOCOM      POINT TO THE COMMON AREA               00000300
00040C 58F0 D0A0      000A0        439+         L     R15,VADPRNT    POINT TO THE ROUTINE                   00000400
000410 05EF                        440+         BALR  R14,R15        THEN CALL IT                           00000900

000412 18F2                        442          LR    R15,R2          GET THE RETURN CODE AGAIN             00034100
                                   443          LEAVE EQ                                                    00034200
000414 182D                        444+         LR    2,13                                                  00000400
000416 58DD 0004      00004        445+         L     13,4(13)                                              00000500
00041A 90F1 D010      00010        446+         STM   15,1,16(13)  STORE RETURN REGS                        00000800
                                   447+*      OS/VS2 RELEASE 3 VERSION  -- 10/25/74                         00001603
00041E 0700                        448+         CNOP  0,4                                                   00144002
000420 47F0 C428      00428        449+         B     *+8                                BRANCH AROUND LENGTH  00145002
000424 01                          450+         DC    AL1(1)                             SUBPOOL VALUE         00146000
000425 002370                      451+         DC    AL3(LENWORK)                       LENGTH                00147000
000428 5800 C424      00424        452+         L     0,*-4                              LOAD SP AND LV        00148002
00042C 4110 2000      00000        453+         LA    1,0(0,2)                           LOAD AREA ADDRESS     00164002
000430 0A0A                        454+         SVC   10                                 ISSUE FREEMAIN SVC    00311202
000432 98EC D00C      0000C        455+         LM    14,12,12(13)                       RESTORE THE REGISTERS 00650000
000436 92FF D00C      0000C        456+         MVI   12(13),X'FF'                       SET RETURN INDICATION 01600000
00043A 07FE                        457+         BR    14                                 RETURN                02000000
                            00000  458+R0       EQU   0        *USED BY O.S.                                 00000100
                            00001  459+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST    00000200
                            00002  460+R2       EQU   2                                                      00000300
                            00003  461+R3       EQU   3                                                      00000400
                            00004  462+R4       EQU   4                                                      00000500
                            00005  463+R5       EQU   5                                                      00000600
                            00006  464+R6       EQU   6                                                      00000700
                            00007  465+R7       EQU   7                                                      00000880
                            00008  466+R8       EQU   8                                                      00000900
                            00009  467+R9       EQU   9                                                      00001000
                            0000A  468+R10      EQU   10                                                     00001100
                            0000B  469+R11      EQU   11                                                     00001200
                            0000C  470+R12      EQU   12                                                     00001300
                            0000D  471+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS            00001400
                            0000E  472+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS               00001500
                            0000F  473+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE  00001600
                            0000D  474 WORKREG  EQU   13                                                     00034300
                                   475 *                                                                     00034400
                                   476 *        PARSE INITIALIZATION                                         00034500
                                   477 *                                                                     00034600


00043C                             479 PARSINIT DS    0H                                                   00034800
00043C 5020 D20C      0020C        480          ST    R2,CPPLADDR    AND THE CPPL ADDRESS                  00034900
                            00000  481          USING CPPL,R2        BASE FOR COMMAND PARM LIST            00035000
000440 D203 D0A8 2004 000A8 00004  482          MVC   ADDRUPT,CPPLUPT ADDR OF USER PROFILE TABLE           00035100
000446 D203 D0B0 2008 000B0 00008  483          MVC   ADDRPSCB,CPPLPSCB                                    00035200
00044C D203 D0AC 200C 000AC 0000C  484          MVC   ADDRECT,CPPLECT ADDR OF ENVIROMENT TABLE             00035300
000452 D203 D0B4 2000 000B4 00000  485          MVC   ADDRCBUF,CPPLCBUF                                    00035400
                                   486          DROP  R2                                                   00035500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   488 *                                                                    00035700
                                   489 *        PUT THE WORK AREA ADDRESSES INTO THE PARM LISTS             00035800
                                   490 *                                                                    00035900
                                   491          WORKADDR MSG,VTCWMSG     WORK AREA FOR VTOCMSG              00036000
000458 5810 C5DC      005DC        492+         L     R1,=A(WORKMSG-WORKAREA)   GET THE OFFSET ( OVER 4K )  00005800
00045C 4111 D000      00000        493+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
000460 5010 D070      00070        494+         ST    R1,VTCWMSG    THEN STORE IT FOR THE ROUTINES         00006000
                                   495          WORKADDR EXCP,VTCWEXCP   WORK AREA FOR VTOCEXCP            00036100
000464 5810 C5E0      005E0        496+         L     R1,=A(WORKEXCP-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
000468 4111 D000      00000        497+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
00046C 5010 D078      00078        498+         ST    R1,VTCWEXCP   THEN STORE IT FOR THE ROUTINES         00006000
                                   499          WORKADDR CHEK,VTCWCHEK   WORK AREA FOR VTOCCHEK            00036200
000470 5810 C5E4      005E4        500+         L     R1,=A(WORKCHEK-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
000474 4111 D000      00000        501+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
000478 5010 D07C      0007C        502+         ST    R1,VTCWCHEK   THEN STORE IT FOR THE ROUTINES         00006000
                                   503          WORKADDR FORM,VTCWFORM   WORK AREA FOR VTOCFORM            00036300
00047C 5810 C5E8      005E8        504+         L     R1,=A(WORKFORM-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
000480 4111 D000      00000        505+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
000484 5010 D080      00080        506+         ST    R1,VTCWFORM   THEN STORE IT FOR THE ROUTINES         00006000
                                   507          WORKADDR EXIT,VTCWEXIT   WORK AREA FOR VTOCEXIT            00036400
000488 5810 C5EC      005EC        508+         L     R1,=A(WORKEXIT-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
00048C 4111 D000      00000        509+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
000490 5010 D074      00074        510+         ST    R1,VTCWEXIT   THEN STORE IT FOR THE ROUTINES         00006000
                                   511          WORKADDR SORT,VTCWSORT   WORK AREA FOR VTOCSORT            00036500
000494 5810 C5F0      005F0        512+         L     R1,=A(WORKSORT-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
000498 4111 D000      00000        513+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
00049C 5010 D088      00088        514+         ST    R1,VTCWSORT   THEN STORE IT FOR THE ROUTINES         00006000
                                   515          WORKADDR PRNT,VTCWPRNT   WORK AREA FOR VTOCPRNT            00036600
0004A0 5810 C5F4      005F4        516+         L     R1,=A(WORKPRNT-WORKAREA)  GET THE OFFSET ( OVER 4K )  00005800
0004A4 4111 D000      00000        517+         LA    R1,0(R1,R13)   RELOCATE IT                           00005900
0004A8 5010 D084      00084        518+         ST    R1,VTCWPRNT   THEN STORE IT FOR THE ROUTINES         00006000


                                   520 *        SET UP THE ADDRESSES FOR CALLING                            00036800
                                   521 *                                                                    00036900
0004AC D21B D08C C5F8 0008C 005F8  522          MVC   VADMSG(RTNADLEN),RTNADDRS  MOVE IN THE ADDRESSES     00037000
                                   523 *                                                                    00037100
                                   524 *                                                                    00037200
                                   525 *                                                                    00037300
                                   526 *        BUILD PARSE PARAMETER LIST AND INVOKE                       00037400
                                   527 *        IKJPARS TO ANALYZE COMMAND OPERANDS                         00037500
                                   528 *                                                                    00037600


0004B2                             530 GOPARSE  DS    0H                                                   00037800
0004B2 50E0 D06C      0006C        531          ST    R14,R14PARSE   SAVE THE RETURN ADDRESS              00037900
0004B6 4110 D048      00048        532          LA    R1,PARSELST    AREA FOR PARSE PARAMETERS            00038000
                            00000  533          USING PPL,R1         BASE FOR PARSE PARAMETER LIST         00038100


0004BA D203 1000 D0A8 00000 000A8  535          MVC   PPLUPT,ADDRUPT PASS UPT ADDRESS                      00038300
0004C0 D203 1004 D0AC 00004 000AC  536          MVC   PPLECT,ADDRECT AND ECT ADDRESS                       00038400
0004C6 D203 1014 D0B4 00014 000B4  537          MVC   PPLCBUF,ADDRCBUF AND COMMAND BUFFER ADDR             00038500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0004CC 50D0 1018      00018         539          ST    WORKREG,PPLUWA ALSO WORK AREA ADDR FOR VALIDITY EXITS    00038700

0004D0 4100 D0DC      000DC         541          LA    R0,ATTNECB     ECB FOR ATTN INTERRUPTS                   00038900
0004D4 9200 D0DC      000DC         542          MVI   ATTNECB,0      CLEAR ECB                                 00039000
0004D8 5000 1008      00008         543          ST    R0,PPLECB      PASSE TO PARSE                            00039100

0004DC 4100 D0B8      000B8         545          LA    R0,ADDRANSR    PASS ADDR OF WORD WHERE PARSE             00039300
0004E0 5000 1010      00010         546          ST    R0,PPLANS      RETURNS PDL ADDRESS                       00039400

0004E4 D203 100C C614 0000C 00614   548          MVC   PPLPCL,ADDRPCL STORE PCL ADDRESS                         00039600



                                    550          CALLTSSR EP=IKJPARS  INVOKE PARSE                              00039800
                                    551+*                                                                       69600002
                                    552+*                                                                       76800002
0004EA 58F0 0010      00010         553+         L     15,CVTPTR *             GET ADDRESS OF CVT               77400002
                            00018   554+         USING CVTMAP,15 *             SET ADDRESSABILITY TO CVT        78000002
                                    555+*                                                                       78600002
0004EE 9180 F20C      00224         556+         TM    CVTPARS,X'80' *        IF HIGH ORDER BIT IS NOT ONE      79200002
0004F2 47E0 C500      00500         557+         BNO   TSRL0032    *           THEN DO LINK, NOT CALL           79800002
                                    558+*                                                                       80400002
0004F6 58F0 F20C      00224         559+         L     15,CVTPARS *           GET ADDR OF ROUTINE               81000002
0004FA 05EF                         560+         BALR  14,15 *                 BRANCH TO ROUTINE                81600002
0004FC 47F0 C516      00516         561+         B     TSRE0032    *           SKIP AROUND LINK                 82200002
                                    562+*                                                                       82800002
                            00500   563+TSRL0032    EQU   *                                                   83400002
000500                              564+         CNOP  0,4                                                     04900000
000500 45F0 C514      00514         565+         BAL   15,*+20            BRANCH AROUND CONSTANTS               04950000
000504 0000050C                     566+         DC    A(*+8)             ADDR. OF PARM. LIST                   05050000
000508 00000000                     567+         DC    A(0)                DCB ADDRESS PARAMETER                06650000
00050C C9D2D1D7C1D9E240             568+         DC    CL8'IKJPARS'        EP PARAMETER                         06750000
000514 0A06                         569+         SVC   6                   ISSUE LINK SVC                       48000000
                                    570+*                                                                       84600002
                            00516   571+TSRE0032    EQU   *                                                   85200002
                                    572+         DROP  15                                                      85800002
                                    573          DROP  R1                                                      00039900


000516 41E0 0018      00018         575          LA    R14,MAXPARSE   RETURN CODE LIMIT                         00040100

00051A 19FE                         577          CR    R15,R14        VERIFY RETURN CODE WITHIN LIMITS          00040300
00051C 4720 C53C      0053C         578          BH    PARSEBAD       NO, ERROR                                 00040400

000520 47FF C524      00524         580          B     *+4(R15)       PROCESS RETURN CODE                       00040600

000524 47F0 C580      00580         582 PARSERET B     PARSEOK         0- SUCESSFUL                             00040800
000528 47F0 C578      00578         583          B     PARSEERR        4- PARSE UNABLE TO PROMPT                00040900
00052C 47F0 C578      00578         584          B     PARSEERR        8- USER ENTERED ATTENTION                00041000
000530 47F0 C53C      0053C         585          B     PARSEBAD       12- INVALID PARAMETERS                    00041100
000534 47F0 C53C      0053C         586          B     PARSEBAD       16- PARSE INTERNAL FAILURE                00041200
000538 47F0 C578      00578         587          B     PARSEERR       20 - VALIDITY CHECK ERROR                 00041300
                            00018   588 MAXPARSE EQU   *-PARSERET                                              00041400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00053C                              590 PARSEBAD DS    0H                                                    00041600
00053C D201 D170 C700 00170 00700   591          MVC   MSGTEXT2+4(L'MSGPARSE),MSGPARSE                       00041700
000542 4110 D172      00172         592          LA    R1,MSGTEXT2+4+L'MSGPARSE                              00041800

000546 4EF0 D0E0      000E0         594          CVD   R15,DOUBLE                                            00042000
00054A 960F D0E7      000E7         595          OI    DOUBLE+7,X'0F'                                        00042100
00054E F317 1000 D0E0 00000 000E0   596          UNPK  0(2,R1),DOUBLE                                        00042200

000554 4100 D16A      0016A         598          LA    R0,MSGTEXT2-2                                         00042400
000558 1B10                         599          SR    R1,R0                                                 00042500
00055A 8910 0010      00010         600          SLL   R1,16                                                 00042600
00055E 5010 D16C      0016C         601          ST    R1,MSGTEXT2                                           00042700


                                    603          VTOCMSG MSGCMDER,MSGTEXT2    PUT OUT 'COMMAND ERROR' MSG    00042900
000562 4110 C716      00716         604+         LA    R1,MSGCMDER    POINT TO THE FIRST MESSAGE             00000300
000566 4100 D16C      0016C         605+         LA    R0,MSGTEXT2    POINT TO THE SECOND MESSAGE            00000500
00056A 9001 D0E8      000E8         606+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES             00000800
                                    607+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                  00000900
00056E 4110 D070      00070         608+         LA    R1,VTOCOM      POINT TO THE COMMON AREA               00000300
000572 58F0 D08C      0008C         609+         L     R15,VADMSG     POINT TO THE ROUTINE                   00000400
000576 05EF                         610+         BALR  R14,R15        THEN CALL IT                           00000900


000578 41F0 000C      0000C         612 PARSEERR LA    R15,12         ERROR CODE 12 - COMMAND FAILED         00043100
00057C 47F0 C582      00582         613          B     PARSERTN       RETURN FROM PARSE                      00043200

000580 1BFF                         615 PARSEOK  SR    R15,R15        CLEAR THE RETURN CODE                  00043400
000582 58E0 D06C      0006C         616 PARSERTN L     R14,R14PARSE   GET THE RETURN LOCATION                00043500
000586 07FE                         617          BR    R14            AND GET OUT OF HERE                    00043600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   620 *                                                                          00043900
                                   621 *        PARSE CLEANUP ROUTINE                                             00044000
                                   622 *                                                                          00044100



000588                             624 FREEPDL  DS    0H                                                          00044300

000588 50E0 D068      00068        626          ST    R14,R14SAVE                                                 00044500

                                   628          IKJRLSA ADDRANSR     RELEASE THE STORAGE                          00044700
00058C 5810 D0B8      000B8        629+         L     1,ADDRANSR              FETCH PDL ADDRESS                   00080000
000590 4110 1000      00000        630+         LA    1,0(0,1)                CLEAR HIGH ORDER BYTE     YM2296    00130002
000594 1211                        631+         LTR   1,1                     WAS A PDL RETURNED                  00140000
000596 4780 C5B2      005B2        632+         BZ    IKJ$0037                IF NO SKIP FREEMAIN                 00150000
00059A                             633+IKJ@0037    DS 0H                     FREE PDL LOOP                       00160000
00059A 58E0 1000      00000        634+         L     14,0(0,1)               LOAD NEXT AREA ADDRESS TO FREE      00170002
00059E 5800 1004      00004        635+         L     0,4(0,1)                LOAD SUBPOOL AND LENGTH   YM2296    00182002
                                   636+*      OS/VS2 RELEASE 3 VERSION  -- 10/25/74                               00001603
0005A2 4110 1000      00000        637+         LA    1,0(0,1)                          CLEAR HI ORDER BYTE       00150802
0005A6 0A0A                        638+         SVC   10                                ISSUE FREEMAIN SVC        00311202
0005A8 41E0 E000      00000        639+         LA    14,0(0,14)              CLEAR HIGH ORDER BYTE     YM2296    00200002
0005AC 121E                        640+         LTR   1,14                    ANY MORE CORE TO FREE               00210000
0005AE 4770 C59A      0059A        641+         BNZ   IKJ@0037                REPEAT LOOP UNTIL DONE              00220000
0005B2                             642+IKJ$0037    DS 0H                     BRANCHED TO IF FREEMAIN SKIPPED     00230000


0005B2 D703 D0B8 D0B8 000B8 000B8  644          XC    ADDRANSR,ADDRANSR                                           00044900

0005B8 58E0 D068      00068        646          L     R14,R14SAVE                                                 00045100
0005BC 07FE                        647          BR    R14                                                         00045200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    649 *                                                                          00045400
                                    650 *                                                                          00045500
                                    651 *        CONSTANTS                                                         00045600
                                    652 *                                                                          00045700
                                    653 *                                                                          00045800
0005C0                              654          LTORG                                                             00045900
0005C0 00000000                     655                =F'0'
0005C4 0000000C                     656                =F'12'
0005C8 00000018                     657                =F'24'
0005CC 0000000000000000             658                =3F'0'
0005D8 E4D5D2D5                     659                =C'UNKN'
0005DC 00000870                     660                =A(WORKMSG-WORKAREA)
0005E0 00000970                     661                =A(WORKEXCP-WORKAREA)
0005E4 00000D70                     662                =A(WORKCHEK-WORKAREA)
0005E8 00000E70                     663                =A(WORKFORM-WORKAREA)
0005EC 00001070                     664                =A(WORKEXIT-WORKAREA)
0005F0 00001870                     665                =A(WORKSORT-WORKAREA)
0005F4 00001970                     666                =A(WORKPRNT-WORKAREA)
0005F8 00000000                     667 RTNADDRS DC    V(VTOCMSG)                                                 00046000
0005FC 00000000                     668          DC    A(0)           DUMMY ENTRY FOR THE EXIT ROUTINE            00046100
000600 00000000                     669          DC    V(VTOCEXCP)                                                00046200
000604 00000000                     670          DC    V(VTOCCHEK)                                                00046300
000608 00000000                     671          DC    V(VTOCFORM)                                                00046400
00060C 00000000                     672          DC    V(VTOCPRNT)                                                00046500
000610 00000000                     673          DC    V(VTOCSORT)                                                00046600
                            0001C   674 RTNADLEN EQU   *-RTNADDRS                                                 00046700
000614 00001210                     675 ADDRPCL  DC    A(PCLMAIN)     ADDR OF MAIN PARSE CONTROL LIST             00046800
000618 0000FFFF                     676 FMIN1    DC    X'0000FFFF'    END OF UCB LIST                             00046900
00061C 4040404040404040             677 BLANKS   DC    CL8' '         BALNKS                                      00047000
000624 0002                         678 H2       DC    H'2'                                                       00047100
000626 0004                         679 H4       DC    H'4'                                                       00047200
000628 0005                         680 H5       DC    H'5'                                                       00047300
                                    681 *                                                                          00047400
                                    682 *                                                                          00047500
                                    683 *                                                                          00047600
                                    684 *                                                                          00047700
                                    685 *                                                                          00047800
00062A C1D3D3                       686 CHARALL  DC    CL3'ALL'                                                   00047900
00062D C1D3E5                       687 CHARALV  DC    CL3'ALV'                                                   00048000
000630 D200 D223 5000 00223 00000   688 MOVVOL   MVC   VOLSER(0),0(R5)                                            00048100
000636 D500 D223 601C 00223 0001C   689 CLCVOL   CLC   VOLSER(0),28(R6)                                           00048200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                          ASM 0201 14.37 04/05/25

00063C 0046002BC4E2D5C1             691 SORTTABX DC    AL2(VTFDSN-VTFMT),AL2(43),CL8'DSNAME'                    00048400
000648 00120005E5D6D3E4             692          DC    AL2(VTFVOLUM-VTFMT),AL2(5),CL8'VOLUME'                   00048500
000654 00040003C1D3D3D6             693          DC    AL2(VTFALLOC-VTFMT),AL2(3),CL8'ALLOC'                    00048600
000660 00080003E4E2C5C4             694          DC    AL2(VTFUSED-VTFMT),AL2(3),CL8'USED'                      00048700
00066C 000C0003E4D5E4E2             695          DC    AL2(VTFUNUSD-VTFMT),AL2(3),CL8'UNUSED'                   00048800
000678 00100001D7C3E340             696          DC    AL2(VTFPCT-VTFMT),AL2(1),CL8'PCT'                        00048900
000684 00250000C5E74040             697          DC    AL2(VTFNOEPV-VTFMT),AL2(0),CL8'EX'                       00049000
000690 00260002C4E2D640             698          DC    AL2(VTFDSORG-VTFMT),AL2(2),CL8'DSO'                      00049100
00069C 00290004D9C6D440             699          DC    AL2(VTFRECFM-VTFMT),AL2(4),CL8'RFM'                      00049200
0006A8 002E0001D3D9C5C3             700          DC    AL2(VTFLRECL-VTFMT),AL2(1),CL8'LRECL'                    00049300
0006B4 00300001C2D3D2E2             701          DC    AL2(VTFBLKSZ-VTFMT),AL2(1),CL8'BLKSZ'                    00049400
0006C0 001C0002C3C4C1E3             702          DC    AL2(VTFCREDT-VTFMT),AL2(2),CL8'CDATE'                    00049500
0006CC 001F0002C5E7D7C4             703          DC    AL2(VTFEXPDT-VTFMT),AL2(2),CL8'EXPDT'                    00049600
0006D8 00220002D9C5C6C4             704          DC    AL2(VTFLSTAC-VTFMT),AL2(2),CL8'REFDT'                    00049700
0006E4 00340000D9C1C3C6             705          DC    AL2(VTFRACF-VTFMT),AL2(0),CL8'RACF'                RPRIN1 00049810
0006F0 00180003E4D5C9E3             706          DC    AL2(VTFUNIT-VTFMT),AL2(3),CL8'UNIT'                RPRIN1 00049820
0006FC 00000000                     707          DC    F'0'                                                     00049900
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  709 *                                                                    00050100
                                  710 *        PROGRAM MESSAGES                                            00050200
                                  711 *                                                                    00050300

                                  713          PRINT NOGEN                                                 00050500

                                  715 MSGPARSE MSG   ' PARSE ERROR CODE '                                  00050700
                                  717 MSGCMDER MSG   ' COMMAND SYSTEM ERROR'                               00050800
                                  719 MSGNOTMT MSG   ' VVVVVV VOLUME IS NOT MOUNTED'                       00050900
                                  721 MSGOFFLN MSG   ' VVVVVV VOLUME IS OFFLINE'                           00051000
                                  723 MSGPEND  MSG   ' VVVVVV VOLUME IS PENDING OFFLINE'                   00051100
                                  725 *                                                                    00051200
                                  726 *                                                                    00051300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000795 08F2F3F1F4                  728 DEVTYPS  DC    X'08',CL4'2314'  UCBTYP AND UNIT NAME             RPRIN1 00051410
00079A 09F3F3F3F0                  729          DC    X'09',CL4'3330'                                  RPRIN1 00051420
00079F 0AF3F3F4F0                  730          DC    X'0A',CL4'3340'                                  RPRIN1 00051430
0007A4 0BF3F3F5F0                  731          DC    X'0B',CL4'3350'                                  RPRIN1 00051440
0007A9 0CF3F3F7F5                  732          DC    X'0C',CL4'3375'                                  RPRIN1 00051445
0007AE 0DF3F3F3F1                  733          DC    X'0D',CL4'3331'                                  RPRIN1 00051450
0007B3 0EF3F3F8F0                  734          DC    X'0E',CL4'3380'                                  RPRIN1 00051455
0007B8 0FF3F3F9F0                  735          DC    X'0F',CL4'3390'                                  RPRIN1 00051460
                          00008    736 DEVT#    EQU   (*-DEVTYPS)/5                                    RPRIN1 00051465
0007C0                             737          DS    0F                                                      00051500
0007C0 004602C4                    738 SORTKTAB DC    AL2(VTFDSN-VTFMT),AL2(DSNSORTE-DSNSORT)                 00051600
0007C4 0000088800000B4C            739          DC    A(DSNSORT),A(DSNSORTE)                                  00051700
0007CC 00120138                    740          DC    AL2(VTFVOLUM-VTFMT),AL2(VOLSORTE-VOLSORT)               00051800
0007D0 00000B5800000C90            741          DC    A(VOLSORT),A(VOLSORTE)                                  00051900
0007D8 000800F0                    742          DC    AL2(VTFUSED-VTFMT),AL2(USESORTE-USESORT)                00052000
0007DC 00000C9C00000D8C            743          DC    A(USESORT),A(USESORTE)                                  00052100
0007E4 000400F0                    744          DC    AL2(VTFALLOC-VTFMT),AL2(ALCSORTE-ALCSORT)               00052200
0007E8 00000C9C00000D8C            745          DC    A(ALCSORT),A(ALCSORTE)                                  00052300
0007F0 000C00F0                    746          DC    AL2(VTFUNUSD-VTFMT),AL2(UNUSORTE-UNUSORT)               00052400
0007F4 00000C9C00000D8C            747          DC    A(UNUSORT),A(UNUSORTE)                                  00052500
0007FC 00100078                    748          DC    AL2(VTFPCT-VTFMT),AL2(PCTSORTE-PCTSORT)                 00052600
000800 00000D9800000E10            749          DC    A(PCTSORT),A(PCTSORTE)                                  00052700
000808 0025000C                    750          DC    AL2(VTFNOEPV-VTFMT),AL2(EXTSORTE-EXTSORT)               00052800
00080C 00000E1C00000E28            751          DC    A(EXTSORT),A(EXTSORTE)                                  00052900
000814 00260030                    752          DC    AL2(VTFDSORG-VTFMT),AL2(DSOSORTE-DSOSORT)               00053000
000818 00000E3400000E64            753          DC    A(DSOSORT),A(DSOSORTE)                                  00053100
000820 0029006C                    754          DC    AL2(VTFRECFM-VTFMT),AL2(RFMSORTE-RFMSORT)               00053200
000824 00000E7000000EDC            755          DC    A(RFMSORT),A(RFMSORTE)                                  00053300
00082C 002E00CC                    756          DC    AL2(VTFLRECL-VTFMT),AL2(LRCSORTE-LRCSORT)               00053400
000830 00000EE800000FB4            757          DC    A(LRCSORT),A(LRCSORTE)                                  00053500
000838 003000CC                    758          DC    AL2(VTFBLKSZ-VTFMT),AL2(BLKSORTE-BLKSORT)               00053600
00083C 00000EE800000FB4            759          DC    A(BLKSORT),A(BLKSORTE)                                  00053700
000844 001C01BC                    760          DC    AL2(VTFCREDT-VTFMT),AL2(CDTSORTE-CDTSORT)               00053800
000848 00000FC00000117C            761          DC    A(CDTSORT),A(CDTSORTE)                                  00053900
000850 002201BC                    762          DC    AL2(VTFLSTAC-VTFMT),AL2(RDTSORTE-RDTSORT)               00054000
000854 00000FC00000117C            763          DC    A(RDTSORT),A(RDTSORTE)                                  00054100
00085C 001F01BC                    764          DC    AL2(VTFEXPDT-VTFMT),AL2(EDTSORTE-EDTSORT)               00054200
000860 00000FC00000117C            765          DC    A(EDTSORT),A(EDTSORTE)                                  00054300
000868 00340018                    766          DC    AL2(VTFRACF-VTFMT),AL2(RACSORTE-RACSORT)         RPRIN1 00054310
00086C 00001188000011A0            767          DC    A(RACSORT),A(RACSORTE)                           RPRIN1 00054320
000874 0018006C                    768          DC    AL2(VTFUNIT-VTFMT),AL2(UNTSORTE-UNTSORT)         RPRIN1 00054330
000878 000011A00000120C            769          DC    A(UNTSORT),A(UNTSORTE)                           RPRIN1 00054340
000880 0000000000000000            770          DC    2F'0'                                                   00054400


                                   772 *        Each entry in the tables below is 12 bytes long          RPRIN1 00054510
                                   773 *        Bytes 0-3: contains the address of the next entry        RPRIN1 00054520
                                   774 *        Bytes 4-5: contains the length of the sort field - 1     RPRIN1 00054530
                                   775 *        Bytes 6-11: contains the value of the sort field         RPRIN1 00054540
                                   776 *                    If shorter the field is padded with zeroes   RPRIN1 00054550
                                   777 *                    or blanks.                                   RPRIN1 00054560
000888 000000000000E940            778 DSNSORT  DC    A(0),AL2(0),CL6'Z'                                      00054600
000894 000000000001E3E5            779          DC    A(0),AL2(1),CL6'TV'                                     00054700
0008A0 000000000001E3D4            780          DC    A(0),AL2(1),CL6'TM'                                     00054800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0008AC 000000000002E34B             781          DC    A(0),AL2(2),CL6'T.Z'                                    00054900
0008B8 000000000002E34B             782          DC    A(0),AL2(2),CL6'T.Y'                                    00055000
0008C4 000000000002E34B             783          DC    A(0),AL2(2),CL6'T.X'                                    00055100
0008D0 000000000002E34B             784          DC    A(0),AL2(2),CL6'T.W'                                    00055200
0008DC 000000000002E34B             785          DC    A(0),AL2(2),CL6'T.V'                                    00055300
0008E8 000000000002E34B             786          DC    A(0),AL2(2),CL6'T.U'                                    00055400
0008F4 000000000002E34B             787          DC    A(0),AL2(2),CL6'T.T'                                    00055500
000900 000000000002E34B             788          DC    A(0),AL2(2),CL6'T.S'                                    00055600
00090C 000000000002E34B             789          DC    A(0),AL2(2),CL6'T.R'                                    00055700
000918 000000000002E34B             790          DC    A(0),AL2(2),CL6'T.Q'                                    00055800
000924 000000000002E34B             791          DC    A(0),AL2(2),CL6'T.P'                                    00055900
000930 000000000002E34B             792          DC    A(0),AL2(2),CL6'T.O'                                    00056000
00093C 000000000002E34B             793          DC    A(0),AL2(2),CL6'T.N'                                    00056100
000948 000000000002E34B             794          DC    A(0),AL2(2),CL6'T.M'                                    00056200
000954 000000000002E34B             795          DC    A(0),AL2(2),CL6'T.L'                                    00056300
000960 000000000002E34B             796          DC    A(0),AL2(2),CL6'T.K'                                    00056400
00096C 000000000002E34B             797          DC    A(0),AL2(2),CL6'T.J'                                    00056500
000978 000000000002E34B             798          DC    A(0),AL2(2),CL6'T.I'                                    00056600
000984 000000000002E34B             799          DC    A(0),AL2(2),CL6'T.H'                                    00056700
000990 000000000002E34B             800          DC    A(0),AL2(2),CL6'T.G'                                    00056800
00099C 000000000002E34B             801          DC    A(0),AL2(2),CL6'T.F'                                    00056900
0009A8 000000000002E34B             802          DC    A(0),AL2(2),CL6'T.E'                                    00057000
0009B4 000000000002E34B             803          DC    A(0),AL2(2),CL6'T.D'                                    00057100
0009C0 000000000002E34B             804          DC    A(0),AL2(2),CL6'T.C'                                    00057200
0009CC 000000000002E34B             805          DC    A(0),AL2(2),CL6'T.B'                                    00057300
0009D8 000000000002E34B             806          DC    A(0),AL2(2),CL6'T.A'                                    00057400
0009E4 000000000001E2E8             807          DC    A(0),AL2(1),CL6'SY'                                     00057500
0009F0 000000000001E2E5             808          DC    A(0),AL2(1),CL6'SV'                                     00057600
0009FC 000000000001D7E5             809          DC    A(0),AL2(1),CL6'PV'                                     00057700
000A08 000000000002D74B             810          DC    A(0),AL2(2),CL6'P.Z'                                    00057800
000A14 000000000002D74B             811          DC    A(0),AL2(2),CL6'P.Y'                                    00057900
000A20 000000000002D74B             812          DC    A(0),AL2(2),CL6'P.X'                                    00058000
000A2C 000000000002D74B             813          DC    A(0),AL2(2),CL6'P.W'                                    00058100
000A38 000000000002D74B             814          DC    A(0),AL2(2),CL6'P.V'                                    00058200
000A44 000000000002D74B             815          DC    A(0),AL2(2),CL6'P.U'                                    00058300
000A50 000000000002D74B             816          DC    A(0),AL2(2),CL6'P.T'                                    00058400
000A5C 000000000002D74B             817          DC    A(0),AL2(2),CL6'P.S'                                    00058500
000A68 000000000002D74B             818          DC    A(0),AL2(2),CL6'P.R'                                    00058600
000A74 000000000002D74B             819          DC    A(0),AL2(2),CL6'P.Q'                                    00058700
000A80 000000000002D74B             820          DC    A(0),AL2(2),CL6'P.P'                                    00058800
000A8C 000000000002D74B             821          DC    A(0),AL2(2),CL6'P.O'                                    00058900
000A98 000000000002D74B             822          DC    A(0),AL2(2),CL6'P.N'                                    00059000
000AA4 000000000002D74B             823          DC    A(0),AL2(2),CL6'P.M'                                    00059100
000AB0 000000000002D74B             824          DC    A(0),AL2(2),CL6'P.L'                                    00059200
000ABC 000000000002D74B             825          DC    A(0),AL2(2),CL6'P.K'                                    00059300
000AC8 000000000002D74B             826          DC    A(0),AL2(2),CL6'P.J'                                    00059400
000AD4 000000000002D74B             827          DC    A(0),AL2(2),CL6'P.I'                                    00059500
000AE0 000000000002D74B             828          DC    A(0),AL2(2),CL6'P.H'                                    00059600
000AEC 000000000002D74B             829          DC    A(0),AL2(2),CL6'P.G'                                    00059700
000AF8 000000000002D74B             830          DC    A(0),AL2(2),CL6'P.F'                                    00059800
000B04 000000000002D74B             831          DC    A(0),AL2(2),CL6'P.E'                                    00059900
000B10 000000000002D74B             832          DC    A(0),AL2(2),CL6'P.D'                                    00060000
000B1C 000000000002D74B             833          DC    A(0),AL2(2),CL6'P.C'                                    00060100
000B28 000000000002D74B             834          DC    A(0),AL2(2),CL6'P.B'                                    00060200
000B34 000000000002D74B             835          DC    A(0),AL2(2),CL6'P.A'                                    00060300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000B40 000000000000D540             836          DC    A(0),AL2(0),CL6'N'                                        00060400
000B4C 0000000000004040             837 DSNSORTE DC    A(0),AL2(0),CL6' '                                        00060500


000B58 000000000004F3F3             839 VOLSORT  DC    A(0),AL2(4),CL6'33509'                                    00060700
000B64 000000000004F3F3             840          DC    A(0),AL2(4),CL6'33508'                                    00060800
000B70 000000000004F3F3             841          DC    A(0),AL2(4),CL6'33507'                                    00060900
000B7C 000000000004F3F3             842          DC    A(0),AL2(4),CL6'33506'                                    00061000
000B88 000000000004F3F3             843          DC    A(0),AL2(4),CL6'33505'                                    00061100
000B94 000000000004F3F3             844          DC    A(0),AL2(4),CL6'33504'                                    00061200
000BA0 000000000004F3F3             845          DC    A(0),AL2(4),CL6'33503'                                    00061300
000BAC 000000000004F3F3             846          DC    A(0),AL2(4),CL6'33502'                                    00061400
000BB8 000000000004F3F3             847          DC    A(0),AL2(4),CL6'33501'                                    00061500
000BC4 000000000004F3F3             848          DC    A(0),AL2(4),CL6'33500'                                    00061600
000BD0 000000000004F3F3             849          DC    A(0),AL2(4),CL6'33309'                                    00061700
000BDC 000000000004F3F3             850          DC    A(0),AL2(4),CL6'33308'                                    00061800
000BE8 000000000004F3F3             851          DC    A(0),AL2(4),CL6'33307'                                    00061900
000BF4 000000000004F3F3             852          DC    A(0),AL2(4),CL6'33306'                                    00062000
000C00 000000000004F3F3             853          DC    A(0),AL2(4),CL6'33305'                                    00062100
000C0C 000000000004F3F3             854          DC    A(0),AL2(4),CL6'33304'                                    00062200
000C18 000000000004F3F3             855          DC    A(0),AL2(4),CL6'33303'                                    00062300
000C24 000000000004F3F3             856          DC    A(0),AL2(4),CL6'33302'                                    00062400
000C30 000000000004F3F3             857          DC    A(0),AL2(4),CL6'33301'                                    00062500
000C3C 000000000004F3F3             858          DC    A(0),AL2(4),CL6'33300'                                    00062600
000C48 000000000000E340             859          DC    A(0),AL2(0),CL6'T'                                        00062700
000C54 000000000000D940             860          DC    A(0),AL2(0),CL6'R'                                        00062800
000C60 000000000000D740             861          DC    A(0),AL2(0),CL6'P'                                        00062900
000C6C 000000000000D440             862          DC    A(0),AL2(0),CL6'M'                                        00063000
000C78 000000000000C940             863          DC    A(0),AL2(0),CL6'I'                                        00063100
000C84 000000000000C840             864          DC    A(0),AL2(0),CL6'H'                                        00063200
000C90 0000000000004040             865 VOLSORTE DC    A(0),AL2(0),CL6' '                                        00063300


000C9C                              867 USESORT  DS    0F                                                        00063500
000C9C                              868 UNUSORT  DS    0F                                                        00063600
000C9C 0000000000030000             869 ALCSORT  DC    A(0),AL2(3),XL4'0000F000',XL2'00'                         00063700
000CA8 0000000000030000             870          DC    A(0),AL2(3),XL4'0000C000',XL2'00'                         00063800
000CB4 0000000000030000             871          DC    A(0),AL2(3),XL4'0000A000',XL2'00'                         00063900
000CC0 0000000000030000             872          DC    A(0),AL2(3),XL4'00008000',XL2'00'                         00064000
000CCC 0000000000030000             873          DC    A(0),AL2(3),XL4'00006000',XL2'00'                         00064100
000CD8 0000000000030000             874          DC    A(0),AL2(3),XL4'00005000',XL2'00'                         00064200
000CE4 0000000000030000             875          DC    A(0),AL2(3),XL4'00004000',XL2'00'                         00064300
000CF0 0000000000030000             876          DC    A(0),AL2(3),XL4'00003000',XL2'00'                         00064400
000CFC 0000000000030000             877          DC    A(0),AL2(3),XL4'00002000',XL2'00'                         00064500
000D08 0000000000030000             878          DC    A(0),AL2(3),XL4'00001000',XL2'00'                         00064600
000D14 0000000000030000             879          DC    A(0),AL2(3),XL4'00000C00',XL2'00'                         00064700
000D20 0000000000030000             880          DC    A(0),AL2(3),XL4'00000800',XL2'00'                         00064800
000D2C 0000000000030000             881          DC    A(0),AL2(3),XL4'00000400',XL2'00'                         00064900
000D38 0000000000030000             882          DC    A(0),AL2(3),XL4'00000300',XL2'00'                         00065000
000D44 0000000000030000             883          DC    A(0),AL2(3),XL4'00000200',XL2'00'                         00065100
000D50 0000000000030000             884          DC    A(0),AL2(3),XL4'00000100',XL2'00'                         00065200
000D5C 0000000000030000             885          DC    A(0),AL2(3),XL4'000000C0',XL2'00'                         00065300
000D68 0000000000030000             886          DC    A(0),AL2(3),XL4'00000080',XL2'00'                         00065400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000D74 0000000000030000             887          DC    A(0),AL2(3),XL4'00000040',XL2'00'                        00065500
000D80 0000000000030000             888          DC    A(0),AL2(3),XL4'00000010',XL2'00'                        00065600
000D8C                              889 USESORTE DS    0F                                                       00065700
000D8C                              890 UNUSORTE DS    0F                                                       00065800
000D8C 0000000000030000             891 ALCSORTE DC    A(0),AL2(3),XL6'00'                                      00065900


000D98 0000000000010064             893 PCTSORT  DC    A(0),AL2(1),XL2'0064',XL4'00'                            00066100
000DA4 000000000001005A             894          DC    A(0),AL2(1),XL2'005A',XL4'00'                            00066200
000DB0 0000000000010050             895          DC    A(0),AL2(1),XL2'0050',XL4'00'                            00066300
000DBC 0000000000010046             896          DC    A(0),AL2(1),XL2'0046',XL4'00'                            00066400
000DC8 000000000001003C             897          DC    A(0),AL2(1),XL2'003C',XL4'00'                            00066500
000DD4 0000000000010032             898          DC    A(0),AL2(1),XL2'0032',XL4'00'                            00066600
000DE0 0000000000010028             899          DC    A(0),AL2(1),XL2'0028',XL4'00'                            00066700
000DEC 000000000001001E             900          DC    A(0),AL2(1),XL2'001E',XL4'00'                            00066800
000DF8 0000000000010014             901          DC    A(0),AL2(1),XL2'0014',XL4'00'                            00066900
000E04 000000000001000A             902          DC    A(0),AL2(1),XL2'000A',XL4'00'                            00067000
000E10 0000000000010000             903 PCTSORTE DC    A(0),AL2(1),XL6'00'                                      00067100


000E1C 000000000000F040             905 EXTSORT  DC    A(0),AL2(0),CL6'0'                                       00067300
000E28 000000000000F040             906 EXTSORTE DC    A(0),AL2(0),CL6'0'                                       00067400


000E34 000000000001E5E2             908 DSOSORT  DC    A(0),AL2(1),CL6'VS'                                      00067600
000E40 000000000001D7E2             909          DC    A(0),AL2(1),CL6'PS'                                      00067700
000E4C 000000000001D7D6             910          DC    A(0),AL2(1),CL6'PO'                                      00067800
000E58 000000000001C4C1             911          DC    A(0),AL2(1),CL6'DA'                                      00067900
000E64 0000000000014040             912 DSOSORTE DC    A(0),AL2(1),CL6' '                                       00068000


000E70 000000000001E5E2             914 RFMSORT  DC    A(0),AL2(1),CL6'VS'                                      00068200
000E7C 000000000002E5C2             915          DC    A(0),AL2(2),CL6'VBS'                                     00068300
000E88 000000000001E5C2             916          DC    A(0),AL2(1),CL6'VB'                                      00068400
000E94 000000000000E540             917          DC    A(0),AL2(0),CL6'V'                                       00068500
000EA0 000000000000E440             918          DC    A(0),AL2(0),CL6'U'                                       00068600
000EAC 000000000001C6E2             919          DC    A(0),AL2(1),CL6'FS'                                      00068700
000EB8 000000000002C6C2             920          DC    A(0),AL2(2),CL6'FBS'                                     00068800
000EC4 000000000001C6C2             921          DC    A(0),AL2(1),CL6'FB'                                      00068900
000ED0 000000000000C640             922          DC    A(0),AL2(0),CL6'F'                                       00069000
000EDC 0000000000004040             923 RFMSORTE DC    A(0),AL2(0),CL6' '                                       00069100


000EE8                              925 LRCSORT  DS    0F                                                       00069300
000EE8 0000000000014650             926 BLKSORT  DC    A(0),AL2(1),XL2'4650',XL4'00'                            00069400
000EF4 0000000000013A98             927          DC    A(0),AL2(1),XL2'3A98',XL4'00'                            00069500
000F00 0000000000012EE0             928          DC    A(0),AL2(1),XL2'2EE0',XL4'00'                            00069600
000F0C 0000000000012328             929          DC    A(0),AL2(1),XL2'2328',XL4'00'                            00069700
000F18 0000000000011770             930          DC    A(0),AL2(1),XL2'1770',XL4'00'                            00069800
000F24 0000000000010BB8             931          DC    A(0),AL2(1),XL2'0BB8',XL4'00'                            00069900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000F30 00000000000107D0             932          DC    A(0),AL2(1),XL2'07D0',XL4'00'                                00070000
000F3C 0000000000010640             933          DC    A(0),AL2(1),XL2'0640',XL4'00'                                00070100
000F48 00000000000104B0             934          DC    A(0),AL2(1),XL2'04B0',XL4'00'                                00070200
000F54 0000000000010320             935          DC    A(0),AL2(1),XL2'0320',XL4'00'                                00070300
000F60 0000000000010258             936          DC    A(0),AL2(1),XL2'0258',XL4'00'                                00070400
000F6C 0000000000010190             937          DC    A(0),AL2(1),XL2'0190',XL4'00'                                00070500
000F78 00000000000100C8             938          DC    A(0),AL2(1),XL2'00C8',XL4'00'                                00070600
000F84 00000000000100A0             939          DC    A(0),AL2(1),XL2'00A0',XL4'00'                                00070700
000F90 0000000000010078             940          DC    A(0),AL2(1),XL2'0078',XL4'00'                                00070800
000F9C 0000000000010050             941          DC    A(0),AL2(1),XL2'0050',XL4'00'                                00070900
000FA8 0000000000010028             942          DC    A(0),AL2(1),XL2'0028',XL4'00'                                00071000
000FB4                              943 BLKSORTE DS    0F                                                           00071100
000FB4 0000000000010000             944 LRCSORTE DC    A(0),AL2(1),XL6'00'                                          00071200



000FC0                              946 CDTSORT  DS    0F                                                           00071400
000FC0                              947 EDTSORT  DS    0F                                                           00071500
000FC0 0000000000026300             948 RDTSORT  DC    A(0),AL2(2),AL1(99),AL2(0),XL3'00'                           00071600
000FCC 0000000000025301             949          DC    A(0),AL2(2),AL1(83),AL2(300),XL3'00'                         00071700
000FD8 0000000000025300             950          DC    A(0),AL2(2),AL1(83),AL2(200),XL3'00'                         00071800
000FE4 0000000000025300             951          DC    A(0),AL2(2),AL1(83),AL2(100),XL3'00'                         00071900
000FF0 0000000000025300             952          DC    A(0),AL2(2),AL1(83),AL2(000),XL3'00'                         00072000
000FFC 0000000000025201             953          DC    A(0),AL2(2),AL1(82),AL2(300),XL3'00'                         00072100
001008 0000000000025200             954          DC    A(0),AL2(2),AL1(82),AL2(200),XL3'00'                         00072200
001014 0000000000025200             955          DC    A(0),AL2(2),AL1(82),AL2(100),XL3'00'                         00072300
001020 0000000000025200             956          DC    A(0),AL2(2),AL1(82),AL2(000),XL3'00'                         00072400
00102C 0000000000025101             957          DC    A(0),AL2(2),AL1(81),AL2(300),XL3'00'                         00072500
001038 0000000000025100             958          DC    A(0),AL2(2),AL1(81),AL2(200),XL3'00'                         00072600
001044 0000000000025100             959          DC    A(0),AL2(2),AL1(81),AL2(100),XL3'00'                         00072700
001050 0000000000025100             960          DC    A(0),AL2(2),AL1(81),AL2(000),XL3'00'                         00072800
00105C 0000000000025001             961          DC    A(0),AL2(2),AL1(80),AL2(300),XL3'00'                         00072900
001068 0000000000025000             962          DC    A(0),AL2(2),AL1(80),AL2(200),XL3'00'                         00073000
001074 0000000000025000             963          DC    A(0),AL2(2),AL1(80),AL2(100),XL3'00'                         00073100
001080 0000000000025000             964          DC    A(0),AL2(2),AL1(80),AL2(000),XL3'00'                         00073200
00108C 0000000000024F01             965          DC    A(0),AL2(2),AL1(79),AL2(300),XL3'00'                         00073300
001098 0000000000024F00             966          DC    A(0),AL2(2),AL1(79),AL2(200),XL3'00'                         00073400
0010A4 0000000000024F00             967          DC    A(0),AL2(2),AL1(79),AL2(100),XL3'00'                         00073500
0010B0 0000000000024F00             968          DC    A(0),AL2(2),AL1(79),AL2(000),XL3'00'                         00073600
0010BC 0000000000024E01             969          DC    A(0),AL2(2),AL1(78),AL2(300),XL3'00'                         00073700
0010C8 0000000000024E00             970          DC    A(0),AL2(2),AL1(78),AL2(200),XL3'00'                         00073800
0010D4 0000000000024E00             971          DC    A(0),AL2(2),AL1(78),AL2(100),XL3'00'                         00073900
0010E0 0000000000024E00             972          DC    A(0),AL2(2),AL1(78),AL2(000),XL3'00'                         00074000
0010EC 0000000000024D01             973          DC    A(0),AL2(2),AL1(77),AL2(300),XL3'00'                         00074100
0010F8 0000000000024D00             974          DC    A(0),AL2(2),AL1(77),AL2(200),XL3'00'                         00074200
001104 0000000000024D00             975          DC    A(0),AL2(2),AL1(77),AL2(100),XL3'00'                         00074300
001110 0000000000024D00             976          DC    A(0),AL2(2),AL1(77),AL2(000),XL3'00'                         00074400
00111C 0000000000024C01             977          DC    A(0),AL2(2),AL1(76),AL2(300),XL3'00'                         00074500
001128 0000000000024C00             978          DC    A(0),AL2(2),AL1(76),AL2(200),XL3'00'                         00074600
001134 0000000000024C00             979          DC    A(0),AL2(2),AL1(76),AL2(100),XL3'00'                         00074700
001140 0000000000024C00             980          DC    A(0),AL2(2),AL1(76),AL2(000),XL3'00'                         00074800
00114C 0000000000024B01             981          DC    A(0),AL2(2),AL1(75),AL2(300),XL3'00'                         00074900
001158 0000000000024B00             982          DC    A(0),AL2(2),AL1(75),AL2(200),XL3'00'                         00075000
001164 0000000000024B00             983          DC    A(0),AL2(2),AL1(75),AL2(100),XL3'00'                         00075100
001170 0000000000024B00             984          DC    A(0),AL2(2),AL1(75),AL2(000),XL3'00'                         00075200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00117C                              985 EDTSORTE DS    0F                                                          00075300
00117C                              986 RDTSORTE DS    0F                                                          00075400
00117C 0000000000020000             987 CDTSORTE DC    A(0),AL2(2),XL6'00'                                         00075500
                                    988 *                                                                   RPRIN1 00075502
001188 000000000000D500             989 RACSORT  DC    A(0),AL2(0),C'N',XL5'00'                             RPRIN1 00075504
001194 000000000000E800             990          DC    A(0),AL2(0),C'Y',XL5'00'                             RPRIN1 00075506
0011A0                              991 RACSORTE DS    0F                                                   RPRIN1 00075508
                                    992 *                                                                   RPRIN1 00075514
0011A0 000000000003F3F3             993 UNTSORT  DC    A(0),AL2(3),CL4'3390',XL2'00'                        RPRIN1 00075516
0011AC 000000000003F3F3             994          DC    A(0),AL2(3),CL4'3380',XL2'00'                        RPRIN1 00075518
0011B8 000000000003F3F3             995          DC    A(0),AL2(3),CL4'3375',XL2'00'                        RPRIN1 00075520
0011C4 000000000003F3F3             996          DC    A(0),AL2(3),CL4'3350',XL2'00'                        RPRIN1 00075522
0011D0 000000000003F3F3             997          DC    A(0),AL2(3),CL4'3340',XL2'00'                        RPRIN1 00075524
0011DC 000000000003F3F3             998          DC    A(0),AL2(3),CL4'3331',XL2'00'                        RPRIN1 00075526
0011E8 000000000003F3F3             999          DC    A(0),AL2(3),CL4'3330',XL2'00'                        RPRIN1 00075528
0011F4 000000000003F2F3            1000          DC    A(0),AL2(3),CL4'2314',XL2'00'                        RPRIN1 00075530
001200 000000000003E4D5            1001          DC    A(0),AL2(3),CL4'UNKN',XL2'00'                        RPRIN1 00075532
00120C                             1002 UNTSORTE DS    0F                                                   RPRIN1 00075534
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                 1004 *                                                                   00075700
                                 1005 *                                                                   00075800
                                 1006 *        P A R S E   C O N T R O L   L I S T                        00075900
                                 1007 *                                                                   00076000
                                 1008 *                                                                   00076100


                                 1010          COPY  VTOCPARS                                             00076300
                                 1011          PUSH  PRINT                                                00000100
                                 1012          PRINT NOGEN                                                00000200
                                 1013 PCLMAIN  IKJPARM DSECT=PDL                                          00000300

                                 1023 VOLS     IKJPOSIT DSNAME,VOLSER,LIST,                              $00000500
                                                    PROMPT='VOLUMES TO SEARCH AND OTHER PARAMETERS',     $00000600
                                                    HELP=('VOLUME SERIAL NUMBERS WHICH ARE TO BE SEARCHED FO$00000700
                                                    DATA SETS TO LIST')                                   00000800

                                 1043 LEVKEY   IKJKEYWD                                                   00001000
                                 1054          IKJNAME 'LEVEL',SUBFLD=SUBLEV                              00001100


                                 1065 ENDKEY   IKJKEYWD                                                   00001300
                                 1075          IKJNAME 'ENDING',SUBFLD=SUBEND                             00001400


                                 1086 CONTAINK IKJKEYWD                                                   00001600
                                 1096          IKJNAME 'CONTAINING',SUBFLD=SUBCONT                        00001700



                                 1108 SPACEK   IKJKEYWD DEFAULT='TRKS'                                    00002000
                                 1120          IKJNAME 'TRKS'                                             00002100

                                 1130 CATK     IKJKEYWD                                                   00002300
                                 1140          IKJNAME 'CAT'                                              00002400


                                 1150 SORTK    IKJKEYWD                                                   00002600
                                 1160          IKJNAME 'SORT',SUBFLD=SUBSORTS                             00002700
                                 1170          IKJNAME 'NOSORT'                                           00002800

                                 1180 BREAKK   IKJKEYWD                                                   00003000
                                 1190          IKJNAME 'BREAK',SUBFLD=SUBBREAK                            00003100


                                 1201 LIMITK   IKJKEYWD                                                   00003300
                                 1211          IKJNAME 'LIMIT',SUBFLD=SUBLIMIT                            00003400
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                 1222 ANDOR1K  IKJKEYWD                                                          00003600
                                 1232          IKJNAME 'AND1',SUBFLD=SUBAO1,ALIAS='AND'                          00003700
                                 1246          IKJNAME 'OR1',SUBFLD=SUBAO1,ALIAS='OR'                            00003800

                                 1261 ANDOR2K  IKJKEYWD                                                          00004000
                                 1271          IKJNAME 'AND2',SUBFLD=SUBAO2                                      00004100
                                 1281          IKJNAME 'OR2',SUBFLD=SUBAO2                                       00004200

                                 1292 ANDOR3K  IKJKEYWD                                                          00004400
                                 1302          IKJNAME 'AND3',SUBFLD=SUBAO3                                      00004500
                                 1312          IKJNAME 'OR3',SUBFLD=SUBAO3                                       00004600

                                 1323 PRINTK   IKJKEYWD                                                          00004800
                                 1333          IKJNAME 'PRINT',SUBFLD=SUBPRINT                                   00004900
                                 1343          IKJNAME 'NOPRINT'                                                 00005000

                                 1353 CHARSK   IKJKEYWD                                                          00005200
                                 1363          IKJNAME 'CHARS',SUBFLD=SUBCHARS                                   00005300

                                 1374 LINESK   IKJKEYWD                                                          00005500
                                 1384          IKJNAME 'LINES',SUBFLD=SUBLINES                                   00005600

                                 1395 HEADK    IKJKEYWD                                                          00005800
                                 1405          IKJNAME 'HEADING',SUBFLD=SUBHEAD                                  00005900
                                 1415          IKJNAME 'NOHEADING'                                               00006000

                                 1425 TOTALK   IKJKEYWD                                                          00006200
                                 1435          IKJNAME 'TOTALS',SUBFLD=SUBTOTAL                                  00006300

                                 1446 OUTPUTK  IKJKEYWD                                                          00006500
                                 1456          IKJNAME 'OUTPUT'                                                  00006600

                                 1466 FORMATK  IKJKEYWD                                                          00006800
                                 1476          IKJNAME 'FORMAT',SUBFLD=SUBFORMT                                  00006900

                                 1487 DSNPLNK  IKJKEYWD                                                          00007100
                                 1497          IKJNAME 'DSNLEN',SUBFLD=SUBDSNLN                                  00007200

                                 1508 SUBLEV   IKJSUBF                                                           00007400
                                 1513 LEVEL    IKJPOSIT DSNAME,LIST,                                            X00007500
                                                    PROMPT='BEGINNING CHARACTERS OF DSNAMES TO PROCESS'          00007600
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                 1528 SUBEND   IKJSUBF                                                          00007800
                                 1534 ENDING   IKJPOSIT DSNAME,LIST,                                           X00007900
                                                     PROMPT='ENDING CHARACTERS OF DSNAMES TO PROCESS'           00008000


                                 1549 SUBCONT  IKJSUBF                                                          00008200
                                 1555 * 9/16/85 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO ALLOW    ABL-CONT 00008210
                                 1556 *           CONT(123) OR CONT(.DATA)                           ABL-CONT 00008220
                                 1557 *ONTAIN  IKJPOSIT DSNAME,LIST,                                            00008300
                                 1558 *              PROMPT='CHARACTER STRING CONTAINED IN DSNAMES TO PROCESS 00008400
                                 1559 *              '                                                          00008500
                                 1560 CONTAIN  IKJIDENT 'PARTIAL DSNAME',LIST,MAXLNTH=44,FIRST=ANY,          X00008510
                                                     PROMPT='PARTIAL DSNAME',OTHER=ANY,                         X00008520
                                                     HELP=('CHARACTER STRING TO BE SEARCHED FOR IN DSNAMES')  00008530


                                 1588 SUBSORTS IKJSUBF                                                          00008700
                                 1594 SUBSORT  IKJIDENT 'SORT FIELDS',LIST,FIRST=ALPHA,MAXLNTH=6              00008800


                                 1615 SUBBREAK IKJSUBF                                                          00009000
                                 1621 BREAK    IKJIDENT 'NUMBER OF CHARACTERS FOR A BREAK',FIRST=NUMERIC,    X00009100
                                                     OTHER=NUMERIC,MAXLNTH=2,DEFAULT='3'                        00009200


                                 1644 SUBCHARS IKJSUBF                                                          00009400
                                 1650 CHARSPL  IKJIDENT 'NUMBER OF CHARACTERS PER LINE   ',FIRST=NUMERIC,    X00009500
                                                     OTHER=NUMERIC,MAXLNTH=3                                    00009600
                                 1670 BLKSZSET IKJIDENT 'PHYSICAL BLOCK SIZE',FIRST=NUMERIC,OTHER=NUMERIC,   X00009700
                                                     MAXLNTH=5                                                  00009800


                                 1691 SUBLINES IKJSUBF                                                          00010000
                                 1697 LINESPP  IKJIDENT 'NUMBER OF LINES PER PAGE        ',FIRST=NUMERIC,    X00010100
                                                     OTHER=NUMERIC,MAXLNTH=3                                    00010200


                                 1718 SUBPRINT IKJSUBF                                                          00010400
                                 1724 SUBPRTKY IKJIDENT 'ADD, REP, NEW, OR DEL',                             X00010500
                                                     FIRST=ALPHA,OTHER=ALPHA,MAXLNTH=3                          00010600
                                 1744 SUBPRTIT IKJIDENT 'ITEMS TO PRINT',LIST,FIRST=ALPHA,MAXLNTH=6           00010700


                                 1765 SUBHEAD  IKJSUBF                                                          00010900
                                 1771 HEADING  IKJPOSIT QSTRING                                                 00011000


                                 1783 SUBTOTAL IKJSUBF                                                          00011200
                                 1789 TOTALN   IKJIDENT 'NUMBER OF CHARACTERS FOR TOTALS',FIRST=NUMERIC,     X00011300
                                                     OTHER=NUMERIC,MAXLNTH=2,DEFAULT='0'                        00011400


                                 1812 SUBLIMIT IKJSUBF                                                          00011600
                                 1818 SUBLKEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',         X00011700
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                                   FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                    00011800


                                 1839 SUBLOPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,   X00012000
                                                   MAXLNTH=2,                                              X00012100
                                                   PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'       00012200


                                 1862 SUBLVALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                 X00012400
                                                   OTHER=ALPHANUM,                                         X00012500
                                                   PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'          00012600



                                 1884 SUBAO1   IKJSUBF                                                      00012800
                                 1890 SUB1KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',       X00012900
                                                   FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                     00013000


                                 1911 SUB1OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,   X00013200
                                                   MAXLNTH=2,                                              X00013300
                                                   PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'       00013400


                                 1934 SUB1VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                 X00013600
                                                   OTHER=ALPHANUM,                                         X00013700
                                                   PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'          00013800


                                 1956 SUBAO2   IKJSUBF                                                      00014000
                                 1962 SUB2KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',       X00014100
                                                   FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                     00014200


                                 1983 SUB2OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,   X00014400
                                                   MAXLNTH=2,                                              X00014500
                                                   PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'       00014600


                                 2006 SUB2VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                 X00014800
                                                   OTHER=ALPHANUM,                                         X00014900
                                                   PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'          00015000


                                 2028 SUBAO3   IKJSUBF                                                      00015200
                                 2034 SUB3KEY IKJIDENT 'FIELD IN DATA SET CONTROL BLOCK TO COMPARE',       X00015300
                                                   FIRST=ALPHA,OTHER=ALPHANUM,MAXLNTH=8                     00015400


                                 2055 SUB3OPER IKJIDENT 'OPERATOR FOR COMPARISON',FIRST=ALPHA,OTHER=ALPHA,   X00015600
                                                   MAXLNTH=2,                                              X00015700
                                                   PROMPT=' OPERATORS ARE EQ, NE, LT, LE, GT, AND GE'       00015800


                                 2078 SUB3VALU IKJIDENT 'COMPARISON VALUE',FIRST=ALPHANUM,                 X00016000
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                                OTHER=ALPHANUM,                                          X00016100
                                                PROMPT='VALUE TO COMPARE FOR DATA SET KEYWORDS'           00016200


                                 2100 SUBFORMT IKJSUBF                                                    00016400
                                 2106 FORMATSP IKJIDENT 'FORMAT TYPES TO OUTPUT',LIST,FIRST=NUMERIC,     X00016500
                                                OTHER=ALPHANUM,MAXLNTH=1,DEFAULT='1'                      00016600


                                 2129 SUBDSNLN IKJSUBF                                                    00016800
                                 2135 DSNPLN   IKJIDENT 'LENGTH OF DSNAME TO PRINT',FIRST=NUMERIC,       X00016900
                                                OTHER=NUMERIC,MAXLNTH=2,DEFAULT='44'                      00017000
                                 2157 DSNLNTYP IKJKEYWD DEFAULT='TRUNCATE'                                00017100
                                 2170          IKJNAME 'TRUNCATE'                                         00017200
                                 2179          IKJNAME 'MULTILINE'                                        00017300
                                 2188          IKJENDP                                                    00017400


                                 2198          POP   PRINT                                                00017600
                          00001  2199 ACTION   EQU   1                                                   00017700
                          00002  2200 VOLUME   EQU   2                                                   00017800
                          00003  2201 CDATE    EQU   3                                                   00017900
                          00004  2202 LSTUS    EQU   4                                                   00018000
                          00005  2203 EXPDT    EQU   5                                                   00018100
                          00006  2204 ALLOC    EQU   6                                                   00018200
                          00007  2205 UNUSED   EQU   7                                                   00018300
                          00008  2206 PCT      EQU   8                                                   00018400
                          00009  2207 EXT      EQU   9                                                   00018500
                          0000A  2208 DSORG    EQU   10                                                  00018600
                          0000B  2209 RECFM    EQU   11                                                  00018700
                          0000C  2210 BLKSZ    EQU   12                                                  00018800
                          0000D  2211 LRECL    EQU   13                                                  00018900
                          0000E  2212 PASS     EQU   14                                                  00019000
                          0000F  2213 CAT      EQU   15                                                  00019100
                          00010  2214 SECT     EQU   16                                                  00019200
                          00011  2215 SECQ     EQU   17                                                  00019300
                          00012  2216 UNIT     EQU   18                                                  00019400
                          00013  2217 ROUND    EQU   19                                                  00019500
                          00014  2218 TYPE     EQU   20                                                  00019600
                          00015  2219 USED     EQU   21                                                  00019700
                          00016  2220 CCHH     EQU   22                                                  00019800
                          00017  2221 UPD      EQU   23                                          TANSKY  00019900
                          00018  2222 RACF     EQU   24                                          TANSKY  00020000
                          00019  2223 DUMMY5   EQU   25                                                  00020100
                          0001A  2224 DSNAME   EQU   26                                                  00020200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   2226 *                                                                          00076500
                                   2227 *        DYNAMIC WORK AREA                                                 00076600
                                   2228 *                                                                          00076700


000000                             2230 WORKAREA DSECT                                                             00076900
000000                             2231 MAINSAVE DS    18A                                                         00077000

                                   2233          VTOCEXCP EQ          DEFINE VTOCEXCP CODES                        00077200

000048                             2238 PARSELST DS    8A             AREA FOR PARSE PARAMETER LIST                00077400

000068                             2240 R14SAVE  DS    A                                                           00077600
00006C                             2241 R14PARSE DS    A                                                           00077700
                                   2242 *                                                                          00077800
                                   2243 *        VTOC COMMAND COMMON AREA                                          00077900
                                   2244 *                                                                          00078000
                                   2245          PRINT GEN                                                         00078100
                                   2246          VTOCOM  NODSECT                                                   00078200
                                   2247+*                                                                          00000300
                                   2248+*        THIS IS THE VTOC COMMAND COMMON AREA                              00000400
                                   2249+*                                                                          00000500
000070                             2250+VTOCOM   DS    0D                                                          00001000
                                   2251+*                                                                          00001200
                                   2252+*        WORKING STORAGE AREAS FOR THE VARIOUS ROUTINES                    00001300
                                   2253+*                                                                          00001400
000070                             2254+VTCWMSG  DS    A              WORKING STORAGE FOR THE MSG  ROUTINE         00001500
000074                             2255+VTCWEXIT DS    A              WORKING STORAGE FOR THE EXIT ROUTINE         00001600
000078                             2256+VTCWEXCP DS    A              WORKING STORAGE FOR THE EXCP ROUTINE         00001700
00007C                             2257+VTCWCHEK DS    A              WORKING STORAGE FOR THE CHEK ROUTINE         00001800
000080                             2258+VTCWFORM DS    A              WORKING STORAGE FOR THE FORM ROUTINE         00001900
000084                             2259+VTCWPRNT DS    A              WORKING STORAGE FOR THE PRNT ROUTINE         00002000
000088                             2260+VTCWSORT DS    A              WORKING STORAGE FOR THE SORT ROUTINE         00002100
                                   2261+*                                                                          00002200
                                   2262+*        ADDRESSES OF THE ROUTINES                                         00002300
                                   2263+*                                                                          00002400
00008C 00000000                    2264+VADMSG   DC    V(VTOCMSG)     ADDRESS OF THE MESSAGE ROUTINE            00002500
000090 00000000                    2265+VADEXIT  DC    V(VTOCEXIT)    ADDRESS OF THE EXIT ROUTINE               00002600
000094 00000000                    2266+VADEXCP  DC    V(VTOCEXIT)    ADDRESS OF THE EXCP ROUTINE               00002700
000098 00000000                    2267+VADCHEK  DC    V(VTOCEXIT)    ADDRESS OF THE CHECK ROUTINE              00002800
00009C 00000000                    2268+VADFORM  DC    V(VTOCEXIT)    ADDRESS OF THE FORMAT ROUTINE             00002900
0000A0 00000000                    2269+VADPRNT  DC    V(VTOCEXIT)    ADDRESS OF THE PRINT ROUTINE              00003000
0000A4 00000000                    2270+VADSORT  DC    V(VTOCEXIT)    ADDRESS OF THE SORT ROUTINE               00003100
                                   2271+*                                                                          00003200
                                   2272+*        TSO COMMAND PROCESSOR AND PARSE DATA                              00003300
                                   2273+*                                                                          00003400
0000A8                             2274+ADDRUPT  DS    A              USER PROFILE TABLE                        00003500
0000AC                             2275+ADDRECT  DS    A              ENVIRONMENT CONTROL TABLE                 00003600
0000B0                             2276+ADDRPSCB DS    A              PROTECTED STEP CONTROL BLOCK              00003700
0000B4                             2277+ADDRCBUF DS    A              COMMAND BUFFER                            00003800

0000B8                             2279+ADDRANSR DS    A              PARSE ANSWER OR PDL ADDRESS               00004000

0000BC                             2281+PARMLIST DS    8A             INTERNAL PARM AREA ( MSG )                00004200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0000DC                            2282+ATTNECB  DS    F              ECB FOR ATTENTIONS                        00004300
0000E0                            2283+DOUBLE   DS    D                                                        00004400

0000E8                            2285+MSGADDRS DS    2A             ADDRESSES OF MESSAGES FOR VTOCMSG         00004600
0000F0                            2286+MSGTEXT1 DS    XL124                                                    00004700
00016C                            2287+MSGTEXT2 DS    XL124                                                    00004800



0001E8                            2289+PUTOLD1  DS    3F                                                       00005000
0001F4                            2290+PUTOLD2  DS    3F                                                       00005100
                                  2291+*                                                                       00005200
                                  2292+*        PARAMETER LIST FOR THE EXIT ROUTINE                            00005300
                                  2293+*                                                                       00005400
000200                            2294+EXITLIST DS    0F                                                       00005500
000200                            2295+EXITAREA DS    A       WORKAREA LOCATION                                00005600
000204                            2296+DSCBADDR DS    A       ADDRESS OF THE DSCB                              00005700
000208                            2297+FORMATAD DS    A       ADDRESS OF THE FORMATTED DSCB                    00005800
00020C                            2298+CPPLADDR DS    A       ADDRESS OF THE CPPL                              00005900
000210                            2299+ACTIONAD DS    A       ADDRESS OF THE RECOMMENDED OR REQUESTED ACTION   00006000
                                  2300+*                                                                       00006100
                                  2301+*        INTER ROUTINE FLAGS                                            00006200
                                  2302+*                                                                       00006300
000214                            2303+VTCEFUNC DS    X              VTOCEXCP FUNCTION FLAG                    00006400
000215                            2304+VTCFMTCK DS    X              FORMAT IS CALLED BY CHECK RTN             00006500
                           00080  2305+VTCFMTCD EQU   X'80'          FORMAT WAS CALLED BY CHECK                00006600
                           00008  2306+VTCFMTCC EQU   X'08'          FORMAT WAS CALLED BY CHECK THIS CALL      00006700
                                  2307+*                                                                       00006800
000216                            2308+TABFULL  DS    X             FLAG TABLES FULL, STOP INPUT               00006900
000217                            2309+LOCAT    DS    X              FLAG TO PERFORM CATALOG LOCATE            00007000
000218                            2310+VTCEPRNT DS    X               PRINT END AND CLEANUP FLAG               00007100
00021A                            2311+DSNLEN   DS    H              LENGTH OF THE DSNAME (NON-BLANKS)         00007200
00021C                            2312+ATABTITL DS    A              ADDRESS OF TABLE OF TITLES, LENGTHS       00007300
                                  2313+*                                                                       00007400
                                  2314+*                                                                       00007500
                                  2315+*                                                                       00007600
                                  2316+*        WORKING STORAGE FOR VOLUME UCB SEARCH                          00007700
                                  2317+*                                                                       00007800
000220                            2318+ADDR     DS    CL3     UCB ADDRESS IN CHARACTERS                        00007900
000223                            2319+VOLSER   DS    CL6     VOLUME SERIAL NUMBER FROM PARSE                  00008000
000229                            2320+VOLID    DS    CL6     CURRENT VOLUME SERIAL NUMBER TO PROCESS          00008100
00022F                            2321+FLAG     DS    X       UCB SEARCH FLAG                                  00008200
000230                            2322+LASTADR  DS    F       LAST UCB ADDRESS FOUND ( NO DUP'S )              00008300
000234                            2323+UCBDEVT  DS    CL4     PRINTABLE FORM OF DEVICE TYPE             RPRIN1 00008310
                                  2324+*                                                                       00008400
                                  2325+*                                                                       00008500
                                  2326+*                                                                       00008600
000238                            2327+SORTTAB  DS    16F                                                      00008700
                                  2328+*                                                                       00008800
                                  2329+* EACH ENTRY CONTAINS A KEY OFFSET (2 BYTES) AND A KEY LENGTH (2 BYTES) 00008900
                                  2330+* THIS TABLE IS BUILT AT PARSE TIME ACCORDING TO THE SORT PARAMETERS    00009000
                                  2331+* SPECIFIED. THE 1ST PARM IS THE HIGH KEY AND SO ON.                    00009100
                                  2332+*                                                                       00009200
                                  2333+*                                                                       00009300
                                  2334+*                                                                       00009400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   2335+*        ADDRESSES OF GETMAIN FOR FORMATTED DATA                          00009500
                                   2336+*                                                                         00009600
000278                             2337+VTCCURAD DS    A             CURRENT AVAILABLE ADDRESS                    00009700
00027C                             2338+VTCCURLN DS    A             CURRENT AVAILABLE LENGTH                     00009800
000280                             2339+VTCGETMN DS    50A           ADDRESSES OF BLOCKS                          00009900
                            00032  2340+VTCGETMX EQU  (*-VTCGETMN)/4  NUMBER OF BLOCKS  MAXIMUM                   00010000
                            08000  2341+VTCGETMS EQU   32768          GETMAIN SIZE                                 00010100
                                   2342+*                                                                         00010200
                                   2343+*        HASH SORT TABLE, POINTERS TO FIRST ENTRIES                       00010300
                                   2344+*                                                                         00010400
000348                             2345+VTCSORTH DS    256A           POINT TO FORMATED ENTRIES                   00010500
                            00748  2346+VTCSORTE EQU   *              END OF LIST                                  00010600
                                   2347+*                                                                         00010700
                                   2348+*        PRINT ENTRIES - PAGE AND LINE COUNTERS                           00010800
                                   2349+*                                                                         00010900
000748                             2350+LINECT   DS    H              LINE COUNT                                  00011000
00074A                             2351+LINEMAX  DS    H              MAXIMUM LINES PER PAGE                      00011100
00074C                             2352+PAGECT   DS    H              PAGE COUNT                                  00011200
00074E                             2353+LINELEN  DS    H              LENGTH OF THE PRINT LINE                    00011300
                                   2354+*                                                                         00011400
                                   2355+*                                                                         00011500
                                   2356+*          VARIOUS ITEMS                                                  00011600
                                   2357+*                                                                         00011700
000750                             2358+FMT4     DS    XL44           SPACE FOR DSCB NAME                         00011800
                            0077C  2359+IECSDSL4 EQU   *                   FORMAT 4 DSCB                          16000000
                            0077C  2360+IECSDSF4 EQU   IECSDSL4                                                   16050000
00077C                             2361+DS4IDFMT DS    CL1                FORMAT IDENTIFIER                        16100000
00077D                             2362+DS4HPCHR DS    XL5                HIGHEST ADDRESS OF A FORMAT 1 DSCB       16150000
000782                             2363+DS4DSREC DS    XL2                NUMBER OF AVAILABLE DSCB'S               16200000
000784                             2364+DS4HCCHH DS    XL4                CCHH OF NEXT AVAILABLE ALTERNATE TRK     16250000
000788                             2365+DS4NOATK DS    XL2                NUMBER OF REMAINING ALTERNATE TRACKS     16300000
00078A                             2366+DS4VTOCI DS    XL1                VTOC INDICATORS                          16350000
                            00080  2367+DS4DOSBT EQU   X'80'              DOS BIT                                  16400000
                            00010  2368+DS4DSTKP EQU   X'10'              DOS STACKED PACK                         16450000
                            00008  2369+DS4DOCVT EQU   X'08'              DOS CONVERTED VTOC                       16500000
                            00004  2370+DS4DIRF  EQU   X'04'              DIRF BIT                                 16550000
                            00002  2371+DS4DICVT EQU   X'02'              DIRF RECLAIMED                           16600000
                            00001  2372+DS4IVTOC EQU   X'01'              VOLUME USES AN INDEXED VTOC     @01A     16650000
00078B                             2373+DS4NOEXT DS    XL1                NUMBER OF EXTENTS IN THE VTOC            16700000
00078C                             2374+         DS    XL2                RESERVED                                 16750000
00078E                             2375+DS4DEVCT DS    0XL14              DEVICE CONSTANTS                         16800000
00078E                             2376+DS4DEVSZ DS    XL4                DEVICE SIZE                              16850000
000792                             2377+DS4DEVTK DS    XL2                DEVICE TRACK LENGTH                      16900000
000794                             2378+DS4DEVOV DS    0XL2               KEYED RECORD OVERHEAD                    16950000
000794                             2379+DS4DEVI  DS    XL1                   NON-LAST KEYED RECORD OVERHEAD        17000000
000795                             2380+DS4DEVL  DS    XL1                   LAST KEYED RECORD OVERHEAD            17050000
000796                             2381+DS4DEVK  DS    XL1                NON-KEYED RECORD OVERHEAD                17100000
                                   2382+*                                   DIFFERENTIAL                           17150000
000797                             2383+DS4DEVFG DS    XL1                FLAG BYTE                                17200000
000798                             2384+DS4DEVTL DS    XL2                DEVICE TOLERANCE                         17250000
00079A                             2385+DS4DEVDT DS    XL1                NUMBER OF DSCB'S PER TRACK               17300000
00079B                             2386+DS4DEVDB DS    XL1                NUMBER OF DIRECTORY BLOCKS PER TRACK     17350000
00079C                             2387+DS4AMTIM DS    XL8                VSAM TIME STAMP                          17400000
0007A4                             2388+DS4AMCAT DS    0XL3               VSAM CATALOG INDICATOR                   17450000
0007A4                             2389+DS4VSIND DS    XL1                VSAM INDICATORS                          17500000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0007A5                             2390+DS4VSCRA DS    XL2                 RELATIVE TRACK LOCATION OF THE CRA   17550000
0007A7                             2391+DS4R2TIM DS    XL8                 VSAM VOLUME/CATALOG MATCH            17600000
                                   2392+*                                  TIME STAMP                           17650000
0007AF                             2393+         DS    XL5                 RESERVED                             17700000
0007B4                             2394+DS4F6PTR DS    XL5                 POINTER TO FIRST FORMAT 6 DSCB       17750000
0007B9                             2395+DS4VTOCE DS    XL10                VTOC EXTENT DESCRIPTION              17800000
0007C3                             2396+         DS    XL25                RESERVED                             17850000
                             007DC 2397+DS4END   EQU   *                                                      17900000
0007E0                             2398+         DS    0D                                                     00012000
0007E0                             2399+FMT3     DS    0XL148         SPACE FOR FORMAT3 DSCB                  00012100
                             007E0 2400+IECSDSL3 EQU   *                   FORMAT 3 DSCB                        15250000
                             007E0 2401+IECSDSF3 EQU   IECSDSL3                                               15300000
0007E0                             2402+         DS    XL4                 KEY IDENTIFIER                       15350000
0007E4                             2403+DS3EXTNT DS    XL40                FOUR EXTENT DESCRIPTIONS             15400000
                                   2404+*        FIRST BYTE                EXTENT TYPE INDICATOR                15450000
                                   2405+*        SECOND BYTE               EXTENT SEQUENCE NUMBER               15500000
                                   2406+*        THIRD - SIXTH BYTES       LOWER LIMIT                          15550000
                                   2407+*        SEVENTH - TENTH BYTES     UPPER LIMIT                          15600000
00080C                             2408+DS3FMTID DS    CL1                 FORMAT IDENTIFIER                    15650000
00080D                             2409+DS3ADEXT DS    XL90                NINE ADDITIONAL EXTENT DESCRIPTIONS  15700000
000867                             2410+DS3PTRDS DS    XL5                 RESERVED                             15750000
                             0086C 2411+DS3END   EQU   *                                                      15800000
000870                             2412+         DS    0D                                                     00012300
                                   2413          PRINT NOGEN                                                  00078300


                                   2415 *                                                                     00078500
                                   2416 *        WORK AREAS FOR SUBROUTINES                                   00078600
                                   2417 *                                                                     00078700
000870                             2418 WORKMSG  DS    XL256                                                  00078800
000970                             2419 WORKEXCP DS    4XL256                                                 00078900
000D70                             2420 WORKCHEK DS    XL256                                                  00079000
000E70                             2421 WORKFORM DS    2XL256                                                 00079100
001070                             2422 WORKEXIT DS    8XL256                                                 00079200
001870                             2423 WORKSORT DS    XL256                                                  00079300
001970                             2424 WORKPRNT DS    10XL256                                                00079400
002370                             2425          DS    0D                                                     00079500
                             02370 2426 LENWORK  EQU   *-WORKAREA                                             00079600


                                   2428          VTFMT                                                        00079800


                                   2470          PDEDSNAM                                                     00080000


                                   2492          IKJPPL                                                       00080200


                                   2508          IKJIOPL                                                      00080400
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                 2522          IKJPSCB                                                        00080600


                                 2565          IKJECT                                                         00080800


                                 2613          IKJCPPL                                                        00081000


                                 2625          IKJUPT                                                         00081200


                                 2653          PRINT NOGEN                                                    00081400
                                 2654          CVT                                                            00081500
                                 2703+         PRINT OFF                                                      03150001
                                 3654          END                                                            00081600
```

POS.ID	REL.ID	FLAGS	ADDRESS
0001	0001	0C	0003E0
0001	0001	0C	000504
0001	0001	0C	0007C4
0001	0001	0C	0007C8
0001	0001	0C	0007D0
0001	0001	0C	0007D4
0001	0001	0C	0007DC
0001	0001	0C	0007E0
0001	0001	0C	0007E8
0001	0001	0C	0007EC
0001	0001	0C	0007F4
0001	0001	0C	0007F8
0001	0001	0C	000800
0001	0001	0C	000804
0001	0001	0C	00080C
0001	0001	0C	000810
0001	0001	0C	000818
0001	0001	0C	00081C
0001	0001	0C	000824
0001	0001	0C	000828
0001	0001	0C	000830
0001	0001	0C	000834
0001	0001	0C	00083C
0001	0001	0C	000840
0001	0001	0C	000848
0001	0001	0C	00084C
0001	0001	0C	000854
0001	0001	0C	000858
0001	0001	0C	000860
0001	0001	0C	000864
0001	0001	0C	00086C
0001	0001	0C	000870
0001	0001	0C	000878
0001	0001	0C	00087C
0001	0002	1C	0005F8
0001	0003	1C	000600
0001	0004	1C	000604
0001	0005	1C	000608
0001	0006	1C	00060C
0001	0007	1C	000610
0001	0008	0C	000614

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ADDR      00003 00000220 02318  00283
ADDRANSR 00004 000000B8 02279  00103 00545 00629 00644 00644
ADDRCBUF 00004 000000B4 02277  00485 00537
ADDRECT  00004 000000AC 02275  00403 00484 00536
ADDRPCL  00004 00000614 00675  00548
ADDRPSCB 00004 000000B0 02276  00483
ADDRUPT  00004 000000A8 02274  00402 00482 00535
ALCSORT  00004 00000C9C 00869  00744 00745
ALCSORTE 00004 00000D8C 00891  00744 00745
AL00651  00001 00001341 01242  01241
AL00661  00001 0000134F 01256  01255
ANDOR1K  00002 00000034 01230  01227
ANDOR2K  00002 00000036 01269  01266
ANDOR3K  00002 00000038 01300  01297
ATTNECB  00004 000000DC 02282  00404 00405 00541 00542
BLANKS   00008 0000061C 00677  00186
BLKSORT  00004 00000EE8 00926  00758 00759
BLKSORTE 00004 00000FB4 00943  00758 00759
BLKSZSET 00004 000000AC 01688  01677
BREAK    00004 0000009C 01641  01628
BREAKK   00002 00000030 01188  01185
CALLEXIT 00004 0000033C 00351  00340
CATK     00002 0000002C 01138  01135
CDTSORT  00004 00000FC0 00946  00760 00761
CDTSORTE 00004 0000117C 00987  00760 00761
CHARALL  00003 0000062A 00686  00198
CHARALV  00003 0000062D 00687  00196
CHARSK   00002 0000003C 01361  01358
CHARSPL  00004 000000A4 01668  01657
CHKRDY   00004 00000262 00268  00229
CHKVIRT  00004 00000286 00277  00271
CLCVOL   00006 00000636 00689  00228
CONTAIN  00004 00000084 01585  01567
CONTAINK 00002 00000028 01094  01091
CPPL     00001 00000000 02618  00481
CPPLADDR 00004 0000020C 02298  00480
CPPLCBUF 00004 00000000 02619  00485
CPPLECT  00004 0000000C 02622  00484
CPPLPSCB 00004 00000008 02621  00483
CPPLUPT  00004 00000004 02620  00482
CVTBRET  00002 0000006A 02766  03333
CVTMAP   00001 00000018 02709  00554
CVTPARS  00004 00000224 03161  00556 00559
CVTPTR   00001 00000010 02704  00553
CVTXTNT1 00001 00000450 03516  02943
CVTXTNT2 00001 0000045C 03525  03014
CVT4MS1  00001 00000010 02785  02792
CVT6DAT  00001 00000002 02788  02792
DEND0096 00001 000014FD 01583  01566
DEND0098 00001 00001519 01610  01600
DEND0100 00001 0000154C 01639  01627
DEND0102 00001 0000157D 01666  01656
DEND0103 00001 0000159E 01686  01676
DEND0105 00001 000015CF 01713  01703
DEND0107 00001 000015F5 01740  01730
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

DEND0108 00001 00001611 01760  01750
DEND0112 00001 0000164D 01807  01795
DEND0114 00001 00001688 01834  01824
DEND0115 00001 000016D7 01857  01845
DEND0116 00001 0000171B 01879  01868
DEND0118 00001 00001756 01906  01896
DEND0119 00001 000017A5 01929  01917
DEND0120 00001 000017E9 01951  01940
DEND0122 00001 00001824 01978  01968
DEND0123 00001 00001873 02001  01989
DEND0124 00001 000018B7 02023  02012
DEND0126 00001 000018F2 02050  02040
DEND0127 00001 00001941 02073  02061
DEND0128 00001 00001985 02095  02084
DEND0130 00001 000019AE 02124  02112
DEND0132 00001 000019DB 02153  02141
DENT0096 00001 0000149D 01564  01566
DENT0098 00001 00001500 01598  01600
DENT0100 00001 0000151C 01625  01627
DENT0102 00001 0000154F 01654  01656
DENT0103 00001 0000157D 01674  01676
DENT0105 00001 000015A1 01701  01703
DENT0107 00001 000015D2 01728  01730
DENT0108 00001 000015F5 01748  01750
DENT0112 00001 0000161E 01793  01795
DENT0114 00001 00001650 01822  01824
DENT0115 00001 00001688 01843  01845
DENT0116 00001 000016D7 01866  01868
DENT0118 00001 0000171E 01894  01896
DENT0119 00001 00001756 01915  01917
DENT0120 00001 000017A5 01938  01940
DENT0122 00001 000017EC 01966  01968
DENT0123 00001 00001824 01987  01989
DENT0124 00001 00001873 02010  02012
DENT0126 00001 000018BA 02038  02040
DENT0127 00001 000018F2 02059  02061
DENT0128 00001 00001941 02082  02084
DENT0130 00001 00001988 02110  02112
DENT0132 00001 000019B1 02139  02141
DEVT#    00001 00000008 00736  00286
DEVTYPS  00001 00000795 00728  00285 00736
DOUBLE   00008 000000E0 02283  00594 00595 00596
DSNLNTYP 00002 00000154 02168  02163
DSNPLN   00004 0000014C 02155  02142
DSNPLNK  00002 00000048 01495  01492
DSNSORT  00004 00000888 00778  00738 00739
DSNSORTE 00004 00000B4C 00837  00738 00739
DSOSORT  00004 00000E34 00908  00752 00753
DSOSORTE 00004 00000E64 00912  00752 00753
EDTSORT  00004 00000FC0 00947  00764 00765
EDTSORTE 00004 0000117C 00985  00764 00765
ENDING   00004 00000068 01545  01539
ENDKEY   00002 00000026 01073  01070
ENDUNIT  00002 000002CA 00294  00292
ENDVTOC  00004 00000360 00370  00317 00324
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

ENT0001  00001 00000018 00077  00086
EXIT0    00002 00000394 00394  00387
EXTSORT  00004 00000E1C 00905  00750 00751
EXTSORTE 00004 00000E28 00906  00750 00751
FLAG     00001 0000022F 02321  00193 00200 00205 00221 00223 00235 00252 00270 00272 00295 00375
FMIN1    00004 00000618 00676  00214
FNDGBL   00004 0000025A 00263  00222
FNDUCB   00006 0000028E 00282  00226 00273 00276
FNDUCB2  00006 000002A8 00287  00290
FNDUCB3  00006 000002C4 00293  00288
FORMATK  00002 00000046 01474  01471
FORMATSP 00004 00000140 02126  02113
FREEPDL  00002 00000588 00624  00434
HEADING  00004 000000D0 01780  01776
HEADK    00002 00000040 01403  01400
H2       00002 00000624 00678  00194
H4       00002 00000626 00679  00323
H5       00002 00000628 00680  00191
IECSDSL3 00001 000007E0 02400  02401
IECSDSL4 00001 0000077C 02359  02360
IKJ$0017 00002 000003F2 00425  00417
IKJ$0037 00002 000005B2 00642  00632
IKJ$0044 00001 00001A06 02195  01015
IKJ$0046 00001 0000128D 01036  01032
IKJ$0096 00001 000014C8 01577  01576
IKJ$0100 00001 0000154C 01638  01637
IKJ$0112 00001 0000164D 01806  01805
IKJ$0115 00001 000016D7 01856  01855
IKJ$0116 00001 0000171B 01878  01877
IKJ$0119 00001 000017A5 01928  01927
IKJ$0120 00001 000017E9 01950  01949
IKJ$0123 00001 00001873 02000  01999
IKJ$0124 00001 000018B7 02022  02021
IKJ$0127 00001 00001941 02072  02071
IKJ$0128 00001 00001985 02094  02093
IKJ$0130 00001 000019AE 02123  02122
IKJ$0132 00001 000019DB 02152  02151
IKJ@0017 00002 000003DA 00418  00414
IKJ@0037 00002 0000059A 00633  00641
IKJ@0044 00001 00000158 02193  01016
IKJ@0045 00001 0000007D 01045  01017
IKJ@0046 00001 00001244 01031  01030
IKJ@0048 00001 0000129D 01060  01059
IKJ@0050 00001 000012B0 01081  01080
IKJ@0052 00001 000012C7 01102  01101
IKJ@0053 00001 000012D4 01115  01114
IKJ@0054 00001 000012DD 01126  01125
IKJ@0056 00001 000012EB 01146  01145
IKJ@0058 00001 000012FA 01166  01165
IKJ@0059 00001 00001307 01176  01175
IKJ@0061 00001 00001317 01196  01195
IKJ@0063 00001 00001329 01217  01216
IKJ@0065 00001 0000133A 01238  01237
IKJ@0066 00001 00001349 01252  01251
IKJ@0068 00001 0000135E 01277  01276
```

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ@0069	00001	00001368	01287	01286
IKJ@0071	00001	00001379	01308	01307
IKJ@0072	00001	00001383	01318	01317
IKJ@0074	00001	00001395	01339	01338
IKJ@0075	00001	000013A3	01349	01348
IKJ@0077	00001	000013B3	01369	01368
IKJ@0079	00001	000013C5	01390	01389
IKJ@0081	00001	000013D9	01411	01410
IKJ@0082	00001	000013E9	01421	01420
IKJ@0084	00001	000013FA	01441	01440
IKJ@0086	00001	0000140D	01462	01461
IKJ@0088	00001	0000141E	01482	01481
IKJ@0090	00001	00001431	01503	01502
IKJ@0091	00001	00000258	01530	01511
IKJ@0092	00001	00001468	01521	01520
IKJ@0093	00001	0000028A	01551	01532
IKJ@0094	00001	0000149A	01542	01541
IKJ@0095	00001	000002ED	01590	01553
IKJ@0096	00001	000014B8	01574	01573
IKJ@0097	00001	00000309	01617	01592
IKJ@0098	00001	00001518	01608	01607
IKJ@0099	00001	0000033C	01646	01619
IKJ@0100	00001	00001549	01635	01634
IKJ@0101	00001	0000038E	01693	01648
IKJ@0102	00001	0000157C	01664	01663
IKJ@0103	00001	0000159D	01684	01683
IKJ@0104	00001	000003BF	01720	01695
IKJ@0105	00001	000015CE	01711	01710
IKJ@0106	00001	00000401	01767	01722
IKJ@0107	00001	000015F4	01738	01737
IKJ@0108	00001	00001610	01758	01757
IKJ@0109	00001	0000040B	01785	01769
IKJ@0111	00001	0000043D	01814	01787
IKJ@0112	00001	0000164A	01803	01802
IKJ@0113	00001	0000050B	01886	01816
IKJ@0114	00001	00001687	01832	01831
IKJ@0115	00001	000016AC	01853	01852
IKJ@0116	00001	000016F4	01876	01875
IKJ@0117	00001	000005D9	01958	01888
IKJ@0118	00001	00001755	01904	01903
IKJ@0119	00001	0000177A	01925	01924
IKJ@0120	00001	000017C2	01948	01947
IKJ@0121	00001	000006A7	02030	01960
IKJ@0122	00001	00001823	01976	01975
IKJ@0123	00001	00001848	01997	01996
IKJ@0124	00001	00001890	02020	02019
IKJ@0125	00001	00000775	02102	02032
IKJ@0126	00001	000018F1	02048	02047
IKJ@0127	00001	00001916	02069	02068
IKJ@0128	00001	0000195E	02092	02091
IKJ@0129	00001	0000079E	02131	02104
IKJ@0130	00001	000019AB	02120	02119
IKJ@0131	00001	000007CB	02159	02133
IKJ@0132	00001	000019D7	02149	02148
IKJ@0133	00001	000019EA	02165	02164

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

IKJ@0134 00001 000019F7 02176  02175
IKJ@0135 00001 00001A05 02185  02184
IKJA0096 00001 000014FD 01582  01578
IKJ00461 00001 0000128D 01035  01034
IKJ00961 00001 000014FD 01581  01580
INCR1    00004 0000020A 00230  00213 00217 00219 00227 00253 00264 00269 00275 00278 00376
IOPL     00001 00000000 02509  00400
IOPLECB  00004 00000008 02518  00406
IOPLECT  00004 00000004 02517  00403
IOPLUPT  00004 00000000 02516  00402
KEND0047 00001 00001293 01050  01048
KEND0049 00001 000012A5 01071  01069
KEND0051 00001 000012B8 01092  01090
KEND0053 00001 000012D4 01116  01112
KEND0055 00001 000012E3 01136  01134
KEND0057 00001 000012F1 01156  01154
KEND0060 00001 0000130D 01186  01184
KEND0062 00001 0000131F 01207  01205
KEND0064 00001 00001331 01228  01226
KEND0067 00001 00001355 01267  01265
KEND0070 00001 00001370 01298  01296
KEND0073 00001 0000138B 01329  01327
KEND0076 00001 000013A9 01359  01357
KEND0078 00001 000013BB 01380  01378
KEND0080 00001 000013CD 01401  01399
KEND0083 00001 000013EF 01431  01429
KEND0085 00001 00001402 01452  01450
KEND0087 00001 00001413 01472  01470
KEND0089 00001 00001426 01493  01491
KEND0133 00001 000019EA 02166  02162
KEYW0047 00001 0000128D 01046  01048
KEYW0049 00001 0000129F 01067  01069
KEYW0051 00001 000012B2 01088  01090
KEYW0053 00001 000012C9 01110  01112
KEYW0055 00001 000012DD 01132  01134
KEYW0057 00001 000012EB 01152  01154
KEYW0060 00001 00001307 01182  01184
KEYW0062 00001 00001319 01203  01205
KEYW0064 00001 0000132B 01224  01226
KEYW0067 00001 0000134F 01263  01265
KEYW0070 00001 0000136A 01294  01296
KEYW0073 00001 00001385 01325  01327
KEYW0076 00001 000013A3 01355  01357
KEYW0078 00001 000013B5 01376  01378
KEYW0080 00001 000013C7 01397  01399
KEYW0083 00001 000013E9 01427  01429
KEYW0085 00001 000013FC 01448  01450
KEYW0087 00001 0000140D 01468  01470
KEYW0089 00001 00001420 01489  01491
KEYW0133 00001 000019DB 02160  02162
LASTADR  00004 00000230 02322  00207 00207 00218 00220
LENWORK  00001 00002370 02426  00078 00451
LEVEL    00004 0000004C 01524  01518
LEVKEY   00002 00000024 01052  01049
LIMITK   00002 00000032 01209  01206
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

LINESK   00002 0000003E 01382  01379
LINESPP  00004 000000B4 01715  01704
LOOP1    00004 0000015C 00181  00378
LRCSORT  00004 00000EE8 00925  00756 00757
LRCSORTE 00004 00000FB4 00944  00756 00757
MAXPARSE 00001 00000018 00588  00575
MOVVOL   00006 00000630 00688  00187
MSGADDRS 00004 000000E8 02285  00242 00606
MSGCMDER 00002 00000716 00718  00604
MSGNOTMT 00002 00000730 00720  00237
MSGOFFLN 00002 00000752 00722  00258
MSGPARSE 00002 00000700 00716  00591 00591 00592
MSGPEND  00002 00000770 00724  00248
MSGTEXT2 00124 0000016C 02287  00237 00238 00240 00248 00258 00591 00592 00598 00601 00605
NAME0048 00001 00001293 01056  01058
NAME0050 00001 000012A5 01077  01079
NAME0052 00001 000012B8 01098  01100
NAME0054 00001 000012D4 01122  01124
NAME0056 00001 000012E3 01142  01144
NAME0058 00001 000012F1 01162  01164
NAME0059 00001 000012FC 01172  01174
NAME0061 00001 0000130D 01192  01194
NAME0063 00001 0000131F 01213  01215
NAME0065 00001 00001331 01234  01236
NAME0066 00001 00001341 01248  01250
NAME0068 00001 00001355 01273  01275
NAME0069 00001 00001360 01283  01285
NAME0071 00001 00001370 01304  01306
NAME0072 00001 0000137B 01314  01316
NAME0074 00001 0000138B 01335  01337
NAME0075 00001 00001397 01345  01347
NAME0077 00001 000013A9 01365  01367
NAME0079 00001 000013BB 01386  01388
NAME0081 00001 000013CD 01407  01409
NAME0082 00001 000013DB 01417  01419
NAME0084 00001 000013EF 01437  01439
NAME0086 00001 00001402 01458  01460
NAME0088 00001 00001413 01478  01480
NAME0090 00001 00001426 01499  01501
NAME0134 00001 000019EA 02172  02174
NAME0135 00001 000019F7 02181  02183
NEND0048 00001 0000129F 01062  01058
NEND0050 00001 000012B2 01083  01079
NEND0052 00001 000012C9 01104  01100
NEND0054 00001 000012DD 01127  01124
NEND0056 00001 000012EB 01147  01144
NEND0058 00001 000012FC 01168  01164
NEND0059 00001 00001307 01177  01174
NEND0061 00001 00001319 01198  01194
NEND0063 00001 0000132B 01219  01215
NEND0065 00001 00001341 01244  01236
NEND0066 00001 0000134F 01258  01250
NEND0068 00001 00001360 01279  01275
NEND0069 00001 0000136A 01289  01285
NEND0071 00001 0000137B 01310  01306
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

NEND0072 00001 00001385 01320  01316
NEND0074 00001 00001397 01341  01337
NEND0075 00001 000013A3 01350  01347
NEND0077 00001 000013B5 01371  01367
NEND0079 00001 000013C7 01392  01388
NEND0081 00001 000013DB 01413  01409
NEND0082 00001 000013E9 01422  01419
NEND0084 00001 000013FC 01443  01439
NEND0086 00001 0000140D 01463  01460
NEND0088 00001 00001420 01484  01480
NEND0090 00001 00001433 01505  01501
NEND0134 00001 000019F7 02177  02174
NEND0135 00001 00001A05 02186  02183
NEXTUCB  00004 000001BE 00211  00231
NEXTVOL  00004 00000376 00377  00236 00247
NOTMNT   00004 00000212 00235  00215
OFFLINE  00006 00000250 00258  00302
OUTPUTK  00002 00000044 01454  01451
PARMERR  00004 0000038C 00392  00135 00138 00144
PARMLIST 00004 000000BC 02281  00399 00409
PARSEBAD 00002 0000053C 00590  00578 00585 00586
PARSEERR 00004 00000578 00612  00583 00584 00587
PARSELST 00004 00000048 02238  00532
PARSEOK  00002 00000580 00615  00582
PARSERET 00004 00000524 00582  00588
PARSERTN 00004 00000582 00616  00613
PARSINIT 00002 0000043C 00479  00096
PCLMAIN  00001 00001210 01014  00675 01015 01018 01024 01044 01045 01055 01061 01066 01076 01082 01087 01097 01103 01109
                               01121 01131 01141 01151 01161 01167 01171 01181 01191 01197 01202 01212 01218 01223 01233
                               01239 01247 01253 01262 01272 01278 01282 01288 01293 01303 01309 01313 01319 01324 01334
                               01340 01344 01354 01364 01370 01375 01385 01391 01396 01406 01412 01416 01426 01436 01442
                               01447 01457 01467 01477 01483 01488 01498 01504 01509 01514 01529 01530 01535 01550 01551
                               01561 01589 01590 01595 01616 01617 01622 01645 01646 01651 01671 01692 01693 01698 01719
                               01720 01725 01745 01766 01767 01772 01784 01785 01790 01813 01814 01819 01840 01863 01885
                               01886 01891 01912 01935 01957 01958 01963 01984 02007 02029 02030 02035 02056 02079 02101
                               02102 02107 02130 02131 02136 02158 02159 02171 02180 02189 02194
PCTSORT  00004 00000D98 00893  00748 00749
PCTSORTE 00004 00000E10 00903  00748 00749
PDL      00001 00000000 01019  00104 01028 01038 01049 01051 01070 01072 01091 01093 01113 01117 01135 01137 01155 01157
                               01185 01187 01206 01208 01227 01229 01266 01268 01297 01299 01328 01330 01358 01360 01379
                               01381 01400 01402 01430 01432 01451 01453 01471 01473 01492 01494 01518 01523 01539 01544
                               01567 01584 01601 01611 01628 01640 01657 01667 01677 01687 01704 01714 01731 01741 01751
                               01761 01776 01779 01796 01808 01825 01835 01846 01858 01869 01880 01897 01907 01918 01930
                               01941 01952 01969 01979 01990 02002 02013 02024 02041 02051 02062 02074 02085 02096 02113
                               02125 02142 02154 02163 02167 02191 02193
PENDING  00006 0000023E 00248  00300
PEND0046 00001 0000128D 01037  01027
PEND0092 00001 00001468 01522  01517
PEND0094 00001 0000149A 01543  01538
PEND0110 00001 0000161B 01778  01775
PHASE2   00002 0000037E 00382  00184
POST0046 00001 00001216 01025  01027
POST0092 00001 00001436 01515  01517
POST0094 00001 0000146B 01536  01538
POST0110 00001 00001614 01773  01775
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

PPL       00001 00000000 02493  00533
PPLANS    00004 00000010 02503  00546
PPLCBUF   00004 00000014 02504  00537
PPLECB    00004 00000008 02501  00543
PPLECT    00004 00000004 02500  00536
PPLPCL    00004 0000000C 02502  00548
PPLUPT    00004 00000000 02499  00535
PPLUWA    00004 00000018 02505  00539
PRINTK    00002 0000003A 01331  01328
RACSORT   00004 00001188 00989  00766 00767
RACSORTE  00004 000011A0 00991  00766 00767
RDTSORT   00004 00000FC0 00948  00762 00763
RDTSORTE  00004 0000117C 00986  00762 00763
READDSCB  00004 000002F2 00316  00334 00346 00357 00365
RETURN    00002 00000396 00396  00098 00315 00325 00393
RETURN1   00002 00000400 00433  00397
RFMSORT   00004 00000E70 00914  00754 00755
RFMSORTE  00004 00000EDC 00923  00754 00755
RTNADDRS  00004 000005F8 00667  00522 00674
RTNADLEN  00001 0000001C 00674  00522
R0        00001 00000000 00458  00241 00241 00242 00404 00406 00541 00543 00545 00546 00598 00599 00605 00606
R1        00001 00000001 00459  00092 00100 00115 00117 00117 00118 00133 00147 00240 00242 00244 00285 00287 00289 00289
                                00293 00311 00320 00330 00342 00351 00362 00371 00384 00399 00400 00438 00492 00493 00493
                                00494 00496 00497 00497 00498 00500 00501 00501 00502 00504 00505 00505 00506 00508 00509
                                00509 00510 00512 00513 00513 00514 00516 00517 00517 00518 00532 00533 00573 00592 00596
                                00599 00600 00601 00604 00606 00608
R13       00001 0000000D 00471  00493 00497 00501 00505 00509 00513 00517
R14       00001 0000000E 00472  00096 00102 00246 00286 00290 00313 00322 00332 00344 00355 00364 00373 00386 00434 00440
                                00531 00575 00577 00610 00616 00617 00626 00646 00647
R14PARSE  00004 0000006C 02241  00531 00616
R14SAVE   00004 00000068 02240  00626 00646
R15       00001 0000000F 00473  00097 00097 00101 00102 00245 00246 00312 00313 00314 00314 00321 00322 00323 00331 00332
                                00333 00333 00343 00344 00345 00345 00352 00353 00353 00355 00356 00356 00363 00364 00372
                                00373 00385 00386 00392 00394 00394 00396 00439 00440 00442 00577 00580 00594 00609 00610
                                00612 00615 00615
R2        00001 00000002 00460  00092 00396 00442 00480 00481 00486
R3        00001 00000003 00461  00121 00122 00122 00124 00125 00149 00150 00150 00151 00153 00156 00160 00163 00180 00181
                                00182 00377 00377
R4        00001 00000004 00462  00110 00120 00121 00129 00129 00134 00134 00136 00137 00155 00155 00157 00160 00163 00164
                                00165 00165 00169 00182 00183 00183 00185 00187 00191 00194 00228
R5        00001 00000005 00463  00111 00112 00112 00113 00133 00139 00140 00140 00156 00158 00158 00170 00181 00196 00198
                                00208 00210 00210 00211 00230 00230 00688
R6        00001 00000006 00464  00120 00136 00139 00141 00143 00147 00159 00164 00166 00166 00173 00209 00209 00211 00212
                                00212 00214 00216 00218 00220 00225 00263 00268 00274 00277 00282 00283 00284 00299 00301
                                00689
R9        00001 00000009 00467  00103 00104
SETVOL    00006 00000220 00238  00257 00259
SORTCOMP  00006 000000E6 00147  00125
SORTK     00002 0000002E 01158  01155
SORTKTAB  00002 000007C0 00738  00149
SORTK1    00004 000000F0 00150  00154
SORTK2    00006 0000012A 00164  00162 00170
SORTK3    00006 0000014C 00172  00152
SORTK4    00006 00000152 00173  00171
SORTPAR1  00004 00000072 00115  00130
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

SORTPAR2 00004 00000076 00117  00127
SORTPAR3 00004 000000A0 00129  00119 00123 00142 00145
SORTPAR4 00006 000000AC 00133  00126
SORTPAR5 00004 000000EC 00149  00131
SORTTAB  00004 00000238 02327  00111 00153 00161 00167
SORTTABX 00002 0000063C 00691  00113 00115
SPACEK   00002 0000002A 01118  01113
SPECUCB  00004 00000202 00228  00224
SUBAO1   00002 0000171C 01888  01239 01253
SUBAO2   00002 000017EA 01960  01278 01288
SUBAO3   00002 000018B8 02032  01309 01319
SUBBREAK 00002 0000151A 01619  01197
SUBCHARS 00002 0000154D 01648  01370
SUBCONT  00002 0000149B 01553  01103
SUBDSNLN 00002 000019AF 02133  01504
SUBEND   00002 00001469 01532  01082
SUBFORMT 00002 00001986 02104  01483
SUBHEAD  00002 00001612 01769  01412
SUBLEV   00002 00001434 01511  01061
SUBLIMIT 00002 0000164E 01816  01218
SUBLINES 00002 0000159F 01695  01391
SUBLKEY  00004 000000E0 01836  01825
SUBLOPER 00004 000000E8 01859  01846
SUBLVALU 00004 000000F0 01881  01869
SUBPRINT 00002 000015D0 01722  01340
SUBPRTIT 00004 000000C4 01762  01751
SUBPRTKY 00004 000000BC 01742  01731
SUBSORT  00004 00000090 01612  00110 01601
SUBSORTS 00002 000014FE 01592  01167
SUBTOTAL 00002 0000161C 01787  01442
SUB1KEY  00004 000000F8 01908  01897
SUB1OPER 00004 00000100 01931  01918
SUB1VALU 00004 00000108 01953  01941
SUB2KEY  00004 00000110 01980  01969
SUB2OPER 00004 00000118 02003  01990
SUB2VALU 00004 00000120 02025  02013
SUB3KEY  00004 00000128 02052  02041
SUB3OPER 00004 00000130 02075  02062
SUB3VALU 00004 00000138 02097  02085
TABFULL  00001 00000216 02308  00316
TOTALK   00002 00000042 01433  01430
TOTALN   00004 000000D8 01809  01796
TSRE0032 00001 00000516 00571  00561
TSRL0032 00001 00000500 00563  00557
UCBDEVT  00004 00000234 02323  00284 00287 00291 00293
UNTSORT  00004 000011A0 00993  00768 00769
UNTSORTE 00004 0000120C 01002  00768 00769
UNUSORT  00004 00000C9C 00868  00746 00747
UNUSORTE 00004 00000D8C 00890  00746 00747
USESORT  00004 00000C9C 00867  00742 00743
USESORTE 00004 00000D8C 00889  00742 00743
VADCHEK  00004 00000098 02267  00331
VADEXCP  00004 00000094 02266  00312 00321 00372
VADEXIT  00004 00000090 02265  00352
VADFORM  00004 0000009C 02268  00343
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

VADMSG   00004 0000008C 02264  00245 00522 00609
VADPRNT  00004 000000A0 02269  00101 00385 00439
VADSORT  00004 000000A4 02270  00363
VOLID    00006 00000229 02320  00282
VOLS     00004 00000008 01039  00180 01028
VOLSER   00006 00000223 02319  00186 00225 00238 00688 00689
VOLSET   00006 000001AE 00207  00192 00195 00199 00201 00206
VOLSETV  00004 000001A6 00205  00197
VOLSORT  00004 00000B58 00839  00740 00741
VOLSORTE 00004 00000C90 00865  00740 00741
VTCCLOSE 00001 00000002 02235  00370
VTCEFUNC 00001 00000214 02303  00310 00319 00370
VTCEPRNT 00001 00000218 02310  00435
VTCFMTCD 00001 00000080 02305  00339
VTCFMTCK 00001 00000215 02304  00339
VTCGETMN 00004 00000280 02339  02340
VTCOPEN  00001 00000001 02234  00310
VTCREAD  00001 00000000 02236  00319
VTCSORTH 00004 00000348 02345  00159 00172
VTCWCHEK 00004 0000007C 02257  00502
VTCWEXCP 00004 00000078 02256  00498
VTCWEXIT 00004 00000074 02255  00510
VTCWFORM 00004 00000080 02258  00506
VTCWMSG  00004 00000070 02254  00494
VTCWPRNT 00004 00000084 02259  00518
VTCWSORT 00004 00000088 02260  00514
VTFALLOC 00004 00000004 02434  00693 00744
VTFBLKSZ 00002 00000030 02451  00701 00758
VTFCREDT 00003 0000001C 02442  00702 00760
VTFDSN   00001 00000046 02468  00691 00738
VTFDSORG 00003 00000026 02446  00698 00752
VTFEXPDT 00003 0000001F 02443  00703 00764
VTFLRECL 00002 0000002E 02450  00700 00756
VTFLSTAC 00003 00000022 02444  00704 00762
VTFMT    00001 00000000 02432  00691 00692 00693 00694 00695 00696 00697 00698 00699 00700 00701 00702 00703 00704 00705
                               00706 00738 00740 00742 00744 00746 00748 00750 00752 00754 00756 00758 00760 00762 00764
                               00766 00768 02467
VTFNOEPV 00001 00000025 02445  00697 00750
VTFPCT   00002 00000010 02439  00696 00748
VTFRACF  00001 00000034 02454  00705 00766
VTFRECFM 00005 00000029 02448  00699 00754
VTFUNIT  00004 00000018 02441  00706 00768
VTFUNUSD 00004 0000000C 02438  00695 00746
VTFUSED  00004 00000008 02437  00694 00742
VTFVOLUM 00006 00000012 02440  00692 00740
VTOCCMD  00001 00000000 00067  00074 01021 01041 01053 01063 01074 01084 01095 01105 01119 01128 01139 01148 01159 01169
                               01178 01189 01199 01210 01220 01231 01245 01259 01270 01280 01290 01301 01311 01321 01332
                               01342 01351 01362 01372 01383 01393 01404 01414 01423 01434 01444 01455 01464 01475 01485
                               01496 01506 01512 01526 01533 01547 01554 01586 01593 01613 01620 01642 01649 01669 01689
                               01696 01716 01723 01743 01763 01770 01781 01788 01810 01817 01837 01860 01882 01889 01909
                               01932 01954 01961 01981 02004 02026 02033 02053 02076 02098 02105 02127 02134 02156 02169
                               02178 02187 02196
VTOCOM   00008 00000070 02250  00100 00244 00311 00320 00330 00342 00351 00362 00371 00384 00438 00608
WORKAREA 00001 00000000 02230  00094 00660 00661 00662 00663 00664 00665 00666 02426
WORKCHEK 00256 00000D70 02420  00662
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

WORKEXCP 00256 00000970 02419  00661
WORKEXIT 00256 00001070 02422  00664
WORKFORM 00256 00000E70 02421  00663
WORKMSG  00256 00000870 02418  00660
WORKPRNT 00256 00001970 02424  00666
WORKREG  00001 0000000D 00474  00094 00539
WORKSORT 00256 00001870 02423  00665
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

=F'0'    00004 000005C0 00655  00118 00137 00151
=F'12'   00004 000005C4 00656  00157
=F'24'   00004 000005C8 00657  00169
=3F'0'   00004 000005CC 00658  00172 00173
=C'UNKN' 00004 000005D8 00659  00291
=A(WORKMSG-WORKAREA)
         00004 000005DC 00660  00492
=A(WORKEXCP-WORKAREA)
         00004 000005E0 00661  00496
=A(WORKCHEK-WORKAREA)
         00004 000005E4 00662  00500
=A(WORKFORM-WORKAREA)
         00004 000005E8 00663  00504
=A(WORKEXIT-WORKAREA)
         00004 000005EC 00664  00508
=A(WORKSORT-WORKAREA)
         00004 000005F0 00665  00512
=A(WORKPRNT-WORKAREA)
         00004 000005F4 00666  00516
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT        864
TOTAL RECORDS READ FROM SYSTEM LIBRARY     5417
TOTAL RECORDS PUNCHED                       130
TOTAL RECORDS PRINTED                      2152
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25

VTOCCHEK  SD  0001 000000 000B6B
PCLMAIN   SD  0002 000B70 0007F6
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25
                                      *********************************************************************** 00000200
                                      *                                                                     * 00000300
                                      *                                                                     * 00000400
                                      * TITLE -      VTOC COMMAND CHECK  ROUTINE                            * 00000500
                                      *                                                                     * 00000600
                                      * FUNCTION -   CHECK THE CONDITIONS SPECIFIED ON THE VTOC COMMAND.    * 00000700
                                      *               SEE IF THE DATA SET PASSED SHOULD BE PROCESSED.       * 00000800
                                      *               THE LIMIT, ENDING, CONTAINING, CCHH, LIMIT, AND,      * 00000900
                                      *               AND OR KEYWORDS ARE PROCESSED BY THIS ROUTINE.        * 00001000
                                      *                                                                     * 00001100
                                      * OPERATION -  FIRST GET THE LENGTH OF THE DSNAME AND SAVE IT.        * 00001200
                                      *               THEN GET THE FORMAT 3 DSCB, IF ONE EXISTS.  TRY       * 00001300
                                      *               EACH KEYWORD TO SEE IF IT WILL EXCLUDE THE DATA       * 00001400
                                      *               SET FROM FURTHER PROCESSING.                          * 00001500
                                      *                                                                     * 00001600
                                      * INPUT -      VTOC COMMON AREA ( VTOCOM )                            * 00001700
                                      *               POINTED TO BY REGISTER 1                              * 00001800
                                      *               USE PARSE DATA, FORMAT 1, 3, AND 4 DSCB'S             * 00001900
                                      *               FOR DSORG, RECFM, ALLOC, USED, PROT, CATLG, OR SECAL  * 00002000
                                      *               CALL VTOCFORM TO FORMAT THE PARMS.  USE FORMATTED DSCB * 00002100
                                      *                                                                     * 00002200
                                      * OUTPUT -     A RETURN CODE OF 0 TO CONTINUE PROCESSING OR 8 TO      * 00002300
                                      *               EXCLUDE THIS DATA SET.                                * 00002400
                                      *                                                                     * 00002500
                                      * ATTRIBUTES - REENTRANT, REUSEABLE, REFRESHABLE.                     * 00002600
                                      *                                                                     * 00002700
                                      *                                                                     * 00002800
                                      *         PROGRAMMED BY R. L. MILLER  (415) 485-6241                  * 00002900
                                      *                                                                     * 00003000
                                      * 9/26/84 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO CORRECT   ABL-EXT 00003010
                                      *           LIM(EX GT 2) TO MEAN EXTENTS (NO EXPDT).            ABL-EXT 00003020
                                      *                                                                     * 00003025
                                      * 9/26/84 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO CORRECT   ABL-049 00003030
                                      *           LIM(XXX ... ERROR MESSAGE                           ABL-049 00003035
                                      *                                                                     * 00003040
                                      * 9/16/85 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO ALLOW    ABL-CONT 00003045
                                      *           CONT(123) OR CONT(.DATA)                          ABL-CONT 00003050
                                      *                                                                     * 00003055
                                      * 12/19/97- MODIFIED BY JOHN KALINICH AT USA LSSC TO ADD YEAR   Y2K   * 00003102
                                      *           2000 SUPPORT FOR DATES.                             Y2K   * 00003202
                                      *                                                                     * 00003300
                                      *********************************************************************** 00003400
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   45 *        MACROS FOR CHECK ROUTINE                                    00003600
                                   46 *                                                                    00003700
                                   47          MACRO                                                       00003800
                                   48 &LABEL   VTCHL &KEY           CALL THE KEYWORD CHECK ROUTINE         00003900
                                   49 &LABEL   L     R1,SUB&KEY.OPER    GET THE OPERATOR VALUE              00004000
                                   50          BAL   R8,GETOPER    TRANSLATE TO A NUMBER                    00004100
                                   51          ST    R15,REFOPER     SAVE IT TOO                            00004200
                                   52          LA    R1,SUB&KEY.VALU   GET THE VALUE PDL                    00004300
                                   53          ST    R1,REFVAL      SAVE THAT ADDRESS THREE                 00004400
                                   54          CLI   FLAGNM&KEY,0  HAS IT BEEN CONVERTED?                   00004500
                                   55          BNE   VTP&SYSNDX    YES, SKIP ALONG                          00004600
                                   56          MVI   FLAGNM&KEY,1  NOTE IT AS CONVERTED                     00004700
                                   57          BAL   R8,PDLNUM     GO CONVERT IT                            00004800
                                   58          ST    R15,NUMBER&KEY      SAVE THE VALUE                     00004900
                                   59          LA    R4,SUB&KEY.KEY  POINT TO THE IKJIDENT FOR THE KEYWORD  00005000
                                   60          BAL   R8,GETKEY     CONVERT TEXT TO A NUMERIC KEY            00005100
                                   61          STC   R15,NUMKEY&KEY  SAVE THAT NUMERIC KEY                  00005200
                                   62          LTR   R15,R15       WAS IT SUCCESSFUL?                       00005300
                                   63          BNZ   VTP&SYSNDX    YES, SKIP ALONG                          00005400
                                   64 *        ISSUE A MESSAGE - A BAD LIM, AND, OR KEYWORD                 00005500
                                   65          MVC   MSGTEXT2,KEYERR  START THE ERROR MESSAGE               00005600
                                   66          L     R1,0(R4)      POINT TO THE TEXT                        00005700
                                   67 ***      MVC   MSGTEXT2+49(6),0(R1)  THEN ADD IT TO THE MESSAGE       00005800
                                   68          MVC   MSGTEXT2+48(6),0(R1)  THEN ADD IT TO THE MESSAGE ABL-049 00005810
                                   69          VTOCMSG MSGTEXT2    ISSUE THE ERROR MESSAGE                  00005900
                                   70 VTP&SYSNDX DS  0H                                                    00006000
                                   71          SR    R1,R1         CLEAR A REGISTER                         00006100
                                   72          ICM   R1,1,NUMKEY&KEY GET THE KEYWORD VALUE                  00006200
                                   73          BZ    VTE&SYSNDX    IF NOT SET, SKIP THE EVALUATION          00006300
                                   74          ST    R1,REFKEY      SAVE THE ADDRESS                        00006400
                                   75          LA    R1,NUMBER&KEY  GET THE ADDRESS OF CONVERTED NUMBER     00006500
                                   76          ST    R1,REFNUM      SAVE IT'S ADDRESS                       00006600
                                   77          BAL   R8,LIMEVAL     GO EVALUATE THE EXPRESSION              00006700
                                   78 VTE&SYSNDX DS  0H                                                    00006800
                                   79          MEND                                                        00006900


                                   81          MACRO                                                       00007100
                                   82 &LABEL   VTANDOR &NUM         EVALUATE, THEN DO AND OR OR FUNCTION   00007200
                                   83 &LABEL   CLI   ANDOR&NUM.K+1,0  WAS THIS KEYWORD SET?                00007300
                                   84          BE    LIMCOMP        NO, JUST CHECK THE FINAL RESULT         00007400
                                   85          VTCHL &NUM           YES, EVALUATE                         00007500
                                   86          CLI   ANDOR&NUM.K+1,1  WAS IT AN AND ?                       00007600
                                   87          BE    VTA&SYSNDX     YES, DO THE AND                         00007700
                                   88          O     R15,LIMVAL     NO, OR IT                               00007800
                                   89          B     VTE&SYSNDX     FINISHED WITH THIS EXPRESSION           00007900
                                   90 VTA&SYSNDX N   R15,LIMVAL     AND THE EXPRESSION VALUE                00008000
                                   91 VTE&SYSNDX ST  R15,LIMVAL     SAVE THE VALUE                          00008100
                                   92          MEND                                                        00008200
                                   93 *                                                                    00008300
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   95          GBLC  &WIN19XX                                     Y2K DEC97 00008510


                                   97 *    THE FOLLOWING VARIABLE DETERMINES THE 19XX DATE WINDOW.  Y2K DEC97 00008730
                                   98 *                                                             Y2K DEC97 00008840
                                   99 *    &WIN19XX IS THE START OF THE 19XX DATE WINDOW.  ANY      Y2K DEC97 00008950
                                  100 *    YEAR LESS THAN &WIN19XX WILL BE CONSIDERED A 20XX DATE.  Y2K DEC97 00009060
                                  101 *                                                             Y2K DEC97 00009170
                                  102 &WIN19XX SETC   '72'   START OF 19XX DATE WINDOW              Y2K DEC97 00009280
                                  103 *                                                                       00009390
                                  104 VTOCCHEK ENTER 12,12          DO THE HOUSEKEEPING                       00009400
000000                            105+VTOCCHEK CSECT                                                          00004220
000000 47F0 F00E      0000E       106+         B     14(0,15)                          BRANCH AROUND ID       00450000
000004 08                         107+         DC    AL1(8)                            LENGTH OF IDENTIFIER   00550000
000005 E5E3D6C3C3C8C5D2           108+         DC    CL8'VTOCCHEK'                     IDENTIFIER             00750000
00000D 00
00000E 90EC D00C      0000C       109+         STM   14,12,12(13)                      SAVE REGISTERS         03700000
000012 18CF                       110+         LR    12,15         SET FIRST BASE REG                       00004700
000014                            111+         CNOP  0,4                                                     00004800
                            00000 112+         USING VTOCCHEK,12                                             00008600
000014 5811 000C      0000C       113+         L     1,12+0(1)      NUMERIC &SAVE IMPLIES A PASSED SAVEAREA 00012600
000018 50D1 0004      00004       114+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE          00012700
00001C 501D 0008      00008       115+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS              00012800
000020 182D                       116+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS      00012900
000022 18D1                       117+         LR    13,1           THIS IS MY SAVEAREA                     00013000
000024 9802 2014      00014       118+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                   00013100
000028 18B1                       119          LR    R11,R1         SAVE ADDR OF VTOCOM                     00009500
                            00000 120          USING VTOCOM,R11     SET ITS ADDRESSABILITY                  00009600
00002A 5890 B048      00048       121          L     R9,ADDRANSR    POINT TO THE PARSE ANSWER               00009700
                            00000 122          USING PDL,R9         SET ITS ADDRESSABILITY                  00009800
                            00000 123          USING CHEKWORK,R13   SET ADDRESSABILITY FOR LOCAL WORK AREA  00009900
                                  124 *                                                                   00010000
                                  125 *        SEE WHAT THE FORMAT ID IS                                  00010100
                                  126 *                                                                   00010200
00002E 5870 B194      00194       127 CHEKFMT  L     R7,DSCBADDR    POINT TO THE DSCB                       00010300
000032 4177 0008      00008       128          LA    R7,8(R7)       GET PAST THE HEADER                     00010400
                            00000 129          USING DSCB1,R7       SET ADDRESSABILITY                      00010500
000036 9500 9047      00047       130          CLI   FORMATK+1,0    DID HE SPECIFY VARIOUS DSCB'S           00010600
00003A 4770 C03E      0003E       131          BNE   CHEKFMTI       YES, GO DO HIS CHECKS                   00010700
00003E                            132 CHEKFMTI DS    0H             NOT YET PROGRAMMED                      00010800
                                  133 *                                                                   00010900
                                  134 *        STANDARD IS ONLY TO ALLOW FORMAT ONES TO GO                00011000
                                  135 *                                                                   00011100
00003E 95F1 702C      0002C       136          CLI   DS1FMTID,C'1'  IS THIS A FORMAT 1?                     00011200
000042 4770 C754      00754       137          BNE   CHECKOUT       NO, EXCLUDE IT FROM FURTHER PROCESSING  00011300
                                  138 *                                                                   00011400
                                  139 *              FIRST SEE HOW BIG THE DSNAME IS                      00011500
                                  140 *                                                                   00011600
000046 4110 702C      0002C       141          LA    R1,DS1FMTID    POINT PAST THE DSNAME                   00011700
00004A DD2B 7000 C8EF 00000 008EF 142          TRT   DS1DSNAM,BLKTRTAB  FIND THE FIRST BLANK                00011800
000050 1B17                       143          SR    R1,R7          SUBTRACT TO GET THE LENGTH              00011900
000052 4010 B1AA      001AA       144          STH   R1,DSNLEN      SAVE THE DSNAME LENGTH                  00012000
000056 1831                       145          LR    R3,R1          KEEP THE LENGTH FOR LATER               00012100
                                  146 *                                                                   00012200
                                  147 *        GET THE FORMAT 3 DSCB, IF IT EXISTS                        00012300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   148 *                                                                          00012400
000058 D793 B770 B770 00770 00770   149          XC    FMT3,FMT3       CLEAR IT FIRST                           00012500
00005E D504 7087 CB60 00087 00B60   150          CLC   DS1PTRDS,=XL5'0000000000'  IS THERE A FORMAT 3?          00012600
000064 4780 C092      00092         151          BE    FMT3NO          NO, SKIP ALONG                           00012700
                                   152 *                                                                          00012800
                                   153 *        SET UP THE CAMLST                                                 00012900
                                   154 *                                                                          00013000
000068 D203 D058 C9F0 00058 009F0   155          MVC   CAMSEEK(4),CAMSCON  MOVE IN THE FIRST WORD OF CAMLST     00013100
00006E 4110 7087      00087         156          LA    R1,DS1PTRDS     GET THE CCHHR ADDRESS                    00013200
000072 5010 D05C      0005C         157          ST    R1,CAMSEEK+4    SAVE IT                                  00013300
000076 4110 B1B9      001B9         158          LA    R1,VOLID        POINT TO THE VOLUME SERIAL               00013400
00007A 5010 D060      00060         159          ST    R1,CAMSEEK+8    SAVE IT                                  00013500
00007E 4110 B770      00770         160          LA    R1,FMT3         POINT TO THE AREA FOR THE DSCB3          00013600
000082 5010 D064      00064         161          ST    R1,CAMSEEK+12   SAVE IT                                  00013700
                                   162          OBTAIN CAMSEEK        GET THE DSCB                             00013800
000086 4110 D058      00058         163+         LA    1,CAMSEEK                        LOAD PARAMETER REG 1    01900002
00008A 0A1B                        164+         SVC   27                        ISSUE OBTAIN SVC               00100019
00008C 12FF                        165          LTR   R15,R15         TEST THE RETURN CODE                     00013900
00008E 4770 C740      00740         166          BNZ   OBT3ERR         BAD NEWS, ISSUE THE MESSAGE              00014000
                                   167 *                                                                          00014100
                                   168 *        PROCESS THE LEVEL KEYWORD                                         00014200
                                   169 *                                                                          00014300
000092 9500 9025      00025         170 FMT3NO   CLI   LEVKEY+1,0      WAS LEVEL SPECIFIED?                     00014400
000096 4780 C0CA      000CA         171          BE    LEVEND          NO, SKIP ON                              00014500
00009A 4140 904C      0004C         172          LA    R4,LEVEL        YES, POINT TO THE PDE                    00014600
                            00000   173          USING PDEDSNAM,R4     SET ADDRESSABILITY                       00014700
00009E 1827                         174          LR    R2,R7           POINT TO THE START OF THE DSNAME         00014800
0000A0 1B55                         175 LEVNEXT  SR    R5,R5           CLEAR FOR INSERT                         00014900
0000A2 BF53 4004      00004         176          ICM   R5,B'0011',PDEDSNL  GET THE DSNAME LENGTH                00015000
0000A6 4780 C754      00754         177          BZ    CHECKOUT        END OF THE LINE, EXCLUDE IT              00015100
0000AA 5860 4000      00000         178          L     R6,PDEDSN       POINT TO THE LEVEL                       00015200
0000AE 1935                         179          CR    R3,R5           COMPARE LENGTHS                          00015300
0000B0 4740 C0BE      000BE         180          BL    LEVINC          THIS LEVEL IS LONGER THAN DSN, NO MATCH  00015400
0000B4 0650                         181          BCTR  R5,0            MINUS ONE FOR THE EX                     00015500
0000B6 4450 CA00      00A00         182          EX    R5,COMPARE      CHECK THE LENGTHS                        00015600
0000BA 4780 C0CA      000CA         183          BE    LEVEND          IT MATCHES, ALLOW IT                     00015700
0000BE BF47 4019      00019         184 LEVINC   ICM   R4,B'0111',PDEDCHN GET THE NEXT LEVEL PDE POINTER         00015800
0000C2 4770 C0A0      000A0         185          BNZ   LEVNEXT         IF IT'S THERE, KEEP LOOKING              00015900
0000C6 47F0 C754      00754         186          B     CHECKOUT        NO MATCHES, EXCLUDE THIS DSNAME          00016000
0000CA                              187 LEVEND   DS    0H                                                       00016100
                                   188          DROP  R4              FINISHED WITH THE PDE                    00016200
                                   189 *                                                                          00016300
                                   190 *        PROCESS THE ENDING KEYWORD                                        00016400
                                   191 *                                                                          00016500
0000CA 9500 9027      00027         192          CLI   ENDKEY+1,0      WAS ENDING SPECIFIED?                    00016600
0000CE 4780 C106      00106         193          BE    ENDEND          NO, SKIP ON                              00016700
0000D2 4140 9068      00068         194          LA    R4,ENDING       YES, POINT TO THE PDE                    00016800
                            00000   195          USING PDEDSNAM,R4     SET ADDRESSABILITY                       00016900
0000D6 1B55                         196 ENDNEXT  SR    R5,R5           CLEAR FOR INSERT                         00017000
0000D8 BF53 4004      00004         197          ICM   R5,B'0011',PDEDSNL  GET THE DSNAME LENGTH                00017100
0000DC 4780 C754      00754         198          BZ    CHECKOUT        END OF THE LINE, EXCLUDE IT              00017200
0000E0 5860 4000      00000         199          L     R6,PDEDSN       POINT TO THE ENDING                      00017300
0000E4 1935                         200          CR    R3,R5           COMPARE LENGTHS                          00017400
0000E6 4740 C0FA      000FA         201          BL    ENDINC          THIS ENDING IS LONGER THAN DSN, NO MATCH 00017500
0000EA 1827                         202          LR    R2,R7           POINT TO THE START OF THE DSNAME         00017600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0000EC 1A23                         203          AR    R2,R3          POINT TO THE END                          00017700
0000EE 1B25                         204          SR    R2,R5          BACKUP TO COMPARE THIS LENGTH             00017800
0000F0 0650                         205          BCTR  R5,0           MINUS ONE FOR THE EX                      00017900
0000F2 4450 CA00      00A00         206          EX    R5,COMPARE     CHECK THE LENGTHS                         00018000
0000F6 4780 C106      00106         207          BE    ENDEND         IT MATCHES, ALLOW IT                      00018100
0000FA BF47 4019      00019         208 ENDINC   ICM   R4,B'0111',PDEDCHN GET THE NEXT ENDING PDE POINTER        00018200
0000FE 4770 C0D6      000D6         209          BNZ   ENDNEXT        IF IT'S THERE, KEEP LOOKING               00018300
000102 47F0 C754      00754         210          B     CHECKOUT       NO MATCHES, EXCLUDE THIS DSNAME           00018400
000106                              211 ENDEND   DS    0H                                                       00018500
                                    212          DROP  R4             FINISHED WITH THE PDE                     00018600
                                    213 *                                                                       00018700
                                    214 *        PROCESS THE CONTAINING KEYWORD                                 00018800
                                    215 *                                                                       00018900
000106 9500 9029      00029         216          CLI   CONTAINK+1,0   WAS CONTAINING SPECIFIED?                 00019000
00010A 4780 C14E      0014E         217          BE    CONEND         NO, SKIP ON                               00019100
00010E 4140 9084      00084         218          LA    R4,CONTAIN     YES, POINT TO THE PDE                     00019200
                            00000   219          USING PDEDSNAM,R4    SET ADDRESSABILITY                        00019300
000112 1B55                         220 CONNEXT  SR    R5,R5          CLEAR FOR INSERT                          00019400
000114 BF53 4004      00004         221          ICM   R5,B'0011',PDEDSNL  GET THE DSNAME LENGTH                00019500
000118 4780 C754      00754         222          BZ    CHECKOUT       END OF THE LINE, EXCLUDE IT               00019600
00011C 5860 4000      00000         223          L     R6,PDEDSN      POINT TO THE CONTAINING                   00019700
000120 1935                         224          CR    R3,R5          COMPARE LENGTHS                           00019800
000122 4740 C142      00142         225          BL    CONINC         THIS CONTAIN IS LONGER THAN DSN, NO MATCH 00019900
000126 1817                         226          LR    R1,R7          POINT TO THE START OF THE DSNAME          00020000
000128 1A13                         227          AR    R1,R3          POINT TO THE END                          00020100
00012A 1B15                         228          SR    R1,R5          BACKUP TO COMPARE THIS LENGTH - LAST ONE  00020200
00012C 1827                         229          LR    R2,R7          POINT TO THE START OF THE DSNAME          00020300
00012E 0650                         230          BCTR  R5,0           MINUS ONE FOR THE EX                      00020400
000130 4450 CA00      00A00         231 CONCOMP  EX    R5,COMPARE     CHECK THE LENGTHS                         00020500
000134 4780 C14E      0014E         232          BE    CONEND         IT MATCHES, ALLOW IT                      00020600
000138 4122 0001      00001         233          LA    R2,1(R2)       CHECK THE WHOLE DSNAME                    00020700
00013C 1921                         234          CR    R2,R1          CHECK FOR THE END OF THE REAL DSN         00020800
00013E 47D0 C130      00130         235          BNH   CONCOMP        NOT THERE YET                             00020900
                                    236 *ONINC   ICM   R4,B'0111',PDEDCHN GET THE NEXT CONTAINING PDE POINTER   00021000
000142 BF47 4009      00009         237 CONINC   ICM   R4,B'0111',9(R4)   GET NEXT CONTAINING PDE PRT  ABL-CONT 00021010
000146 4770 C112      00112         238          BNZ   CONNEXT        IF IT'S THERE, KEEP LOOKING               00021100
00014A 47F0 C754      00754         239          B     CHECKOUT       NO MATCHES, EXCLUDE THIS DSNAME           00021200
00014E                              240 CONEND   DS    0H                                                       00021300
                                    241          DROP  R4             FINISHED WITH THE PDE                     00021400
                                    242 *                                                                       00021500
                                    243 *        NOW THE BIG MESS, CHECK FOR LIMIT, AND'S, AND OR'S             00021600
                                    244 *                                                                       00021700
00014E 9500 9033      00033         245          CLI   LIMITK+1,0     WAS LIMIT SPECIFIED                       00021800
000152 4780 C3A8      003A8         246          BE    LIMEND         NO, THEN THERE CAN BE NO AND'S OR OR'S    00021900
000156 94F7 B1A5      001A5         247          NI    VTCFMTCK,255-VTCFMTCC  TURN OFF THE ROUTINE CALL FLAG    00022000
                                    248          VTCHL L              EVALUATE THE LIMIT 1=TRUE 0=FALSE         00022100
00015A 5810 90E8      000E8         249+         L     R1,SUBLOPER        GET THE OPERATOR VALUE                 00004000
00015E 4580 C84E      0084E         250+         BAL   R8,GETOPER    TRANSLATE TO A NUMBER                     00004100
000162 50F0 D098      00098         251+         ST    R15,REFOPER     SAVE IT TOO                              00004200
000166 4110 90F0      000F0         252+         LA    R1,SUBLVALU       GET THE VALUE PDL                      00004300
00016A 5010 D09C      0009C         253+         ST    R1,REFVAL      SAVE THAT ADDRESS THREE                   00004400
00016E 9500 D07A      0007A         254+         CLI   FLAGNML,0     HAS IT BEEN CONVERTED?                    00004500
000172 4770 C1B8      001B8         255+         BNE   VTP0005       YES, SKIP ALONG                            00004600
000176 9201 D07A      0007A         256+         MVI   FLAGNML,1     NOTE IT AS CONVERTED                       00004700
00017A 4580 C772      00772         257+         BAL   R8,PDLNUM     GO CONVERT IT                              00004800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00017E 50F0 D074      00074         258+         ST    R15,NUMBERL         SAVE THE VALUE                        00004900
000182 4140 90E0      000E0         259+         LA    R4,SUBLKEY      POINT TO THE IKJIDENT FOR THE KEYWORD    00005000
000186 4580 C7E0      007E0         260+         BAL   R8,GETKEY     CONVERT TEXT TO A NUMERIC KEY              00005100
00018A 42F0 D07B      0007B         261+         STC   R15,NUMKEYL     SAVE THAT NUMERIC KEY                    00005200
00018E 12FF                         262+         LTR   R15,R15       WAS IT SUCCESSFUL?                         00005300
000190 4770 C1B8      001B8         263+         BNZ   VTP0005       YES, SKIP ALONG                            00005400
                                    264+*        ISSUE A MESSAGE - A BAD LIM, AND, OR KEYWORD                   00005500
000194 D27B B0FC CA8E 000FC 00A8E   265+         MVC   MSGTEXT2,KEYERR  START THE ERROR MESSAGE                 00005600
00019A 5814 0000      00000         266+         L     R1,0(R4)      POINT TO THE TEXT                        00005700
                                    267+***      MVC   MSGTEXT2+49(6),0(R1)  THEN ADD IT TO THE MESSAGE         00005800
00019E D205 B12C 1000 0012C 00000   268+         MVC   MSGTEXT2+48(6),0(R1)  THEN ADD IT TO THE MESSAGE ABL-049 00005810
0001A4 4110 B0FC      000FC         269+         LA    R1,MSGTEXT2    POINT TO THE FIRST MESSAGE                00000300
0001A8 1B00                         270+         SR    R0,R0          NO SECOND LEVEL MESSAGE                   00000700
0001AA 9001 B078      00078         271+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    272+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
0001AE 4110 B000      00000         273+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
0001B2 58F0 B01C      0001C         274+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
0001B6 05EF                         275+         BALR  R14,R15        THEN CALL IT                              00000900
0001B8                              276+VTP0005    DS  0H                                                       00006000
0001B8 1B11                         277+         SR    R1,R1         CLEAR A REGISTER                           00006100
0001BA BF11 D07B      0007B         278+         ICM   R1,1,NUMKEYL    GET THE KEYWORD VALUE                    00006200
0001BE 4780 C1D2      001D2         279+         BZ    VTE0005       IF NOT SET, SKIP THE EVALUATION            00006300
0001C2 5010 D094      00094         280+         ST    R1,REFKEY      SAVE THE ADDRESS                          00006400
0001C6 4110 D074      00074         281+         LA    R1,NUMBERL     GET THE ADDRESS OF CONVERTED NUMBER       00006500
0001CA 5010 D0A0      000A0         282+         ST    R1,REFNUM      SAVE IT'S ADDRESS                         00006600
0001CE 4580 C3AC      003AC         283+         BAL   R8,LIMEVAL     GO EVALUATE THE EXPRESSION                00006700
0001D2                              284+VTE0005    DS  0H                                                       00006800
0001D2 50F0 D070      00070         285          ST    R15,LIMVAL     SAVE THE ANSWER                           00022200
                                    286          VTANDOR 1            CHECK AND1 OR OR1                         00022300
0001D6 9500 9035      00035         287+         CLI   ANDOR1K+1,0      WAS THIS KEYWORD SET?                   00007300
0001DA 4780 C39E      0039E         288+         BE    LIMCOMP        NO, JUST CHECK THE FINAL RESULT           00007400
0001DE 5810 9100      00100         289+         L     R1,SUB1OPER        GET THE OPERATOR VALUE                00004000
0001E2 4580 C84E      0084E         290+         BAL   R8,GETOPER    TRANSLATE TO A NUMBER                      00004100
0001E6 50F0 D098      00098         291+         ST    R15,REFOPER     SAVE IT TOO                               00004200
0001EA 4110 9108      00108         292+         LA    R1,SUB1VALU       GET THE VALUE PDL                       00004300
0001EE 5010 D09C      0009C         293+         ST    R1,REFVAL      SAVE THAT ADDRESS THREE                   00004400
0001F2 9500 D082      00082         294+         CLI   FLAGNM1,0     HAS IT BEEN CONVERTED?                     00004500
0001F6 4770 C23C      0023C         295+         BNE   VTP0009       YES, SKIP ALONG                            00004600
0001FA 9201 D082      00082         296+         MVI   FLAGNM1,1     NOTE IT AS CONVERTED                       00004700
0001FE 4580 C772      00772         297+         BAL   R8,PDLNUM     GO CONVERT IT                              00004800
000202 50F0 D07C      0007C         298+         ST    R15,NUMBER1         SAVE THE VALUE                        00004900
000206 4140 90F8      000F8         299+         LA    R4,SUB1KEY      POINT TO THE IKJIDENT FOR THE KEYWORD    00005000
00020A 4580 C7E0      007E0         300+         BAL   R8,GETKEY     CONVERT TEXT TO A NUMERIC KEY              00005100
00020E 42F0 D083      00083         301+         STC   R15,NUMKEY1     SAVE THAT NUMERIC KEY                    00005200
000212 12FF                         302+         LTR   R15,R15       WAS IT SUCCESSFUL?                         00005300
000214 4770 C23C      0023C         303+         BNZ   VTP0009       YES, SKIP ALONG                            00005400
                                    304+*        ISSUE A MESSAGE - A BAD LIM, AND, OR KEYWORD                   00005500
000218 D27B B0FC CA8E 000FC 00A8E   305+         MVC   MSGTEXT2,KEYERR  START THE ERROR MESSAGE                 00005600
00021E 5814 0000      00000         306+         L     R1,0(R4)      POINT TO THE TEXT                        00005700
                                    307+***      MVC   MSGTEXT2+49(6),0(R1)  THEN ADD IT TO THE MESSAGE         00005800
000222 D205 B12C 1000 0012C 00000   308+         MVC   MSGTEXT2+48(6),0(R1)  THEN ADD IT TO THE MESSAGE ABL-049 00005810
000228 4110 B0FC      000FC         309+         LA    R1,MSGTEXT2    POINT TO THE FIRST MESSAGE                00000300
00022C 1B00                         310+         SR    R0,R0          NO SECOND LEVEL MESSAGE                   00000700
00022E 9001 B078      00078         311+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    312+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000232 4110 B000      00000         313+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000236 58F0 B01C      0001C         314+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
00023A 05EF                         315+         BALR  R14,R15        THEN CALL IT                              00000900
00023C                              316+VTP0009    DS  0H                                                       00006000
00023C 1B11                         317+         SR    R1,R1         CLEAR A REGISTER                          00006100
00023E BF11 D083      00083         318+         ICM   R1,1,NUMKEY1    GET THE KEYWORD VALUE                     00006200
000242 4780 C256      00256         319+         BZ    VTE0009       IF NOT SET, SKIP THE EVALUATION           00006300
000246 5010 D094      00094         320+         ST    R1,REFKEY      SAVE THE ADDRESS                          00006400
00024A 4110 D07C      0007C         321+         LA    R1,NUMBER1     GET THE ADDRESS OF CONVERTED NUMBER       00006500
00024E 5010 D0A0      000A0         322+         ST    R1,REFNUM      SAVE IT'S ADDRESS                         00006600
000252 4580 C3AC      003AC         323+         BAL   R8,LIMEVAL     GO EVALUATE THE EXPRESSION                00006700
000256                              324+VTE0009    DS  0H                                                       00006800
000256 9501 9035      00035         325+         CLI   ANDOR1K+1,1      WAS IT AN AND ?                          00007600
00025A 4780 C266      00266         326+         BE    VTA0008        YES, DO THE AND                           00007700
00025E 56F0 D070      00070         327+         O     R15,LIMVAL     NO, OR IT                                 00007800
000262 47F0 C26A      0026A         328+         B     VTE0008        FINISHED WITH THIS EXPRESSION             00007900
000266 54F0 D070      00070         329+VTA0008    N   R15,LIMVAL     AND THE EXPRESSION VALUE                  00008000
00026A 50F0 D070      00070         330+VTE0008    ST  R15,LIMVAL     SAVE THE VALUE                            00008100
                                    331          VTANDOR 2            CHECK AND2 OR OR2                         00022400
00026E 9500 9037      00037         332+         CLI   ANDOR2K+1,0      WAS THIS KEYWORD SET?                    00007300
000272 4780 C39E      0039E         333+         BE    LIMCOMP        NO, JUST CHECK THE FINAL RESULT           00007400
000276 5810 9118      00118         334+         L     R1,SUB2OPER        GET THE OPERATOR VALUE                 00004000
00027A 4580 C84E      0084E         335+         BAL   R8,GETOPER    TRANSLATE TO A NUMBER                     00004100
00027E 50F0 D098      00098         336+         ST    R15,REFOPER     SAVE IT TOO                              00004200
000282 4110 9120      00120         337+         LA    R1,SUB2VALU       GET THE VALUE PDL                      00004300
000286 5010 D09C      0009C         338+         ST    R1,REFVAL      SAVE THAT ADDRESS THREE                   00004400
00028A 9500 D08A      0008A         339+         CLI   FLAGNM2,0     HAS IT BEEN CONVERTED?                    00004500
00028E 4770 C2D4      002D4         340+         BNE   VTP0013       YES, SKIP ALONG                           00004600
000292 9201 D08A      0008A         341+         MVI   FLAGNM2,1     NOTE IT AS CONVERTED                      00004700
000296 4580 C772      00772         342+         BAL   R8,PDLNUM     GO CONVERT IT                             00004800
00029A 50F0 D084      00084         343+         ST    R15,NUMBER2         SAVE THE VALUE                       00004900
00029E 4140 9110      00110         344+         LA    R4,SUB2KEY      POINT TO THE IKJIDENT FOR THE KEYWORD    00005000
0002A2 4580 C7E0      007E0         345+         BAL   R8,GETKEY     CONVERT TEXT TO A NUMERIC KEY             00005100
0002A6 42F0 D08B      0008B         346+         STC   R15,NUMKEY2     SAVE THAT NUMERIC KEY                   00005200
0002AA 12FF                         347+         LTR   R15,R15       WAS IT SUCCESSFUL?                        00005300
0002AC 4770 C2D4      002D4         348+         BNZ   VTP0013       YES, SKIP ALONG                           00005400
                                    349+*        ISSUE A MESSAGE - A BAD LIM, AND, OR KEYWORD                   00005500
0002B0 D27B B0FC CA8E 000FC 00A8E   350+         MVC   MSGTEXT2,KEYERR  START THE ERROR MESSAGE                 00005600
0002B6 5814 0000      00000         351+         L     R1,0(R4)      POINT TO THE TEXT                         00005700
                                    352+***      MVC   MSGTEXT2+49(6),0(R1)  THEN ADD IT TO THE MESSAGE         00005800
0002BA D205 B12C 1000 0012C 00000   353+         MVC   MSGTEXT2+48(6),0(R1)  THEN ADD IT TO THE MESSAGE ABL-049 00005810
0002C0 4110 B0FC      000FC         354+         LA    R1,MSGTEXT2    POINT TO THE FIRST MESSAGE                00000300
0002C4 1B00                         355+         SR    R0,R0          NO SECOND LEVEL MESSAGE                   00000700
0002C6 9001 B078      00078         356+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    357+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
0002CA 4110 B000      00000         358+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
0002CE 58F0 B01C      0001C         359+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
0002D2 05EF                         360+         BALR  R14,R15        THEN CALL IT                              00000900
0002D4                              361+VTP0013    DS  0H                                                       00006000
0002D4 1B11                         362+         SR    R1,R1         CLEAR A REGISTER                          00006100
0002D6 BF11 D08B      0008B         363+         ICM   R1,1,NUMKEY2    GET THE KEYWORD VALUE                     00006200
0002DA 4780 C2EE      002EE         364+         BZ    VTE0013       IF NOT SET, SKIP THE EVALUATION           00006300
0002DE 5010 D094      00094         365+         ST    R1,REFKEY      SAVE THE ADDRESS                          00006400
0002E2 4110 D084      00084         366+         LA    R1,NUMBER2     GET THE ADDRESS OF CONVERTED NUMBER       00006500
0002E6 5010 D0A0      000A0         367+         ST    R1,REFNUM      SAVE IT'S ADDRESS                         00006600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0002EA 4580 C3AC      003AC         368+         BAL   R8,LIMEVAL     GO EVALUATE THE EXPRESSION                00006700
0002EE                              369+VTE0013    DS  0H                                                      00006800
0002EE 9501 9037      00037         370+         CLI   ANDOR2K+1,1      WAS IT AN AND ?                          00007600
0002F2 4780 C2FE      002FE         371+         BE    VTA0012        YES, DO THE AND                           00007700
0002F6 56F0 D070      00070         372+         O     R15,LIMVAL     NO, OR IT                                 00007800
0002FA 47F0 C302      00302         373+         B     VTE0012        FINISHED WITH THIS EXPRESSION             00007900
0002FE 54F0 D070      00070         374+VTA0012    N   R15,LIMVAL     AND THE EXPRESSION VALUE                  00008000
000302 50F0 D070      00070         375+VTE0012    ST  R15,LIMVAL     SAVE THE VALUE                            00008100
                                    376          VTANDOR 3            CHECK AND3 OR OR3                         00022500
000306 9500 9039      00039         377+         CLI   ANDOR3K+1,0      WAS THIS KEYWORD SET?                    00007300
00030A 4780 C39E      0039E         378+         BE    LIMCOMP        NO, JUST CHECK THE FINAL RESULT           00007400
00030E 5810 9130      00130         379+         L     R1,SUB3OPER        GET THE OPERATOR VALUE                00004000
000312 4580 C84E      0084E         380+         BAL   R8,GETOPER    TRANSLATE TO A NUMBER                      00004100
000316 50F0 D098      00098         381+         ST    R15,REFOPER     SAVE IT TOO                               00004200
00031A 4110 9138      00138         382+         LA    R1,SUB3VALU       GET THE VALUE PDL                       00004300
00031E 5010 D09C      0009C         383+         ST    R1,REFVAL      SAVE THAT ADDRESS THREE                   00004400
000322 9500 D092      00092         384+         CLI   FLAGNM3,0     HAS IT BEEN CONVERTED?                     00004500
000326 4770 C36C      0036C         385+         BNE   VTP0017       YES, SKIP ALONG                            00004600
00032A 9201 D092      00092         386+         MVI   FLAGNM3,1     NOTE IT AS CONVERTED                       00004700
00032E 4580 C772      00772         387+         BAL   R8,PDLNUM     GO CONVERT IT                              00004800
000332 50F0 D08C      0008C         388+         ST    R15,NUMBER3         SAVE THE VALUE                         00004900
000336 4140 9128      00128         389+         LA    R4,SUB3KEY      POINT TO THE IKJIDENT FOR THE KEYWORD    00005000
00033A 4580 C7E0      007E0         390+         BAL   R8,GETKEY     CONVERT TEXT TO A NUMERIC KEY              00005100
00033E 42F0 D093      00093         391+         STC   R15,NUMKEY3     SAVE THAT NUMERIC KEY                    00005200
000342 12FF                         392+         LTR   R15,R15       WAS IT SUCCESSFUL?                         00005300
000344 4770 C36C      0036C         393+         BNZ   VTP0017       YES, SKIP ALONG                            00005400
                                    394+*        ISSUE A MESSAGE - A BAD LIM, AND, OR KEYWORD                   00005500
000348 D27B B0FC CA8E 000FC 00A8E   395+         MVC   MSGTEXT2,KEYERR  START THE ERROR MESSAGE                 00005600
00034E 5814 0000      00000         396+         L     R1,0(R4)      POINT TO THE TEXT                          00005700
                                    397+***      MVC   MSGTEXT2+49(6),0(R1)  THEN ADD IT TO THE MESSAGE         00005800
000352 D205 B12C 1000 0012C 00000   398+         MVC   MSGTEXT2+48(6),0(R1)  THEN ADD IT TO THE MESSAGE ABL-049 00005810
000358 4110 B0FC      000FC         399+         LA    R1,MSGTEXT2    POINT TO THE FIRST MESSAGE                 00000300
00035C 1B00                         400+         SR    R0,R0          NO SECOND LEVEL MESSAGE                    00000700
00035E 9001 B078      00078         401+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                 00000800
                                    402+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
000362 4110 B000      00000         403+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                   00000300
000366 58F0 B01C      0001C         404+         L     R15,VADMSG     POINT TO THE ROUTINE                       00000400
00036A 05EF                         405+         BALR  R14,R15        THEN CALL IT                               00000900
00036C                              406+VTP0017    DS  0H                                                      00006000
00036C 1B11                         407+         SR    R1,R1         CLEAR A REGISTER                           00006100
00036E BF11 D093      00093         408+         ICM   R1,1,NUMKEY3    GET THE KEYWORD VALUE                     00006200
000372 4780 C386      00386         409+         BZ    VTE0017       IF NOT SET, SKIP THE EVALUATION            00006300
000376 5010 D094      00094         410+         ST    R1,REFKEY      SAVE THE ADDRESS                          00006400
00037A 4110 D08C      0008C         411+         LA    R1,NUMBER3     GET THE ADDRESS OF CONVERTED NUMBER       00006500
00037E 5010 D0A0      000A0         412+         ST    R1,REFNUM      SAVE IT'S ADDRESS                         00006600
000382 4580 C3AC      003AC         413+         BAL   R8,LIMEVAL     GO EVALUATE THE EXPRESSION                00006700
000386                              414+VTE0017    DS  0H                                                      00006800
000386 9501 9039      00039         415+         CLI   ANDOR3K+1,1      WAS IT AN AND ?                          00007600
00038A 4780 C396      00396         416+         BE    VTA0016        YES, DO THE AND                           00007700
00038E 56F0 D070      00070         417+         O     R15,LIMVAL     NO, OR IT                                 00007800
000392 47F0 C39A      0039A         418+         B     VTE0016        FINISHED WITH THIS EXPRESSION             00007900
000396 54F0 D070      00070         419+VTA0016    N   R15,LIMVAL     AND THE EXPRESSION VALUE                  00008000
00039A 50F0 D070      00070         420+VTE0016    ST  R15,LIMVAL     SAVE THE VALUE                            00008100
00039E 58F0 D070      00070         421 LIMCOMP  L     R15,LIMVAL     GET THE RESULT OF ALL THIS                00022600
0003A2 12FF                         422          LTR   R15,R15        TEST IT                                   00022700
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0003A4 4780 C754      00754         423          BZ    CHECKOUT       IT GETS EXCLUDED                          00022800
0003A8                              424 LIMEND   DS    0H                                                       00022900
0003A8 47F0 C75C      0075C         425          B     CHECKIN        ALL TESTS PASSED, INCLUDE THIS ONE        00023000



                                    427 *                                                                         00023200
                                    428 *        EVALUATION ROUTINE FOR   KEYWORD  OPER  VALUE                    00023300
                                    429 *                                                                         00023400
0003AC 5850 D094      00094         430 LIMEVAL  L     R5,REFKEY      GET THE KEYWORD VALUE                     00023500
0003B0 4C50 CA4A      00A4A         431          MH    R5,H12         MULTIPLY IT BY 12                         00023600
0003B4 5A50 B1AC      001AC         432          A     R5,ATABTITL    THEN RELOCATE IT                          00023700
0003B8 1BAA                         433          SR    R10,R10         CLEAR THE ROUTINE POINTER                00023800
0003BA 9180 5001      00001         434          TM    1(R5),X'80'    IS IT A FORMATTED ITEM?                   00023900
0003BE 4710 C406      00406         435          BO    LIMFORM        YES, GO DO IT                             00024000
0003C2 1B66                         436          SR    R6,R6         CLEAR A REGISTER                           00024100
0003C4 4365 0002      00002         437          IC    R6,2(R5)      GET THE OFFSET INTO VTFMT                  00024200
0003C8 43A5 0001      00001         438          IC    R10,1(R5)      GET THE ROUTINE NUMBER                    00024300
0003CC 12AA                         439          LTR   R10,R10         SEE IF IT'S A GOOD NUMBER                00024400
0003CE 4720 C3E2      003E2         440          BP    LIMEVAL1       IT'S ALL RIGHT                            00024500
                                    441 LIMABEND ABEND 702,DUMP       CRASH AND BURN                             00024600
0003D2                              442+LIMABEND DS    0H                                                       00400002
0003D2 4110 02BE      002BE         443+         LA    1,702                             LOAD PARAMETER REG 1   01900002
0003D6 4100 0080      00080         444+         LA    0,128(0,0)         PICK UP DUMP/STEP/DUMPOPTS     YM1995 01800002
0003DA 8900 0018      00018         445+         SLL   0,24(0)            SHIFT TO HIGH ORDER                    01850002
0003DE 1610                         446+         OR    1,0                OR IN WITH COMPCODE                    01900002
0003E0 0A0D                         447+         SVC   13                 LINK TO ABEND ROUTINE                  02050002
0003E2 47FA C3E2      003E2         448 LIMEVAL1 B     *(R10)         AND GO TO IT                              00024700
0003E6 47F0 C4BE      004BE         449          B     LIMDATE        CDATE, EXPDT, REFDT                       00024800
0003EA 47F0 C506      00506         450          B     LIMLUSE        *** DUMMY ENTRY ***                       00024900
0003EE 47F0 C406      00406         451          B     LIMFORM        FORM , USED SPACE                         00025000
0003F2 47F0 C406      00406         452          B     LIMFORM        UNUSED SPACE                              00025100
0003F6 47F0 C406      00406         453          B     LIMFORM        PCT USED                                  00025200
0003FA 47F0 C52A      0052A         454          B     LIMEXT         EXTENTS                                   00025300
0003FE 47F0 C538      00538         455          B     LIMBLREC       LRECL, BLKSZ, SEC Q                       00025400
000402 47F0 C5EC      005EC         456          B     LIMCCHH       CCHH CHECKING                              00025500



                                    458 *                                                                         00025700
                                    459 *        PERFORM THE FORMATTED ITEM CHECKING                              00025800
                                    460 *                                                                         00025900
000406                              461 LIMFORM  DS    0H                                                       00026000
000406 9108 B1A5      001A5         462          TM    VTCFMTCK,VTCFMTCC  WAS FORMAT CALLED BEFORE FOR THIS DS  00026100
00040A 4710 C41C      0041C         463          BO    LIMFCALD       YES, DON'T CALL IT AGAIN                  00026200
                                    464          VTCALL FORM          NO, CALL IT TO GET THE ITEMS              00026300
00040E 4110 B000      00000         465+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000412 58F0 B02C      0002C         466+         L     R15,VADFORM    POINT TO THE ROUTINE                      00000400
000416 05EF                         467+         BALR  R14,R15        THEN CALL IT                              00000900
000418 9688 B1A5      001A5         468          OI    VTCFMTCK,VTCFMTCC+VTCFMTCD  THEN SET THE SWITCHES        00026400
00041C 1B22                         469 LIMFCALD SR    R2,R2          CLEAR A WORK REG                          00026500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

00041E 5A60 B198      00198         470          A     R6,FORMATAD   RELOCATE THE BLOCK                        00026600
000422 47FA C426      00426         471          B     *+4(R10)         AND GO TO IT                           00026700
000426 47F0 C43E      0043E         472          B     LIMFORMA      FORMATTED ITEM                            00026800
00042A 47F0 C3D2      003D2         473          B     LIMABEND       CDATE, EXPDT                             00026900
00042E 47F0 C3D2      003D2         474          B     LIMABEND       LAST USE DATE                            00027000
000432 47F0 C574      00574         475          B     LIMALLOC       ALLOC, USED SPACE                        00027100
000436 47F0 C586      00586         476          B     LIMUNUSD       UNUSED SPACE                             00027200
00043A 47F0 C5A8      005A8         477          B     LIMPCT         PCT USED                                 00027300
00043E                              478 LIMFORMA DS    0H                                                      00027400
00043E 4325 0002      00002         479          IC    R2,2(R5)       GET THE OFFSET IN VTFMT                  00027500
000442 5A20 B198      00198         480          A     R2,FORMATAD    THEN RELOCATE IT                         00027600
000446 5840 D09C      0009C         481          L     R4,REFVAL      GET THE VALUE PDE                        00027700
00044A 4834 0004      00004         482          LH    R3,4(R4)       GET THE LENGTH OF THE STRING             00027800
00044E 5814 0000      00000         483          L     R1,0(R4)       AND ITS ADDRESS                          00027900
                                    484 *                                                                       00028000
                                    485 *        DO THE ACTUAL COMPARE                                          00028100
                                    486 *                                                                       00028200
000452 0630                         487          BCTR  R3,0           DOWN ONE FOR AN EX                       00028300
000454 4430 C88E      0088E         488          EX    R3,COMPLIM     COMPARE AS SPECIFIED                     00028400
000458                              489 COMPDONE DS    0H             GET THE OPERATOR ADDRESS                 00028500
000458 4740 C498      00498         490          BL    COMPLOW        CHECK THE OPERATOR, VALUE LESS THAN ITEM 00028600
00045C 4780 C47C      0047C         491          BE    COMPEQ         CHECK THE OPERATOR, KEYWORD EQUALS VALUE 00028700
                                    492 *                            KEYWORD IS GREATER THAN THE VALUE          00028800
000460 9502 D09B      0009B         493 COMPHI   CLI   REFOPER+3,NE       WAS OPERATOR NE                        00028900
000464 4780 C4B4      004B4         494          BE    COMPYES        HIGH SATISFIES THE EXPRESSION            00029000
000468 9505 D09B      0009B         495          CLI   REFOPER+3,GT       ALSO FOR GT                            00029100
00046C 4780 C4B4      004B4         496          BE    COMPYES        HIGH SATISFIES THE EXPRESSION            00029200
000470 9506 D09B      0009B         497          CLI   REFOPER+3,GE       AND FOR GE                             00029300
000474 4780 C4B4      004B4         498          BE    COMPYES        HIGH SATISFIES THE EXPRESSION            00029400
000478 47F0 C4BA      004BA         499          B     COMPNO         THIS ONE DOESN'T FIT                     00029500
                                    500 *                            KEYWORD IS EQUAL TO THE VALUE              00029600
00047C 9501 D09B      0009B         501 COMPEQ   CLI   REFOPER+3,EQ       WAS OPERATOR EQ                        00029700
000480 4780 C4B4      004B4         502          BE    COMPYES        EQ   SATISFIES THE EXPRESSION            00029800
000484 9504 D09B      0009B         503          CLI   REFOPER+3,LE       ALSO FOR LE                            00029900
000488 4780 C4B4      004B4         504          BE    COMPYES        EQ   SATISFIES THE EXPRESSION            00030000
00048C 9506 D09B      0009B         505          CLI   REFOPER+3,GE       AND FOR GE                             00030100
000490 4780 C4B4      004B4         506          BE    COMPYES        EQ   SATISFIES THE EXPRESSION            00030200
000494 47F0 C4BA      004BA         507          B     COMPNO         THIS ONE DOESN'T FIT                     00030300
                                    508 *                            KEYWORD IS LESS THAN THE VALUE             00030400
000498 9502 D09B      0009B         509 COMPLOW  CLI   REFOPER+3,NE       WAS OPERATOR NE                        00030500
00049C 4780 C4B4      004B4         510          BE    COMPYES        LOW  SATISFIES THE EXPRESSION            00030600
0004A0 9503 D09B      0009B         511          CLI   REFOPER+3,LT       ALSO FOR LT                            00030700
0004A4 4780 C4B4      004B4         512          BE    COMPYES        LOW  SATISFIES THE EXPRESSION            00030800
0004A8 9504 D09B      0009B         513          CLI   REFOPER+3,LE       AND FOR LE                             00030900
0004AC 4780 C4B4      004B4         514          BE    COMPYES        LOW  SATISFIES THE EXPRESSION            00031000
0004B0 47F0 C4BA      004BA         515          B     COMPNO         THIS ONE DOESN'T FIT                     00031100
                                    516 *                                                                       00031200
                                    517 *        IT FITS OR IT DOESN'T                                          00031300
                                    518 *                                                                       00031400
0004B4 41F0 0001      00001         519 COMPYES  LA    R15,1          SET A TRUE VALUE                         00031500
0004B8 07F8                         520          BR    R8             THEN RETURN                              00031600
0004BA 1BFF                         521 COMPNO   SR    R15,R15        SET A FALSE VALUE                        00031700
0004BC 07F8                         522          BR    R8             THEN RETURN                              00031800
                                    523 *                                                                       00031900
                                    524 *        SPECIAL ROUTINES TO CHECK NON-FORMATTED ITEMS                  00032000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    525 *                                                                          00032100
0004BE                              526 LIMDATE  DS    0H                                                          00032200
                                    527 *                                                                          00032300
                                    528 *        COMPARE DATES                                                     00032400
                                    529 *                                                                          00032500
0004BE 41E0 7035      00035         530          LA    R14,DS1CREDT  POINT TO CREATION DATE                      00032600
0004C2 9503 D097      00097         531          CLI   REFKEY+3,CDATE      IS THAT IT?                             00032700
0004C6 4780 C4DA      004DA         532          BE    LIMDGET       YES, THIS IS IT                             00032800
0004CA 41E0 7038      00038         533          LA    R14,DS1EXPDT  POINT TO EXPIRATION DATE                    00032900
0004CE 9505 D097      00097         534          CLI   REFKEY+3,EXPDT      IS THAT IT?                             00033000
0004D2 4780 C4DA      004DA         535          BE    LIMDGET       YES, THIS IS IT                             00033100
0004D6 41E0 704B      0004B         536          LA    R14,DS1REFD   NO, USE REFERENCE DATE                      00033200
0004DA 1BFF                         537 LIMDGET  SR    R15,R15       CLEAR A WORK REG                            00033300
0004DC 43FE 0000      00000         538          IC    R15,0(R14)    GET THE YEAR                                00033400
0004E0 4CF0 CA54      00A54         539          MH    R15,H1000     TIMES 1000                                  00033500
0004E4 1B11                         540          SR    R1,R1         CLEAR ANOTHER WORK REG                      00033600
0004E6 BF13 E001      00001         541          ICM   R1,3,1(R14)    GET THE DAYS                               00033700
0004EA 1AF1                         542          AR    R15,R1        PUT THE DATE TOGETHER                       00033800
0004EC 5810 D0A0      000A0         543          L     R1,REFNUM     GET THE ADDRESS OF THE VALUE                00033900
0004F0 5811 0000      00000         544          L     R1,0(R1)      GET THE VALUE ITSELF                        00034000
                                    545          C     R1,=A(&WIN19XX*1000) BELOW 19XX WINDOW?        Y2K DEC97 00034110
0004F4 5910 CB58      00B58         546+         C     R1,=A(72*1000)       BELOW 19XX WINDOW?        Y2K DEC97 00034110
0004F8 47B0 C500      00500         547          BNL   *+8                  NO, THEN 19XX             Y2K DEC97 00034220
0004FC 5A10 CB5C      00B5C         548          A     R1,=F'100000'        YES, THEN 20XX            Y2K DEC97 00034330
000500 19F1                         549          CR    R15,R1        COMPARE THEM                                00034400
000502 47F0 C458      00458         550          B     COMPDONE      GO CHECK OPERANDS                           00034500
000506                              551 LIMLUSE  DS    0H                                                          00034600
                                    552 *                                                                          00034700
                                    553 *        LAST USE DATE                                                     00034800
                                    554 *                                                                          00034900
000506 1BEE                         555          SR    R14,R14       CLEAR THE DATE                              00035000
000508 D503 CA4C 704B 00A4C 0004B   556          CLC   ZERO,75(R7)   CHECK FOR NO DATA                           00035100
00050E 4780 C51C      0051C         557          BE    LIMLUCMP      RIGHT, SKIP ON                              00035200
000512 D202 D0CD 704B 000CD 0004B   558          MVC   CHEKDBLW+5(3),75(R7)  MOVE IN THE LAST USE DATE            00035300
000518 4FE0 D0C8      000C8         559          CVB   R14,CHEKDBLW  CONVERT IT TO BINARY                         00035400
00051C 5810 D0A0      000A0         560 LIMLUCMP L     R1,REFNUM     GET THE ADDRESS OF THE VALUE                00035500
000520 5811 0000      00000         561          L     R1,0(R1)      GET THE VALUE                               00035600
000524 19E1                         562          CR    R14,R1        DO THE COMPARE                              00035700
000526 47F0 C458      00458         563          B     COMPDONE      THEN CHASE DOWN THE OPERANDS                00035800
00052A                              564 LIMEXT   DS    0H                                                          00035900
                                    565 *                                                                          00036000
                                    566 *        EXTENTS                                                           00036100
                                    567 *                                                                          00036200
00052A 5810 D0A0      000A0         568          L     R1,REFNUM     GET THE COMPARE VALUE ADDRESS               00036300
00052E D500 703B 1003 0003B 00003   569          CLC   DS1NOEPV,3(R1)        COMPARE THEM                          00036400
000534 47F0 C458      00458         570          B     COMPDONE      GO CHECK OPERANDS                           00036500
000538                              571 LIMBLREC DS    0H                                                          00036600
                                    572 *                                                                          00036700
                                    573 *        LRECL, BLKSZ, SECQ                                                00036800
                                    574 *                                                                          00036900
000538 5810 D0A0      000A0         575          L     R1,REFNUM     GET THE ADDRESS OF THE COMPARE VALUE        00037000
00053C 58F1 0000      00000         576          L     R15,0(R1)      THEN GET THE VALUE ITSELF                  00037100
000540 950C D097      00097         577          CLI   REFKEY+3,BLKSZ      BLOCK SIZE?                             00037200
000544 4770 C552      00552         578          BNE   LIMB1         NO, KEEP CHECKING                            00037300
000548 4810 7056      00056         579          LH    R1,DS1BLKL    COMPARE TO THE BLOCK SIZE                   00037400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00054C 191F                        580          CR    R1,R15        COMPARE THEM                                00037500
00054E 47F0 C458      00458        581          B     COMPDONE      GO SIFT THROUGH THE OPERANDS                00037600
000552 950D D097      00097        582 LIMB1    CLI   REFKEY+3,LRECL  LOGICAL RECORD LENGTH                       00037700
000556 4770 C564      00564        583          BNE   LIMB2         NO, KEEP GOING                              00037800
00055A 4810 7058      00058        584          LH    R1,DS1LRECL   COMPARE TO THE LRECL                        00037900
00055E 191F                        585          CR    R1,R15        COMPARE THEM                                00038000
000560 47F0 C458      00458        586          B     COMPDONE      GO CHECK THE OPERANDS                       00038100
000564 D201 D06E 7060 0006E 00060  587 LIMB2    MVC   HWORK,DS1SCALO+2 GET THE SECONDARY QUANTITY               00038200
00056A 4810 D06E      0006E        588          LH    R1,HWORK      DO THE COMPARE                              00038300
00056E 191F                        589          CR    R1,R15        COMPARE THEM                                00038400
000570 47F0 C458      00458        590          B     COMPDONE      THEN CHECK THE OPERANDS                     00038500
                                   591 *                                                                        00038600
                                   592 *        SPACE CHECKING ROUTINES                                         00038700
                                   593 *                                                                        00038800
000574                             594 LIMALLOC DS    0H                                                        00038900
                                   595 *                                                                        00039000
                                   596 *        ALLOC AND USED                                                  00039100
                                   597 *                                                                        00039200
000574 5810 D0A0      000A0        598          L     R1,REFNUM     GET THE ADDRESS OF THE CONVERTED NUMBER     00039300
000578 5811 0000      00000        599          L     R1,0(R1)      GET THE VALUE                               00039400
00057C 58F6 0000      00000        600          L     R15,0(R6)     GET THE AMOUNT                              00039500
000580 19F1                        601          CR    R15,R1        COMPARE THEM                                00039600
000582 47F0 C458      00458        602          B     COMPDONE      THEN CHECK THE OPERANDS                     00039700
000586                             603 LIMUNUSD DS    0H                                                        00039800
                                   604 *                                                                        00039900
                                   605 *        UNUSED                                                          00040000
                                   606 *                                                                        00040100
000586 5860 B198      00198        607          L     R6,FORMATAD   POINT TO THE FORMATTED VTOC                 00040200
                            00000  608          USING VTFMT,R6      SET ADDRESSABILITY                          00040300
00058A BFEF 6008      00008        609          ICM   R14,15,VTFUSED      GET THE AMOUNT USED                   00040400
00058E 4740 C59A      0059A        610          BM    LIMUNUAL      IF MINUS, WE DON'T KNOW                     00040500
000592 58E0 6004      00004        611          L     R14,VTFALLOC  GET ALLOC                                   00040600
000596 5BE0 6008      00008        612          S     R14,VTFUSED   MINUS THE AMOUNT USED                       00040700
00059A 5810 D0A0      000A0        613 LIMUNUAL L     R1,REFNUM     GET THE ENTERED VALUE                       00040800
00059E 5811 0000      00000        614          L     R1,0(R1)      NOW ITS VALUE FOR REAL                      00040900
0005A2 19E1                        615          CR    R14,R1        COMPARE THE VALUES                          00041000
0005A4 47F0 C458      00458        616          B     COMPDONE      THEN GO CHECK THE OPERANDS                  00041100
0005A8                             617 LIMPCT   DS    0H                                                        00041200
                                   618 *                                                                        00041300
                                   619 *        PER CENT                                                        00041400
                                   620 *                                                                        00041500
0005A8 5860 B198      00198        621          L     R6,FORMATAD   POINT TO THE FORMATTED VTOC                 00041600
                            00000  622          USING VTFMT,R6      SET ADDRESSABILITY                          00041700
0005AC 1BEE                        623          SR    R14,R14       CLEAR A REGISTER                            00041800
0005AE BFFF 6008      00008        624          ICM   R15,15,VTFUSED      GET THE AMOUNT USED                   00041900
0005B2 4740 C5CE      005CE        625          BM    LIMP100       IF UNKNOWN USED, SET 100 PER CENT           00042000
0005B6 D503 6004 CA4C 00004 00A4C  626          CLC   VTFALLOC,ZERO ZERO ALLOCATED SPACE?                       00042100
0005BC 4770 C5D6      005D6        627          BNE   LIMPCTOK      NO, CONTINUE                                00042200
0005C0 D503 6008 CA4C 00008 00A4C  628          CLC   VTFUSED,ZERO  ZERO USED SPACE?                            00042300
0005C6 4780 C5DE      005DE        629          BE    LIMPCOMP      YES, PCT IS ZERO                            00042400
                                   630 *              ZERO ALLOCATED, NONZERO USED, INCLUDE THIS ONE             00042500
0005CA 47F0 C4B4      004B4        631          B     COMPYES                                                   00042600
0005CE 41F0 0064      00064        632 LIMP100  LA    R15,100       SET UP 100 PER CENT                         00042700
0005D2 47F0 C5DE      005DE        633          B     LIMPCOMP      GO COMPARE                                  00042800
0005D6 5CE0 CA50      00A50        634 LIMPCTOK M     R14,F100      MULTIPLY BY 100 PERCENT                     00042900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0005DA 5DE0 6004      00004         635          D     R14,VTFALLOC  DIVIDE BY THE ALLOCATION                  00043000
0005DE 5810 D0A0      000A0         636 LIMPCOMP L     R1,REFNUM     GET THE VALUE ADDRESS                     00043100
0005E2 5811 0000      00000         637          L     R1,0(R1)      THEN THE VALUE                            00043200
0005E6 19F1                         638          CR    R15,R1        THEN COMPARE THEM                         00043300
0005E8 47F0 C458      00458         639          B     COMPDONE      THEN GO SIFT THROUGH THE OPERANDS         00043400
                                    640 *                                                                       00043500
                                    641 *        CCHH CHECKING IS NOT QUITE STANDARD BECAUSE THERE MAY          00043600
                                    642 *        MAY BE UP TO 16 EXTENTS TO COMPARE.  THE DATA MAY BE           00043700
                                    643 *        CC OR CCHH FORMATS.  THE DATA SET MAY BE EQUAL TO,             00043800
                                    644 *        LESS THAN, AND GREATER THAN ANY PARTICULAR VALUE.              00043900
                                    645 *                                                                       00044000
0005EC                              646 LIMCCHH  DS    0H                                                       00044100
                                    647 *                                                                       00044200
                                    648 *        FIRST SEE IF THE CCHH WAS CONVERTED                            00044300
                                    649 *              CONVERT IT IF NOT, SKIP IF IT'S DONE                     00044400
                                    650 *                                                                       00044500
0005EC 5850 D0A0      000A0         651          L     R5,REFNUM     GET THE ADDRESS OF THE COMPARISON VALUE   00044600
0005F0 5845 0000      00000         652          L     R4,0(R5)      GET THE VALUE                             00044700
0005F4 BF63 5004      00004         653          ICM   R6,3,4(R5)    GET THE COMPARE LENGTH                    00044800
0005F8 4720 C680      00680         654          BP    LIMCSET       IF IT'S SET, THE CONVERSION IS DONE       00044900
                                    655 *                      IT WASN'T SET, CONVERT FROM CHARS TO BINARY      00045000
0005FC 5810 D09C      0009C         656          L     R1,REFVAL     GET THE ADDRESS OF THE IKJIDENT           00045100
000600 5821 0000      00000         657          L     R2,0(R1)      POINT TO THE TEXT                         00045200
000604 4831 0004      00004         658          LH    R3,4(R1)      GET THE LENGTH OF THE TEXT                00045300
                                    659 *        IT SHOULD BE 4 OR 8 CHARACTERS                                 00045400
000608 D707 B070 B070 00070 00070   660          XC    DOUBLE,DOUBLE CLEAR OUT A PLACE TO WORK                 00045500
00060E 4930 CA42      00A42         661          CH    R3,H4         IS IT A CYLINDER ONLY?                    00045600
000612 4720 C636      00636         662          BH    LIMCCON2      NO, TRY FOR A CCHH                        00045700
000616 4780 C62E      0062E         663          BE    LIMCCON1      YES, JUST CONVERT IT                      00045800
                                    664          VTOCMSG CCHHLEN     LESS THAN FOUR CHARS, ISSUE A MSG         00045900
00061A 4110 CAC6      00AC6         665+         LA    R1,CCHHLEN     POINT TO THE FIRST MESSAGE               00000300
00061E 1B00                         666+         SR    R0,R0          NO SECOND LEVEL MESSAGE                  00000700
000620 9001 B078      00078         667+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES               00000800
                                    668+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                    00000900
000624 4110 B000      00000         669+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000628 58F0 B01C      0001C         670+         L     R15,VADMSG     POINT TO THE ROUTINE                     00000400
00062C 05EF                         671+         BALR  R14,R15        THEN CALL IT                             00000900
00062E 4160 0001      00001         672 LIMCCON1 LA    R6,1          SET THE COMPARE LENGTH                    00046000
000632 47F0 C662      00662         673          B     LIMCMOVE      GO MOVE IT IN                             00046100
000636 4160 0003      00003         674 LIMCCON2 LA    R6,3          SET THE COMPARE LENGTH                    00046200
00063A 4930 CA46      00A46         675          CH    R3,H8         WAS IT A CCHH?                            00046300
00063E 4780 C662      00662         676          BE    LIMCMOVE      YES, JUST THE RIGHT LENGTH                00046400
                                    677          VTOCMSG CCHHLEN     WARN THE PERSON                           00046500
000642 4110 CAC6      00AC6         678+         LA    R1,CCHHLEN     POINT TO THE FIRST MESSAGE               00000300
000646 1B00                         679+         SR    R0,R0          NO SECOND LEVEL MESSAGE                  00000700
000648 9001 B078      00078         680+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES               00000800
                                    681+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                    00000900
00064C 4110 B000      00000         682+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                 00000300
000650 58F0 B01C      0001C         683+         L     R15,VADMSG     POINT TO THE ROUTINE                     00000400
000654 05EF                         684+         BALR  R14,R15        THEN CALL IT                             00000900
000656 4930 CA46      00A46         685          CH    R3,H8         CHECK AGAIN                               00046600
00065A 4740 C662      00662         686          BL    LIMCMOVE      IS IT OVER 8 CHARS?                       00046700
00065E 4830 CA46      00A46         687          LH    R3,H8         YES, SET IT FOR THE MAX - IGNORE RR       00046800
000662 0630                         688 LIMCMOVE BCTR  R3,0          MINUS ONE FOR THE EX                      00046900
000664 4430 C894      00894         689          EX    R3,MOVECCHH   MOVE IN THE CHARS                         00047000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000668 DC07 B070 C945 00070 00945   690          TR    DOUBLE,DECTABLE TRANSLATE HEX EBCDIC TO HEX BINARY       00047100
00066E F248 D068 B070 00068 00070   691          PACK  CYLH(5),DOUBLE(9)  SQUISH OUT THE ZONES                  00047200
000674 5840 D068      00068         692          L     R4,CYLH       GET THE CCHH                               00047300
000678 5045 0000      00000         693          ST    R4,0(R5)      SAVE IT FOR LATER                          00047400
00067C 4065 0004      00004         694          STH   R6,4(R5)      SAVE THE LENGTH TOO                        00047500
000680                              695 LIMCSET  DS    0H            THE NUMBER IS CONVERTED                    00047600
                                    696 *                                                                       00047700
                                    697 *        COMPARE THE EXTENTS TO THE CCHH VALUE.                         00047800
                                    698 *        ANY EXTENT MAY BE LT, EQ, AND GT A PARTICULAR                  00047900
                                    699 *        VALUE, AND ALL THE EXTENTS MUST BE CHECKED.                    00048000
                                    700 *                                                                       00048100
000680 9200 D0D0      000D0         701          MVI   CCHHCOMP,0    CLEAR THE FLAGS                            00048200
000684 1B22                         702          SR    R2,R2         CLEAR A REG FOR AN EXTENT COUNTER          00048300
000686 BF21 703B      0003B         703          ICM   R2,1,DS1NOEPV GET THE NUMBER OF EXTENTS                   00048400
00068A 4780 C4BA      004BA         704          BZ    COMPNO        NO EXTENTS, JUST GO SEE                    00048500
                                    705 *                                                                       00048600
                                    706 *        GET EACH EXTENT AND PROCESS IT                                 00048700
                                    707 *                                                                       00048800
00068E 1B11                         708          SR    R1,R1         FIRST EXTENT                               00048900
000690 1831                         709 EXTNEXT  LR    R3,R1         GET THE CURRENT EXTENT                     00049000
000692 8930 0002      00002         710          SLL   R3,2          TIMES 4                                    00049100
000696 4403 C700      00700         711          EX    R0,GETEXT(R3) GET THE EXTENT ADDRESS INTO R3             00049200
                                    712 *                                                                       00049300
                                    713 *        CHECK THE BOTTOM OF THE EXTENT                                 00049400
                                    714 *                                                                       00049500
00069A 94F7 D0D0      000D0         715          NI    CCHHCOMP,255-CCHHX TURN OFF THE STRADDLE FLAG            00049600
00069E 4460 C89A      0089A         716          EX    R6,CLCEXTLO    DO THE COMPARE                            00049700
0006A2 4720 C6B2      006B2         717          BH    SETH1         THE FIELD IS HIGHER THAN THE VALUE         00049800
0006A6 4780 C6BA      006BA         718          BE    SETEQ1        THE FIELD IS EQUAL TO THE VALUE            00049900
0006AA 9628 D0D0      000D0         719          OI    CCHHCOMP,CCHHLOW+CCHHX  LOWER -  POSSIBLE STRADDLE       00050000
0006AE 47F0 C6BE      006BE         720          B     CHECKHI       GO CHECK THE TOP OF THIS EXTENT            00050100
0006B2 9680 D0D0      000D0         721 SETH1    OI    CCHHCOMP,CCHHHIGH  SET THE FLAG                          00050200
0006B6 47F0 C6BE      006BE         722          B     CHECKHI       GO CHECK THE TOP OF THIS EXTENT            00050300
0006BA 9640 D0D0      000D0         723 SETEQ1   OI    CCHHCOMP,CCHHEQ   SET THE FLAG                          00050400
                                    724 *                                                                       00050500
                                    725 *        CHECK THE TOP OF THE EXTENT                                    00050600
                                    726 *                                                                       00050700
0006BE 4460 C8A0      008A0         727 CHECKHI  EX    R6,CLCEXTHI   DO THE COMPARE                            00050800
0006C2 4780 C6D6      006D6         728          BE    SETEQ2        EQUAL, GO SET IT                           00050900
0006C6 4740 C6DA      006DA         729          BL    EXTSET        LOW, GO SET IT                             00051000
                                    730 *                                                                       00051100
                                    731 *        THIS IS THE ONLY SLIGHTLY TRICKY PART, A STRADDLE              00051200
                                    732 *        IF THE BOTTOM OF THE EXTENT IS LOWER THAN THE VALUE AND THE    00051300
                                    733 *        TOP OF THE EXTENT IS HIGHER THAN THE VALUE, THEN THE           00051400
                                    734 *        EQ FLAG SHOULD BE SET TOO.                                     00051500
                                    735 *                                                                       00051600
0006CA 9680 D0D0      000D0         736          OI    CCHHCOMP,CCHHHIGH  SET THE HIGH FLAG                    00051700
0006CE 9108 D0D0      000D0         737          TM    CCHHCOMP,CCHHX     WAS THE BOTTOM LOWER THAN THE VALUE? 00051800
0006D2 4780 C6DA      006DA         738          BZ    EXTSET        NO, SKIP ON                                00051900
0006D6 9640 D0D0      000D0         739 SETEQ2   OI    CCHHCOMP,CCHHEQ    SET THE EQ FLAG                      00052000
                                    740 *                                                                       00052100
                                    741 *        FINISHED WITH THAT EXTENT, CHECK FOR MORE                      00052200
                                    742 *                                                                       00052300
0006DA                              743 EXTSET   DS    0H                                                       00052400
0006DA 4111 0001      00001         744          LA    R1,1(R1)      INCREMENT THE EXTENT COUNTER               00052500
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0006DE 1912                       745          CR    R1,R2         CHECK THE EXTENT COUNTER                  00052600
0006E0 47B0 C6EC      006EC       746          BNL   LIMCOPER      THAT'S ALL FOLKS                          00052700
0006E4 91E0 D0D0      000D0       747          TM    CCHHCOMP,CCHHHIGH+CCHHEQ+CCHHLOW  ARE THEY ALL SET?      00052800
0006E8 47E0 C690      00690       748          BNO   EXTNEXT       NO, CONTINUE LOOKING                      00052900
                                  749 *                           YES, STOP NOW - ALL THE FLAGS ARE SET     00053000
0006EC 5840 D098      00098       750 LIMCOPER L     R4,REFOPER    GET THE NUMERIC VALUE OF THE KEY          00053100
0006F0 4344 C8AA      008AA       751          IC    R4,CCHHTAB(R4)  GET A FLAG MASK                         00053200
0006F4 4440 C8A6      008A6       752          EX    R4,CCHHOPER   CHECK TO SEE IF THE CONDITION IS SET      00053300
0006F8 4780 C4BA      004BA       753          BZ    COMPNO        NOT THERE                                 00053400
0006FC 47F0 C4B4      004B4       754          B     COMPYES       YES                                       00053500
                                  755 *                                                                     00053600
                                  756 *        EXECUTED INSTRUCTIONS TO GET THE ADDRESS OF THIS EXTENT      00053700
                                  757 *                                                                     00053800
000700 4130 7069      00069       758 GETEXT   LA    R3,DS1EXT1     1ST EXTENT                             00053900
000704 4130 7073      00073       759          LA    R3,DS1EXT2     2ND EXTENT                             00054000
000708 4130 707D      0007D       760          LA    R3,DS1EXT3     3RD EXTENT                             00054100
00070C 4130 B774      00774       761          LA    R3,DS3EXTNT    4TH EXTENT                             00054200
000710 4130 B77E      0077E       762          LA    R3,DS3EXTNT+10 5TH EXTENT                             00054300
000714 4130 B788      00788       763          LA    R3,DS3EXTNT+20 6TH EXTENT                             00054400
000718 4130 B792      00792       764          LA    R3,DS3EXTNT+30 7TH EXTENT                             00054500
00071C 4130 B79D      0079D       765          LA    R3,DS3ADEXT    8TH EXTENT                             00054600
000720 4130 B7A7      007A7       766          LA    R3,DS3ADEXT+10 9TH EXTENT                             00054700
000724 4130 B7B1      007B1       767          LA    R3,DS3ADEXT+20 10TH EXTENT                            00054800
000728 4130 B7BB      007BB       768          LA    R3,DS3ADEXT+30 11TH EXTENT                            00054900
00072C 4130 B7C5      007C5       769          LA    R3,DS3ADEXT+40 12TH EXTENT                            00055000
000730 4130 B7CF      007CF       770          LA    R3,DS3ADEXT+50 13TH EXTENT                            00055100
000734 4130 B7D9      007D9       771          LA    R3,DS3ADEXT+60 14TH EXTENT                            00055200
000738 4130 B7E3      007E3       772          LA    R3,DS3ADEXT+70 15TH EXTENT                            00055300
00073C 4130 B7ED      007ED       773          LA    R3,DS3ADEXT+80 16TH EXTENT                            00055400
                                  774 *                                                                     00055500
                                  775 *        ISSUE ERROR MESSAGES AND RETURN                              00055600
                                  776 *                                                                     00055700
                                  777 OBT3ERR  VTOCMSG OBT3ERRM   OBTAIN ERROR MESSAGE                      00055800
000740 4110 CA5C      00A5C       778+OBT3ERR  LA    R1,OBT3ERRM    POINT TO THE FIRST MESSAGE             00000300
000744 1B00                       779+         SR    R0,R0          NO SECOND LEVEL MESSAGE                00000700
000746 9001 B078      00078       780+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES             00000800
                                  781+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                  00000900
00074A 4110 B000      00000       782+         LA    R1,VTOCOM      POINT TO THE COMMON AREA               00000300
00074E 58F0 B01C      0001C       783+         L     R15,VADMSG     POINT TO THE ROUTINE                   00000400
000752 05EF                       784+         BALR  R14,R15        THEN CALL IT                           00000900
000754 41F0 0008      00008       785 CHECKOUT LA    R15,8          EXCLUDE THIS DATA SET                  00055900
000758 47F0 C75E      0075E       786          B     CHEKRET        RETURN                                 00056000
                                  787 *                                                                     00056100
00075C 1BFF                       788 CHECKIN  SR    R15,R15        CLEAR THE REGISTER, PROCESS THIS DATA SET 00056200
                                  789 CHEKRET  LEAVE EQ                                                     00056300
00075E 182D                       790+CHEKRET  LR    2,13                                                   00000400
000760 58DD 0004      00004       791+         L     13,4(13)                                              00000500
000764 90F1 D010      00010       792+         STM   15,1,16(13)  STORE RETURN REGS                        00000800
000768 98EC D00C      0000C       793+         LM    14,12,12(13)                     RESTORE THE REGISTERS  00650000
00076C 92FF D00C      0000C       794+         MVI   12(13),X'FF'                     SET RETURN INDICATION  01600000
000770 07FE                       795+         BR    14                               RETURN                 02000000
                           00000  796+R0       EQU   0        *USED BY O.S.                                00000100
                           00001  797+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST   00000200
                           00002  798+R2       EQU   2                                                     00000300
                           00003  799+R3       EQU   3                                                     00000400
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                          00004   800+R4       EQU   4                                                      00000500
                          00005   801+R5       EQU   5                                                      00000600
                          00006   802+R6       EQU   6                                                      00000700
                          00007   803+R7       EQU   7                                                      00000880
                          00008   804+R8       EQU   8                                                      00000900
                          00009   805+R9       EQU   9                                                      00001000
                          0000A   806+R10      EQU   10                                                     00001100
                          0000B   807+R11      EQU   11                                                     00001200
                          0000C   808+R12      EQU   12                                                     00001300
                          0000D   809+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS            00001400
                          0000E   810+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS               00001500
                          0000F   811+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE  00001600
                                  812 *                                                                     00056400
                                  813 *                                                                     00056500
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  815 *                                                                  00056700
                                  816 *        ROUTINES USED ABOVE                                       00056800
                                  817 *                                                                  00056900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   819 *                                                                   00057100
                                   820 *        PDLNUM - CONVERT FROM CHARACTERS ( EBCDIC ) TO AN INTEGER   00057200
                                   821 *              BINARY FORM, PASSED BACK VIA REGISTER 15              00057300
                                   822 *              A PARSE PDE IS THE INPUT AS SHOWN IN THE SAMPLE BELOW 00057400
                                   823 *                      LA    R1,PDL     POINT TO THE PARSE DECRIPTION 00057500
                                   824 *                      BAL   R8,PDLNUM  GO CONVERT TO NUMERICS      00057600
                                   825 *              THE ROUTINE WILL TERMINATE IF IT FINDS NON-NUMERICS 00057700
                                   826 *                 ANY CHARACTERS OTHER THEN 0-9, +, -               00057800
                                   827 *              REGISTERS 1, 2, 5, 6, AND 7 ARE USED                 00057900
                                   828 *                                                                   00058000
000772 9018 D0A4      000A4        829 PDLNUM   STM   R1,R8,PDLNSAVE SAVE THE REGISTERS                    00058100
000776 4821 0004      00004        830          LH    R2,4(R1)       GET THE STRING ADDRESS                00058200
00077A 5811 0000      00000        831          L     R1,0(R1)       GET THE STRING ADDRESS                00058300
00077E 9200 D0C4      000C4        832          MVI   PDLMINUS,0     CLEAR THE NEGATIVE NUMBER FLAG        00058400
000782 1B55                        833          SR    R5,R5          CLEAR THE CHARACTER COUNTER           00058500
000784 1BFF                        834          SR    R15,R15        CLEAR THE ANSWER                      00058600
000786 4165 1000      00000        835 PDLLOOP  LA    R6,0(R5,R1)    POINT TO THIS DIGIT                   00058700
00078A 4155 0001      00001        836          LA    R5,1(R5)       GET TO THE NEXT DIGIT                 00058800
00078E 1952                        837          CR    R5,R2          IS THIS THE END OF THE STRING?        00058900
000790 4720 C7CC      007CC        838          BH    PDLFINI        YES, EXIT                             00059000
000794 1B77                        839          SR    R7,R7          CLEAR A WORK REGISTER                 00059100
000796 4376 0000      00000        840          IC    R7,0(R6)       GET THE CHARACTER                     00059200
00079A 4B70 C7DE      007DE        841          SH    R7,PDLH240     SUBTRACT THE CHARACTER C'0'           00059300
00079E 4740 C7AC      007AC        842          BM    PDLSP          IF NEGATIVE, CHECK SPECIAL CHARACTERS 00059400
0007A2 4CF0 C7DC      007DC        843          MH    R15,PDLH10     IT'S A DIGIT, MULTIPLY PRIOR NUM BY TEN 00059500
0007A6 1AF7                        844          AR    R15,R7         ADD ON THE NEW DIGIT                  00059600
0007A8 47F0 C786      00786        845          B     PDLLOOP        AND LOOP FOR MORE                     00059700
                                   846 *                                                                   00059800
                                   847 *        CHECK FOR SPECIAL CHARACTERS                               00059900
                                   848 *                                                                   00060000
0007AC 9540 6000      00000        849 PDLSP    CLI   0(R6),C' '     IS IT A BLANK?                        00060100
0007B0 4780 C786      00786        850          BE    PDLLOOP        THEN IT'S OK                          00060200
0007B4 954E 6000      00000        851          CLI   0(R6),C'+'     IS IT A PLUS?                         00060300
0007B8 4780 C786      00786        852          BE    PDLLOOP        THAT'S ALSO OK                        00060400
0007BC 9560 6000      00000        853          CLI   0(R6),C'-'     IS IT A MINUS?                        00060500
0007C0 4770 C7CC      007CC        854          BNE   PDLFINI        NO, JUST QUIT                         00060600
0007C4 9201 D0C4      000C4        855          MVI   PDLMINUS,1     YES, NOTE IT                          00060700
0007C8 47F0 C786      00786        856          B     PDLLOOP        AND LOOK FOR MORE                     00060800
                                   857 *                                                                   00060900
                                   858 *        QUIT, AFTER SETTING R15 TO NEGATIVE IF NEEDED              00061000
                                   859 *                                                                   00061100
0007CC 9501 D0C4      000C4        860 PDLFINI  CLI   PDLMINUS,1     WAS A MINUS SIGN FOUND?               00061200
0007D0 4770 C7D6      007D6        861          BNE   PDLLEAVE       NO, EXIT                              00061300
0007D4 11FF                        862          LNR   R15,R15        YES, MAKE IT NEGATIVE                 00061400
0007D6 9818 D0A4      000A4        863 PDLLEAVE LM    R1,R8,PDLNSAVE RESTORE THE REGISTERS                 00061500
0007DA 07F8                        864          BR    R8             RETURN                                00061600
0007DC 000A                        865 PDLH10   DC    H'10'                                                00061700
0007DE 00F0                        866 PDLH240  DC    H'240'                                               00061800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   868 *                                                                        00062000
                                   869 *        ROUTINE TO CONVERT A TEXT DSCB ITEM                             00062100
                                   870 *        INTO ITS KEY NUMBER                                             00062200
                                   871 *        INPUT IS REG 4 - IKJIDENT PTR                                   00062300
                                   872 *        OUTPUT IS REG 15 - KEY NUMBER                                   00062400
                                   873 *        ENTRY VIA BAL   R8,GETKEY                                       00062500
                                   874 *                                                                        00062600
0007E0 5810 B1AC      001AC        875 GETKEY   L     R1,ATABTITL     POINT TO THE TABLE                      00062700
0007E4 4111 000C      0000C        876          LA    R1,12(R1)     POINT TO THE FIRST ENTRY                  00062800
0007E8 41F0 0001      00001        877          LA    R15,1           SET UP THE KEY NUMBER COUNTER             00062900
0007EC 5864 0000      00000        878          L     R6,0(R4)      POINT TO THE ENTERED TEXT                 00063000
0007F0 BF33 4004      00004        879          ICM   R3,3,4(R4)    GET THE LENGTH OF THE ENTERED TEXT        00063100
0007F4 47D0 C842      00842        880          BNP   GETKNOTF      NOT FOUND IF ZERO                         00063200
0007F8 0630                        881          BCTR  R3,0          MINUS ONE FOR THE EX                      00063300
0007FA 4121 0004      00004        882 GETKLOOP LA    R2,4(R1)      POINT TO THE COMPARISON TEXT              00063400
0007FE 9540 2000      00000        883          CLI   0(R2),C' '    IS IT HERE?                               00063500
000802 4770 C816      00816        884          BNE   GETKSTD       YES, THIS IS IT                           00063600
000806 4122 0001      00001        885          LA    R2,1(R2)      NO, MOVE OVER ONE MORE                    00063700
00080A 9540 2000      00000        886          CLI   0(R2),C' '    IS IT HERE?                               00063800
00080E 4770 C816      00816        887          BNE   GETKSTD       YES, THIS IS IT                           00063900
000812 4122 0001      00001        888          LA    R2,1(R2)      NO, MOVE OVER ONE MORE                    00064000
000816 4430 C846      00846        889 GETKSTD  EX    R3,GETKCOMP   COMPARE THE KEY TEXT                      00064100
00081A 4770 C832      00832        890          BNE   GETNFND       NOT HERE, BRANCH                  ABL-EXT 00064110
00081E D502 CB65 6000 00B65 00000  891          CLC   =C'EX ',0(R6) EX (FOR EXTENTS)?                 ABL-EXT 00064120
000824 4770 C844      00844        892          BNE   GETKFND       I FOUND IT                        ABL-EXT 00064130
000828 D502 CB68 2000 00B68 00000  893          CLC   =C'EXP',0(R2) EXP (FOR EXPDT)?                  ABL-EXT 00064140
00082E 4770 C844      00844        894          BNE   GETKFND       I FOUND IT                        ABL-EXT 00064150

000832                             896 GETNFND  DS    0H                                                ABL-EXT 00064170
                                   897 *        BE    GETKFND       I FOUND IT                       ?ABL-EXT 00064200
000832 4111 000C      0000C        898          LA    R1,12(R1)     GET TO THE NEXT KEY                       00064300
000836 41FF 0001      00001        899          LA    R15,1(R15)    INCREMENT THE KEY COUNTER                 00064400
00083A 49F0 C84C      0084C        900          CH    R15,H26       CHECK FOR THE END OF THE TABLE            00064500
00083E 47D0 C7FA      007FA        901          BNH   GETKLOOP      NOT YET, KEEP LOOKING                     00064600
                                   902 *                                                                        00064700
                                   903 *        KEY WAS NOT FOUND, SEND BACK A ZERO                             00064800
                                   904 *                                                                        00064900
000842 1BFF                        905 GETKNOTF SR    R15,R15       SET UP THE ZERO AND RETURN                00065000
000844 07F8                        906 GETKFND  BR    R8            JUST RETURN                               00065100
000846 D500 6000 2000 00000 00000  907 GETKCOMP CLC   0(0,R6),0(R2) EXECUTED TEXT COMPARE                     00065200
00084C 001A                        908 H26      DC    H'26'                                                   00065300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    910 *                                                                   00065500
                                    911 *        ROUTINE TO CONVERT THE OPERATOR TEXT                       00065600
                                    912 *        INTO A NUMERIC VALUE                                       00065700
                                    913 *                                                                   00065800
00084E 41F0 0001      00001         914 GETOPER  LA    R15,1         NUMERIC VALUE COUNTER                 00065900
000852 18EF                         915 GETOLOOP LR    R14,R15       GET THE NUMBER                        00066000
000854 8BE0 0001      00001         916          SLA   R14,1         MULTIPLY BY 2                         00066100
000858 41EE C8B1      008B1         917          LA    R14,OPERS(R14)      RELOCATE IT                     00066200
00085C D501 E000 1000 00000 00000   918          CLC   0(2,R14),0(R1)      IS THIS THE TEXT?               00066300
000862 4780 C88C      0088C         919          BE    GETOFND       YES, RETURN THE NUMBER                00066400
000866 41FF 0001      00001         920          LA    R15,1(R15)    NO, TRY THE NEXT ONE                  00066500
00086A 49F0 CA44      00A44         921          CH    R15,H7        CHECK FOR THE END                     00066600
00086E 4740 C852      00852         922          BL    GETOLOOP      NOT THERE YET, KEEP TRYING            00066700
                                    923          VTOCMSG OPERERR,OPERERR2  ISSUE THE MESSAGE                 00066800
000872 4110 CAFC      00AFC         924+         LA    R1,OPERERR     POINT TO THE FIRST MESSAGE           00000300
000876 4100 CB36      00B36         925+         LA    R0,OPERERR2    POINT TO THE SECOND MESSAGE          00000500
00087A 9001 B078      00078         926+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES           00000800
                                    927+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                00000900
00087E 4110 B000      00000         928+         LA    R1,VTOCOM      POINT TO THE COMMON AREA             00000300
000882 58F0 B01C      0001C         929+         L     R15,VADMSG     POINT TO THE ROUTINE                 00000400
000886 05EF                         930+         BALR  R14,R15        THEN CALL IT                         00000900
000888 41F0 0001      00001         931          LA    R15,1         SET THE DEFAULT OPERATOR, EQ          00066900
00088C 07F8                         932 GETOFND  BR    R8            THEN RETURN                           00067000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    934 *                                                                   00067200
                                    935 *        PROGRAM CONSTANTS                                          00067300
                                    936 *                                                                   00067400
00088E D500 2000 1000 00000 00000   937 COMPLIM  CLC   0(0,R2),0(R1)  COMPARE KEYWORD TO VALUE             00067500
000894 D200 B070 2000 00070 00000   938 MOVECCHH MVC   DOUBLE(0),0(R2)                                     00067600
00089A D500 3002 5000 00002 00000   939 CLCEXTLO CLC   2(0,R3),0(R5)                                       00067700
0008A0 D500 3006 5000 00006 00000   940 CLCEXTHI CLC   6(0,R3),0(R5)                                       00067800
0008A6 9100 D0D0      000D0         941 CCHHOPER TM    CCHHCOMP,0                                         00067900
0008AA 0040A0206080C0               942 CCHHTAB  DC    X'0040A0206080C0'  CCHHCOMP FLAGS                  00068000
0008B1 4040C5D8D5C5D3E3             943 OPERS    DC    C'  EQNELTLEGTGE'                                  00068100
                                    944 *    FOR  EQ, NE, LT, LE, GT, GE                                    00068200
0008BF 4020202020202020             945 EDMASK   DC    XL16'40202020202020202020202020202120'             00068300
0008CF 4040404040404040             946 BLANKS   DC    CL16'                '                             00068400
0008DF 5C5C5C5C5C5C5C5C             947 STARS    DC    CL16'****************'                             00068500
0008EF 0000000000000000             948 BLKTRTAB DC    XL64'00',X'04',XL192'00'                           00068600
                                    949 CAMSCON  CAMLST SEEK,*,*,*                                          00068700
0009F0                              950+CAMSCON  DS    0F                                ALIGN ON FULL WORD     00349401
0009F0 C0                           951+         DC    AL1(192)                          THREE BYTES OF FLAGS   00349501
0009F1 80                           952+         DC    AL1(128)                          INDICATING THE FUNC-   00349601
0009F2 00                           953+         DC    AL1(0)                            TION TO BE PERFORMED   00399601
0009F3 00                           954+         DC    AL1(0)                            NO OPTION THREE        00419601
0009F4 000009F4                     955+         DC    A(*)                              PARAMETER TWO          00441601
0009F8 000009F8                     956+         DC    A(*)                              PARAMETER THREE        00448001
0009FC 000009FC                     957+         DC    A(*)                              PARAMETER FOUR         00448801
000A00 D500 6000 2000 00000 00000   958 COMPARE  CLC   0(0,R6),0(R2)  EXECUTED COMPARE                      00068800
                           00945    959 DECTABLE EQU   *-C'A'   CONVERT EBCDIC HEX TO BINARY                00068900
000A06 0A0B0C0D0E0F                 960          DC    X'0A0B0C0D0E0F'                                    00069000
000A0C FFFFFFFFFFFFFFFF             961          DC    (C'0'-C'F'-1)X'FF'  FILLER                         00069100
000A35 0001020304050607             962          DC    X'0001020304050607 0809'                           00069200
                                    963 *                                                                   00069300
                                    964 *                                                                   00069400
                                    965 *                                                                   00069500
000A3F 00
000A40 0003                         966 H3       DC    H'3'                                               00069600
000A42 0004                         967 H4       DC    H'4'                                               00069700
000A44 0007                         968 H7       DC    H'7'                                               00069800
000A46 0008                         969 H8       DC    H'8'                                               00069900
000A48 000A                         970 H10      DC    H'10'                                              00070000
000A4A 000C                         971 H12      DC    H'12'                                              00070100
000A4C 00000000                     972 ZERO     DC    F'0'                                               00070200
000A50 00000064                     973 F100     DC    F'100'                                             00070300
000A54 03E8                         974 H1000    DC    H'1000'                                            00070400
000A56 0000
000A58 0000007F                     975 F127     DC    F'127'                                             00070500
                                    976 *                                                                   00070600
                                    977 *                                                                   00070700
                                    978          PRINT NOGEN                                                00070800
                                    979 *                                                                   00070900
                                    980 *        PROGRAM MESSAGES                                           00071000
                                    981 *                                                                   00071100
                                    982 OBT3ERRM MSG   ' VTOCCHEK - ERROR IN OBTAIN FOR FORMAT 3 DSCB '    00071200
                                    984 KEYERR   MSG   ' VTOCCHEK - LIM, AND, OR OR SUBPARM ERROR - XXXXXX '  00071300
                                    986 CCHHLEN  MSG   ' VTOCCHEK - CCHH SHOULD BE 4 OR 8 HEX CHARACTERS '  00071400
                                    988 OPERERR  MSG   ' VTOCCHEK - OPERATOR WAS NOT EQ, NE, LT, LE, GT, OR GE' 00071500
                                    990 OPERERR2 MSG   '          - WILL ASSUME EQ'                         00071600
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25
                                  992 *                                                                     00071700
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   994 *                                                                   00071900
                                   995 *                                                                   00072000
                                   996 *        P A R S E   C O N T R O L   L I S T                        00072100
                                   997 *                                                                   00072200
                                   998 *                                                                   00072300
                                   999          PRINT OFF                                                  00072400
                                  1001          PUSH  PRINT                                                00000100
                                  1002          PRINT NOGEN                                                00000200
                                  2188          POP   PRINT                                                00017600
                                  2215          PRINT ON                                                   00072600
                                  2216 *                                                                   00072700
                                  2217 *        DYNAMIC WORK AREA                                          00072800
                                  2218 *                                                                   00072900


000000                            2220 CHEKWORK DSECT                                                      00073100
000000                            2221          DS    18A            PRINT ROUTINE SAVE AREA               00073200
000048                            2222 CHARS    DS    CL16           CONVERSION TO CHARACTERS              00073300
                                  2223 CAMSEEK  CAMLST SEEK,*,*,*                                          00073400
                           00010  2232 CAMLEN   EQU   *-CAMSEEK                                           00073500
000068                            2233          DS    0D                                                   00073600
000068                            2234 CYLH     DS    F                                                    00073700
00006C                            2235          DS    X              PAD FOR CCHH                          00073800
                           00001  2236 EQ       EQU   1              EQUATES FOR OPERATOR VALUES           00073900
                           00002  2237 NE       EQU   2                                                    00074000
                           00003  2238 LT       EQU   3                                                    00074100
                           00004  2239 LE       EQU   4                                                    00074200
                           00005  2240 GT       EQU   5                                                    00074300
                           00006  2241 GE       EQU   6                                                    00074400
00006E                            2242 HWORK    DS    H                                                    00074500
000070                            2243 LIMVAL   DS    F                                                    00074600
000074                            2244 NUMBERL  DS    F                                                    00074700
000078                            2245 NUMLENL  DS    H                                                    00074800
00007A                            2246 FLAGNML  DS    X                                                    00074900
00007B                            2247 NUMKEYL  DS    X                                                    00075000
00007C                            2248 NUMBER1  DS    F                                                    00075100
000080                            2249 NUMLEN1  DS    H                                                    00075200
000082                            2250 FLAGNM1  DS    X                                                    00075300
000083                            2251 NUMKEY1  DS    X                                                    00075400
000084                            2252 NUMBER2  DS    F                                                    00075500
000088                            2253 NUMLEN2  DS    H                                                    00075600
00008A                            2254 FLAGNM2  DS    X                                                    00075700
00008B                            2255 NUMKEY2  DS    X                                                    00075800
00008C                            2256 NUMBER3  DS    F                                                    00075900
000090                            2257 NUMLEN3  DS    H                                                    00076000
000092                            2258 FLAGNM3  DS    X                                                    00076100
000093                            2259 NUMKEY3  DS    X                                                    00076200
000094                            2260 REFKEY   DS    F                                                    00076300
000098                            2261 REFOPER  DS    F                                                    00076400
00009C                            2262 REFVAL   DS    A                                                    00076500
0000A0                            2263 REFNUM   DS    A                                                    00076600
0000A4                            2264 PDLNSAVE DS    8A             REGISTER SAVE AREA FOR PDLNUM RTN     00076700
0000C4 00                         2265 PDLMINUS DC    X'00'                                               00076800
0000C8                            2266 CHEKDBLW DS    D                                                    00076900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0000D0                           2267 CCHHCOMP DS    X                                                    00077000
                           00080  2268 CCHHHIGH EQU   X'80'                                                00077100
                           00040  2269 CCHHEQ   EQU   X'40'                                                00077200
                           00020  2270 CCHHLOW  EQU   X'20'                                                00077300
                           00008  2271 CCHHX    EQU   X'08'                                                00077400
0000D8                           2272          DS    0D                                                   00077500
                           000D8  2273 LENWORK  EQU   *-CHEKWORK                                           00077600
                                  2274 *                                                                  00077700
                                  2275 *        VTOC COMMAND COMMON AREA                                  00077800
                                  2276 *                                                                  00077900
                                  2277          PRINT NOGEN                                               00078000
                                  2278          VTOCOM                                                    00078100


                                  2446 *                                                                  00078300
                                  2447 *        FORMATTED DSCB                                            00078400
                                  2448 *                                                                  00078500
                                  2449          VTFMT                                                     00078600


                                  2491          PDEDSNAM                                                  00078800


000000                            2514 DSCB1    DSECT                                                     00079100
                                  2515          IECSDSL1 1                                                00079200
                                  2597          END                                                       00079300
000B58 00011940                   2598                =A(72*1000)
000B5C 000186A0                   2599                =F'100000'
000B60 0000000000                 2600                =XL5'0000000000'
000B65 C5E740                     2601                =C'EX '
000B68 C5E7D7                     2602                =C'EXP'
```

POS.ID	REL.ID	FLAGS	ADDRESS
0001	0001	0C	0009F4
0001	0001	0C	0009F8
0001	0001	0C	0009FC

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ADDRANSR 00004 00000048 02311  00121
AL00601  00001 00000CA1 01232  01231
AL00611  00001 00000CAF 01246  01245
ANDOR1K  00002 00000034 01220  00287 00325 01217
ANDOR2K  00002 00000036 01259  00332 00370 01256
ANDOR3K  00002 00000038 01290  00377 00415 01287
ATABTITL 00004 000001AC 02344  00432 00875
BLKSZ    00001 0000000C 02200  00577
BLKSZSET 00004 000000AC 01678  01667
BLKTRTAB 00064 000008EF 00948  00142
BREAK    00004 0000009C 01631  01618
BREAKK   00002 00000030 01178  01175
CAMSCON  00004 000009F0 00950  00155
CAMSEEK  00004 00000058 02224  00155 00157 00159 00161 00163 02232
CATK     00002 0000002C 01128  01125
CCHHCOMP 00001 000000D0 02267  00701 00715 00719 00721 00723 00736 00737 00739 00747 00941
CCHHEQ   00001 00000040 02269  00723 00739 00747
CCHHHIGH 00001 00000080 02268  00721 00736 00747
CCHHLEN  00002 00000AC6 00987  00665 00678
CCHHLOW  00001 00000020 02270  00719 00747
CCHHOPER 00004 000008A6 00941  00752
CCHHTAB  00007 000008AA 00942  00751
CCHHX    00001 00000008 02271  00715 00719 00737
CDATE    00001 00000003 02191  00531
CHARSK   00002 0000003C 01351  01348
CHARSPL  00004 000000A4 01658  01647
CHECKHI  00004 000006BE 00727  00720 00722
CHECKIN  00002 0000075C 00788  00425
CHECKOUT 00004 00000754 00785  00137 00177 00186 00198 00210 00222 00239 00423
CHEKDBLW 00008 000000C8 02266  00558 00559
CHEKFMTI 00002 0000003E 00132  00131
CHEKRET  00002 0000075E 00790  00786
CHEKWORK 00001 00000000 02220  00123 02273
CLCEXTHI 00006 000008A0 00940  00727
CLCEXTLO 00006 0000089A 00939  00716
COMPARE  00006 00000A00 00958  00182 00206 00231
COMPDONE 00002 00000458 00489  00550 00563 00570 00581 00586 00590 00602 00616 00639
COMPEQ   00004 0000047C 00501  00491
COMPLIM  00006 0000088E 00937  00488
COMPLOW  00004 00000498 00509  00490
COMPNO   00002 000004BA 00521  00499 00507 00515 00704 00753
COMPYES  00004 000004B4 00519  00494 00496 00498 00502 00504 00506 00510 00512 00514 00631 00754
CONCOMP  00004 00000130 00231  00235
CONEND   00002 0000014E 00240  00217 00232
CONINC   00004 00000142 00237  00225
CONNEXT  00002 00000112 00220  00238
CONTAIN  00004 00000084 01575  00218 01557
CONTAINK 00002 00000028 01084  00216 01081
CYLH     00004 00000068 02234  00691 00692
DECTABLE 00001 00000945 00959  00690
DEND0091 00001 00000E5D 01573  01556
DEND0093 00001 00000E79 01600  01590
DEND0095 00001 00000EAC 01629  01617
DEND0097 00001 00000EDD 01656  01646
DEND0098 00001 00000EFE 01676  01666
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

DEND0100 00001 00000F2F 01703  01693
DEND0102 00001 00000F55 01730  01720
DEND0103 00001 00000F71 01750  01740
DEND0107 00001 00000FAD 01797  01785
DEND0109 00001 00000FE8 01824  01814
DEND0110 00001 00001037 01847  01835
DEND0111 00001 0000107B 01869  01858
DEND0113 00001 000010B6 01896  01886
DEND0114 00001 00001105 01919  01907
DEND0115 00001 00001149 01941  01930
DEND0117 00001 00001184 01968  01958
DEND0118 00001 000011D3 01991  01979
DEND0119 00001 00001217 02013  02002
DEND0121 00001 00001252 02040  02030
DEND0122 00001 000012A1 02063  02051
DEND0123 00001 000012E5 02085  02074
DEND0125 00001 0000130E 02114  02102
DEND0127 00001 0000133B 02143  02131
DENT0091 00001 00000DFD 01554  01556
DENT0093 00001 00000E60 01588  01590
DENT0095 00001 00000E7C 01615  01617
DENT0097 00001 00000EAF 01644  01646
DENT0098 00001 00000EDD 01664  01666
DENT0100 00001 00000F01 01691  01693
DENT0102 00001 00000F32 01718  01720
DENT0103 00001 00000F55 01738  01740
DENT0107 00001 00000F7E 01783  01785
DENT0109 00001 00000FB0 01812  01814
DENT0110 00001 00000FE8 01833  01835
DENT0111 00001 00001037 01856  01858
DENT0113 00001 0000107E 01884  01886
DENT0114 00001 000010B6 01905  01907
DENT0115 00001 00001105 01928  01930
DENT0117 00001 0000114C 01956  01958
DENT0118 00001 00001184 01977  01979
DENT0119 00001 000011D3 02000  02002
DENT0121 00001 0000121A 02028  02030
DENT0122 00001 00001252 02049  02051
DENT0123 00001 000012A1 02072  02074
DENT0125 00001 000012E8 02100  02102
DENT0127 00001 00001311 02129  02131
DOUBLE   00008 00000070 02315  00660 00660 00690 00691 00938
DSCBADDR 00004 00000194 02328  00127
DSCB1    00001 00000000 02514  00129
DSNLEN   00002 000001AA 02343  00144
DSNLNTYP 00002 00000154 02158  02153
DSNPLN   00004 0000014C 02145  02132
DSNPLNK  00002 00000048 01485  01482
DS1BLKL  00002 00000056 02558  00579
DS1CREDT 00003 00000035 02522  00530
DS1DSNAM 00044 00000000 02518  00142
DS1EXPDT 00003 00000038 02523  00533
DS1EXT1  00010 00000069 02588  00758
DS1EXT2  00010 00000073 02593  00759
DS1EXT3  00010 0000007D 02594  00760
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

DS1FMTID 00001 0000002C 02519  00136 00141
DS1IND01 00001 00000001 02582  02583
DS1IND02 00001 00000002 02578  02581
DS1LRECL 00002 00000058 02559  00584
DS1NOEPV 00001 0000003B 02524  00569 00703
DS1PTRDS 00005 00000087 02595  00150 00156
DS1REFD  00003 0000004B 02529  00536
DS1SCALO 00004 0000005E 02584  00587
DS3ADEXT 00090 0000079D 02441  00765 00766 00767 00768 00769 00770 00771 00772 00773
DS3EXTNT 00040 00000774 02435  00761 00762 00763 00764
ENDEND   00002 00000106 00211  00193 00207
ENDINC   00004 000000FA 00208  00201
ENDING   00004 00000068 01535  00194 01529
ENDKEY   00002 00000026 01063  00192 01060
ENDNEXT  00002 000000D6 00196  00209
EQ       00001 00000001 02236  00501
EXPDT    00001 00000005 02193  00534
EXTNEXT  00002 00000690 00709  00748
EXTSET   00002 000006DA 00743  00729 00738
FLAGNML  00001 0000007A 02246  00254 00256
FLAGNM1  00001 00000082 02250  00294 00296
FLAGNM2  00001 0000008A 02254  00339 00341
FLAGNM3  00001 00000092 02258  00384 00386
FMT3     00148 00000770 02431  00149 00149 00160
FMT3NO   00004 00000092 00170  00151
FORMATAD 00004 00000198 02329  00470 00480 00607 00621
FORMATK  00002 00000046 01464  00130 01461
FORMATSP 00004 00000140 02116  02103
F100     00004 00000A50 00973  00634
GE       00001 00000006 02241  00497 00505
GETEXT   00004 00000700 00758  00711
GETKCOMP 00006 00000846 00907  00889
GETKEY   00004 000007E0 00875  00260 00300 00345 00390
GETKFND  00002 00000844 00906  00892 00894
GETKLOOP 00004 000007FA 00882  00901
GETKNOTF 00002 00000842 00905  00880
GETKSTD  00004 00000816 00889  00884 00887
GETNFND  00002 00000832 00896  00890
GETOFND  00002 0000088C 00932  00919
GETOLOOP 00002 00000852 00915  00922
GETOPER  00004 0000084E 00914  00250 00290 00335 00380
GT       00001 00000005 02240  00495
HEADING  00004 000000D0 01770  01766
HEADK    00002 00000040 01393  01390
HWORK    00002 0000006E 02242  00587 00588
H1000    00002 00000A54 00974  00539
H12      00002 00000A4A 00971  00431
H26      00002 0000084C 00908  00900
H4       00002 00000A42 00967  00661
H7       00002 00000A44 00968  00921
H8       00002 00000A46 00969  00675 00685 00687
IECSDSL1 00001 00000000 02516  02517
IECSDSL3 00001 00000770 02432  02433
IECSDSL4 00001 0000070C 02391  02392
IKJ$0039 00001 00001366 02185  01005
```

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ$0041	00001	00000BED	01026	01022
IKJ$0091	00001	00000E28	01567	01566
IKJ$0095	00001	00000EAC	01628	01627
IKJ$0107	00001	00000FAD	01796	01795
IKJ$0110	00001	00001037	01846	01845
IKJ$0111	00001	0000107B	01868	01867
IKJ$0114	00001	00001105	01918	01917
IKJ$0115	00001	00001149	01940	01939
IKJ$0118	00001	000011D3	01990	01989
IKJ$0119	00001	00001217	02012	02011
IKJ$0122	00001	000012A1	02062	02061
IKJ$0123	00001	000012E5	02084	02083
IKJ$0125	00001	0000130E	02113	02112
IKJ$0127	00001	0000133B	02142	02141
IKJ@0039	00001	00000158	02183	01006
IKJ@0040	00001	0000007D	01035	01007
IKJ@0041	00001	00000BA4	01021	01020
IKJ@0043	00001	00000BFD	01050	01049
IKJ@0045	00001	00000C10	01071	01070
IKJ@0047	00001	00000C27	01092	01091
IKJ@0048	00001	00000C34	01105	01104
IKJ@0049	00001	00000C3D	01116	01115
IKJ@0051	00001	00000C4B	01136	01135
IKJ@0053	00001	00000C5A	01156	01155
IKJ@0054	00001	00000C67	01166	01165
IKJ@0056	00001	00000C77	01186	01185
IKJ@0058	00001	00000C89	01207	01206
IKJ@0060	00001	00000C9A	01228	01227
IKJ@0061	00001	00000CA9	01242	01241
IKJ@0063	00001	00000CBE	01267	01266
IKJ@0064	00001	00000CC8	01277	01276
IKJ@0066	00001	00000CD9	01298	01297
IKJ@0067	00001	00000CE3	01308	01307
IKJ@0069	00001	00000CF5	01329	01328
IKJ@0070	00001	00000D03	01339	01338
IKJ@0072	00001	00000D13	01359	01358
IKJ@0074	00001	00000D25	01380	01379
IKJ@0076	00001	00000D39	01401	01400
IKJ@0077	00001	00000D49	01411	01410
IKJ@0079	00001	00000D5A	01431	01430
IKJ@0081	00001	00000D6D	01452	01451
IKJ@0083	00001	00000D7E	01472	01471
IKJ@0085	00001	00000D91	01493	01492
IKJ@0086	00001	00000258	01520	01501
IKJ@0087	00001	00000DC8	01511	01510
IKJ@0088	00001	0000028A	01541	01522
IKJ@0089	00001	00000DFA	01532	01531
IKJ@0090	00001	000002ED	01580	01543
IKJ@0091	00001	00000E18	01564	01563
IKJ@0092	00001	00000309	01607	01582
IKJ@0093	00001	00000E78	01598	01597
IKJ@0094	00001	0000033C	01636	01609
IKJ@0095	00001	00000EA9	01625	01624
IKJ@0096	00001	0000038E	01683	01638
IKJ@0097	00001	00000EDC	01654	01653

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ@0098	00001	00000EFD	01674	01673
IKJ@0099	00001	000003BF	01710	01685
IKJ@0100	00001	00000F2E	01701	01700
IKJ@0101	00001	00000401	01757	01712
IKJ@0102	00001	00000F54	01728	01727
IKJ@0103	00001	00000F70	01748	01747
IKJ@0104	00001	0000040B	01775	01759
IKJ@0106	00001	0000043D	01804	01777
IKJ@0107	00001	00000FAA	01793	01792
IKJ@0108	00001	0000050B	01876	01806
IKJ@0109	00001	00000FE7	01822	01821
IKJ@0110	00001	0000100C	01843	01842
IKJ@0111	00001	00001054	01866	01865
IKJ@0112	00001	000005D9	01948	01878
IKJ@0113	00001	000010B5	01894	01893
IKJ@0114	00001	000010DA	01915	01914
IKJ@0115	00001	00001122	01938	01937
IKJ@0116	00001	000006A7	02020	01950
IKJ@0117	00001	00001183	01966	01965
IKJ@0118	00001	000011A8	01987	01986
IKJ@0119	00001	000011F0	02010	02009
IKJ@0120	00001	00000775	02092	02022
IKJ@0121	00001	00001251	02038	02037
IKJ@0122	00001	00001276	02059	02058
IKJ@0123	00001	000012BE	02082	02081
IKJ@0124	00001	0000079E	02121	02094
IKJ@0125	00001	0000130B	02110	02109
IKJ@0126	00001	000007CB	02149	02123
IKJ@0127	00001	00001337	02139	02138
IKJ@0128	00001	0000134A	02155	02154
IKJ@0129	00001	00001357	02166	02165
IKJ@0130	00001	00001365	02175	02174
IKJA0091	00001	00000E5D	01572	01568
IKJ00411	00001	00000BED	01025	01024
IKJ00911	00001	00000E5D	01571	01570
KEND0042	00001	00000BF3	01040	01038
KEND0044	00001	00000C05	01061	01059
KEND0046	00001	00000C18	01082	01080
KEND0048	00001	00000C34	01106	01102
KEND0050	00001	00000C43	01126	01124
KEND0052	00001	00000C51	01146	01144
KEND0055	00001	00000C6D	01176	01174
KEND0057	00001	00000C7F	01197	01195
KEND0059	00001	00000C91	01218	01216
KEND0062	00001	00000CB5	01257	01255
KEND0065	00001	00000CD0	01288	01286
KEND0068	00001	00000CEB	01319	01317
KEND0071	00001	00000D09	01349	01347
KEND0073	00001	00000D1B	01370	01368
KEND0075	00001	00000D2D	01391	01389
KEND0078	00001	00000D4F	01421	01419
KEND0080	00001	00000D62	01442	01440
KEND0082	00001	00000D73	01462	01460
KEND0084	00001	00000D86	01483	01481
KEND0128	00001	0000134A	02156	02152

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

KEYERR   00002 00000A8E 00985  00265 00305 00350 00395
KEYW0042 00001 00000BED 01036  01038
KEYW0044 00001 00000BFF 01057  01059
KEYW0046 00001 00000C12 01078  01080
KEYW0048 00001 00000C29 01100  01102
KEYW0050 00001 00000C3D 01122  01124
KEYW0052 00001 00000C4B 01142  01144
KEYW0055 00001 00000C67 01172  01174
KEYW0057 00001 00000C79 01193  01195
KEYW0059 00001 00000C8B 01214  01216
KEYW0062 00001 00000CAF 01253  01255
KEYW0065 00001 00000CCA 01284  01286
KEYW0068 00001 00000CE5 01315  01317
KEYW0071 00001 00000D03 01345  01347
KEYW0073 00001 00000D15 01366  01368
KEYW0075 00001 00000D27 01387  01389
KEYW0078 00001 00000D49 01417  01419
KEYW0080 00001 00000D5C 01438  01440
KEYW0082 00001 00000D6D 01458  01460
KEYW0084 00001 00000D80 01479  01481
KEYW0128 00001 0000133B 02150  02152
LE       00001 00000004 02239  00503 00513
LEVEL    00004 0000004C 01514  00172 01508
LEVEND   00002 000000CA 00187  00171 00183
LEVINC   00004 000000BE 00184  00180
LEVKEY   00002 00000024 01042  00170 01039
LEVNEXT  00002 000000A0 00175  00185
LIMABEND 00002 000003D2 00442  00473 00474
LIMALLOC 00002 00000574 00594  00475
LIMBLREC 00002 00000538 00571  00455
LIMB1    00004 00000552 00582  00578
LIMB2    00006 00000564 00587  00583
LIMCCHH  00002 000005EC 00646  00456
LIMCCON1 00004 0000062E 00672  00663
LIMCCON2 00004 00000636 00674  00662
LIMCMOVE 00002 00000662 00688  00673 00676 00686
LIMCOMP  00004 0000039E 00421  00288 00333 00378
LIMCOPER 00004 000006EC 00750  00746
LIMCSET  00002 00000680 00695  00654
LIMDATE  00002 000004BE 00526  00449
LIMDGET  00002 000004DA 00537  00532 00535
LIMEND   00002 000003A8 00424  00246
LIMEVAL  00004 000003AC 00430  00283 00323 00368 00413
LIMEVAL1 00004 000003E2 00448  00440
LIMEXT   00002 0000052A 00564  00454
LIMFCALD 00002 0000041C 00469  00463
LIMFORM  00002 00000406 00461  00435 00451 00452 00453
LIMFORMA 00002 0000043E 00478  00472
LIMITK   00002 00000032 01199  00245 01196
LIMLUCMP 00004 0000051C 00560  00557
LIMLUSE  00002 00000506 00551  00450
LIMPCOMP 00004 000005DE 00636  00629 00633
LIMPCT   00002 000005A8 00617  00477
LIMPCTOK 00004 000005D6 00634  00627
LIMP100  00004 000005CE 00632  00625
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

LIMUNUAL 00004 0000059A 00613  00610
LIMUNUSD 00002 00000586 00603  00476
LIMVAL   00004 00000070 02243  00285 00327 00329 00330 00372 00374 00375 00417 00419 00420 00421
LINESK   00002 0000003E 01372  01369
LINESPP  00004 000000B4 01705  01694
LRECL    00001 0000000D 02201  00582
LT       00001 00000003 02238  00511
MOVECCHH 00006 00000894 00938  00689
MSGADDRS 00004 00000078 02317  00271 00311 00356 00401 00667 00680 00780 00926
MSGTEXT2 00124 000000FC 02319  00265 00268 00269 00305 00308 00309 00350 00353 00354 00395 00398 00399
NAME0043 00001 00000BF3 01046  01048
NAME0045 00001 00000C05 01067  01069
NAME0047 00001 00000C18 01088  01090
NAME0049 00001 00000C34 01112  01114
NAME0051 00001 00000C43 01132  01134
NAME0053 00001 00000C51 01152  01154
NAME0054 00001 00000C5C 01162  01164
NAME0056 00001 00000C6D 01182  01184
NAME0058 00001 00000C7F 01203  01205
NAME0060 00001 00000C91 01224  01226
NAME0061 00001 00000CA1 01238  01240
NAME0063 00001 00000CB5 01263  01265
NAME0064 00001 00000CC0 01273  01275
NAME0066 00001 00000CD0 01294  01296
NAME0067 00001 00000CDB 01304  01306
NAME0069 00001 00000CEB 01325  01327
NAME0070 00001 00000CF7 01335  01337
NAME0072 00001 00000D09 01355  01357
NAME0074 00001 00000D1B 01376  01378
NAME0076 00001 00000D2D 01397  01399
NAME0077 00001 00000D3B 01407  01409
NAME0079 00001 00000D4F 01427  01429
NAME0081 00001 00000D62 01448  01450
NAME0083 00001 00000D73 01468  01470
NAME0085 00001 00000D86 01489  01491
NAME0129 00001 0000134A 02162  02164
NAME0130 00001 00001357 02171  02173
NE       00001 00000002 02237  00493 00509
NEND0043 00001 00000BFF 01052  01048
NEND0045 00001 00000C12 01073  01069
NEND0047 00001 00000C29 01094  01090
NEND0049 00001 00000C3D 01117  01114
NEND0051 00001 00000C4B 01137  01134
NEND0053 00001 00000C5C 01158  01154
NEND0054 00001 00000C67 01167  01164
NEND0056 00001 00000C79 01188  01184
NEND0058 00001 00000C8B 01209  01205
NEND0060 00001 00000CA1 01234  01226
NEND0061 00001 00000CAF 01248  01240
NEND0063 00001 00000CC0 01269  01265
NEND0064 00001 00000CCA 01279  01275
NEND0066 00001 00000CDB 01300  01296
NEND0067 00001 00000CE5 01310  01306
NEND0069 00001 00000CF7 01331  01327
NEND0070 00001 00000D03 01340  01337
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

NEND0072 00001 00000D15 01361  01357
NEND0074 00001 00000D27 01382  01378
NEND0076 00001 00000D3B 01403  01399
NEND0077 00001 00000D49 01412  01409
NEND0079 00001 00000D5C 01433  01429
NEND0081 00001 00000D6D 01453  01450
NEND0083 00001 00000D80 01474  01470
NEND0085 00001 00000D93 01495  01491
NEND0129 00001 00001357 02167  02164
NEND0130 00001 00001365 02176  02173
NUMBERL  00004 00000074 02244  00258 00281
NUMBER1  00004 0000007C 02248  00298 00321
NUMBER2  00004 00000084 02252  00343 00366
NUMBER3  00004 0000008C 02256  00388 00411
NUMKEYL  00001 0000007B 02247  00261 00278
NUMKEY1  00001 00000083 02251  00301 00318
NUMKEY2  00001 0000008B 02255  00346 00363
NUMKEY3  00001 00000093 02259  00391 00408
OBT3ERR  00004 00000740 00778  00166
OBT3ERRM 00002 00000A5C 00983  00778
OPERERR  00002 00000AFC 00989  00924
OPERERR2 00002 00000B36 00991  00925
OPERS    00014 000008B1 00943  00917
OUTPUTK  00002 00000044 01444  01441
PCLMAIN  00001 00000B70 01004  01005 01008 01014 01034 01035 01045 01051 01056 01066 01072 01077 01087 01093 01099 01111
                                01121 01131 01141 01151 01157 01161 01171 01181 01187 01192 01202 01208 01213 01223 01229
                                01237 01243 01252 01262 01268 01272 01278 01283 01293 01299 01303 01309 01314 01324 01330
                                01334 01344 01354 01360 01365 01375 01381 01386 01396 01402 01406 01416 01426 01432 01437
                                01447 01457 01467 01473 01478 01488 01494 01499 01504 01519 01520 01525 01540 01541 01551
                                01579 01580 01585 01606 01607 01612 01635 01636 01641 01661 01682 01683 01688 01709 01710
                                01715 01735 01756 01757 01762 01774 01775 01780 01803 01804 01809 01830 01853 01875 01876
                                01881 01902 01925 01947 01948 01953 01974 01997 02019 02020 02025 02046 02069 02091 02092
                                02097 02120 02121 02126 02148 02149 02161 02170 02179 02184
PDEDCHN  00003 00000019 02511  00184 00208
PDEDSN   00004 00000000 02496  00178 00199 00223
PDEDSNAM 00001 00000000 02495  00173 00195 00219
PDEDSNL  00002 00000004 02497  00176 00197 00221
PDL      00001 00000000 01009  00122 01018 01028 01039 01041 01060 01062 01081 01083 01103 01107 01125 01127 01145 01147
                                01175 01177 01196 01198 01217 01219 01256 01258 01287 01289 01318 01320 01348 01350 01369
                                01371 01390 01392 01420 01422 01441 01443 01461 01463 01482 01484 01508 01513 01529 01534
                                01557 01574 01591 01601 01618 01630 01647 01657 01667 01677 01694 01704 01721 01731 01741
                                01751 01766 01769 01786 01798 01815 01825 01836 01848 01859 01870 01887 01897 01908 01920
                                01931 01942 01959 01969 01980 01992 02003 02014 02031 02041 02052 02064 02075 02086 02103
                                02115 02132 02144 02153 02157 02181 02183
PDLFINI  00004 000007CC 00860  00838 00854
PDLH10   00002 000007DC 00865  00843
PDLH240  00002 000007DE 00866  00841
PDLLEAVE 00004 000007D6 00863  00861
PDLLOOP  00004 00000786 00835  00845 00850 00852 00856
PDLMINUS 00001 000000C4 02265  00832 00855 00860
PDLNSAVE 00004 000000A4 02264  00829 00863
PDLNUM   00004 00000772 00829  00257 00297 00342 00387
PDLSP    00004 000007AC 00849  00842
PEND0041 00001 00000BED 01027  01017
PEND0087 00001 00000DC8 01512  01507
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

PEND0089 00001 00000DFA 01533  01528
PEND0105 00001 00000F7B 01768  01765
POST0041 00001 00000B76 01015  01017
POST0087 00001 00000D96 01505  01507
POST0089 00001 00000DCB 01526  01528
POST0105 00001 00000F74 01763  01765
PRINTK   00002 0000003A 01321  01318
REFKEY   00004 00000094 02260  00280 00320 00365 00410 00430 00531 00534 00577 00582
REFNUM   00004 000000A0 02263  00282 00322 00367 00412 00543 00560 00568 00575 00598 00613 00636 00651
REFOPER  00004 00000098 02261  00251 00291 00336 00381 00493 00495 00497 00501 00503 00505 00509 00511 00513 00750
REFVAL   00004 0000009C 02262  00253 00293 00338 00383 00481 00656
R0       00001 00000000 00796  00270 00270 00271 00310 00310 00311 00355 00355 00356 00400 00400 00401 00666 00666 00667
                               00679 00679 00680 00711 00779 00779 00780 00925 00926
R1       00001 00000001 00797  00119 00141 00143 00144 00145 00156 00157 00158 00159 00160 00161 00226 00227 00228 00234
                               00249 00252 00253 00266 00268 00269 00271 00273 00277 00277 00278 00280 00281 00282 00289
                               00292 00293 00306 00308 00309 00311 00313 00317 00317 00318 00320 00321 00322 00334 00337
                               00338 00351 00353 00354 00356 00358 00362 00362 00363 00365 00366 00367 00379 00382 00383
                               00396 00398 00399 00401 00403 00407 00407 00408 00410 00411 00412 00465 00483 00540 00540
                               00541 00542 00543 00544 00544 00546 00548 00549 00560 00561 00561 00562 00568 00569 00575
                               00576 00579 00580 00584 00585 00588 00589 00598 00599 00599 00601 00613 00614 00614 00615
                               00636 00637 00637 00638 00656 00657 00658 00665 00667 00669 00678 00680 00682 00708 00708
                               00709 00744 00744 00745 00778 00780 00782 00829 00830 00831 00831 00835 00863 00875 00876
                               00876 00882 00898 00898 00918 00924 00926 00928 00937
R10      00001 0000000A 00806  00433 00433 00438 00439 00439 00448 00471
R11      00001 0000000B 00807  00119 00120
R13      00001 0000000D 00809  00123
R14      00001 0000000E 00810  00275 00315 00360 00405 00467 00530 00533 00536 00538 00541 00555 00555 00559 00562 00609
                               00611 00612 00615 00623 00623 00634 00635 00671 00684 00784 00915 00916 00917 00917 00918
                               00930
R15      00001 0000000F 00811  00165 00165 00251 00258 00261 00262 00262 00274 00275 00285 00291 00298 00301 00302 00302
                               00314 00315 00327 00329 00330 00336 00343 00346 00347 00347 00359 00360 00372 00374 00375
                               00381 00388 00391 00392 00392 00404 00405 00417 00419 00420 00421 00422 00422 00466 00467
                               00519 00521 00521 00537 00537 00538 00539 00542 00549 00576 00580 00585 00589 00600 00601
                               00624 00632 00638 00670 00671 00683 00684 00783 00784 00785 00788 00788 00834 00834 00843
                               00844 00862 00862 00877 00899 00899 00900 00905 00905 00914 00915 00920 00920 00921 00929
                               00930 00931
R2       00001 00000002 00798  00174 00202 00203 00204 00229 00233 00233 00234 00469 00469 00479 00480 00657 00702 00702
                               00703 00745 00830 00837 00882 00883 00885 00885 00886 00888 00888 00893 00907 00937 00938
                               00958
R3       00001 00000003 00799  00145 00179 00200 00203 00224 00227 00482 00487 00488 00658 00661 00675 00685 00687 00688
                               00689 00709 00710 00711 00758 00759 00760 00761 00762 00763 00764 00765 00766 00767 00768
                               00769 00770 00771 00772 00773 00879 00881 00889 00939 00940
R4       00001 00000004 00800  00172 00173 00184 00188 00194 00195 00208 00212 00218 00219 00237 00237 00241 00259 00266
                               00299 00306 00344 00351 00389 00396 00481 00482 00483 00652 00692 00693 00750 00751 00751
                               00752 00878 00879
R5       00001 00000005 00801  00175 00175 00176 00179 00181 00182 00196 00196 00197 00200 00204 00205 00206 00220 00220
                               00221 00224 00228 00230 00231 00430 00431 00432 00434 00437 00438 00479 00651 00652 00653
                               00693 00694 00833 00833 00835 00836 00836 00837 00939 00940
R6       00001 00000006 00802  00178 00199 00223 00436 00436 00437 00470 00600 00607 00608 00621 00622 00653 00672 00674
                               00694 00716 00727 00835 00840 00849 00851 00853 00878 00891 00907 00958
R7       00001 00000007 00803  00127 00128 00128 00129 00143 00174 00202 00226 00229 00556 00558 00839 00839 00840 00841
                               00844
R8       00001 00000008 00804  00250 00257 00260 00283 00290 00297 00300 00323 00335 00342 00345 00368 00380 00387 00390
                               00413 00520 00522 00829 00863 00864 00906 00932
R9       00001 00000009 00805  00121 00122
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

SETEQ1   00004 000006BA 00723  00718
SETEQ2   00004 000006D6 00739  00728
SETH1    00004 000006B2 00721  00717
SORTK    00002 0000002E 01148  01145
SPACEK   00002 0000002A 01108  01103
SUBAO1   00002 0000107C 01878  01229 01243
SUBAO2   00002 0000114A 01950  01268 01278
SUBAO3   00002 00001218 02022  01299 01309
SUBBREAK 00002 00000E7A 01609  01187
SUBCHARS 00002 00000EAD 01638  01360
SUBCONT  00002 00000DFB 01543  01093
SUBDSNLN 00002 0000130F 02123  01494
SUBEND   00002 00000DC9 01522  01072
SUBFORMT 00002 000012E6 02094  01473
SUBHEAD  00002 00000F72 01759  01402
SUBLEV   00002 00000D94 01501  01051
SUBLIMIT 00002 00000FAE 01806  01208
SUBLINES 00002 00000EFF 01685  01381
SUBLKEY  00004 000000E0 01826  00259 01815
SUBLOPER 00004 000000E8 01849  00249 01836
SUBLVALU 00004 000000F0 01871  00252 01859
SUBPRINT 00002 00000F30 01712  01330
SUBPRTIT 00004 000000C4 01752  01741
SUBPRTKY 00004 000000BC 01732  01721
SUBSORT  00004 00000090 01602  01591
SUBSORTS 00002 00000E5E 01582  01157
SUBTOTAL 00002 00000F7C 01777  01432
SUB1KEY  00004 000000F8 01898  00299 01887
SUB1OPER 00004 00000100 01921  00289 01908
SUB1VALU 00004 00000108 01943  00292 01931
SUB2KEY  00004 00000110 01970  00344 01959
SUB2OPER 00004 00000118 01993  00334 01980
SUB2VALU 00004 00000120 02015  00337 02003
SUB3KEY  00004 00000128 02042  00389 02031
SUB3OPER 00004 00000130 02065  00379 02052
SUB3VALU 00004 00000138 02087  00382 02075
TOTALK   00002 00000042 01423  01420
TOTALN   00004 000000D8 01799  01786
VADFORM  00004 0000002C 02300  00466
VADMSG   00004 0000001C 02296  00274 00314 00359 00404 00670 00683 00783 00929
VOLID    00006 000001B9 02352  00158
VOLS     00004 00000008 01029  01018
VTA0008  00004 00000266 00329  00326
VTA0012  00004 000002FE 00374  00371
VTA0016  00004 00000396 00419  00416
VTCFMTCC 00001 00000008 02338  00247 00462 00468
VTCFMTCD 00001 00000080 02337  00468
VTCFMTCK 00001 000001A5 02336  00247 00462 00468
VTCGETMN 00004 00000210 02371  02372
VTE0005  00002 000001D2 00284  00279
VTE0008  00004 0000026A 00330  00328
VTE0009  00002 00000256 00324  00319
VTE0012  00004 00000302 00375  00373
VTE0013  00002 000002EE 00369  00364
VTE0016  00004 0000039A 00420  00418
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

VTE0017  00002 00000386 00414  00409
VTFALLOC 00004 00000004 02455  00611 00626 00635
VTFMT    00001 00000000 02453  00608 00622 02488
VTFUSED  00004 00000008 02458  00609 00612 00624 00628
VTOCCHEK 00001 00000000 00105  00112 01011 01031 01043 01053 01064 01074 01085 01095 01109 01118 01129 01138 01149 01159
                               01168 01179 01189 01200 01210 01221 01235 01249 01260 01270 01280 01291 01301 01311 01322
                               01332 01341 01352 01362 01373 01383 01394 01404 01413 01424 01434 01445 01454 01465 01475
                               01486 01496 01502 01516 01523 01537 01544 01576 01583 01603 01610 01632 01639 01659 01679
                               01686 01706 01713 01733 01753 01760 01771 01778 01800 01807 01827 01850 01872 01879 01899
                               01922 01944 01951 01971 01994 02016 02023 02043 02066 02088 02095 02117 02124 02146 02159
                               02168 02177 02186
VTOCOM   00001 00000000 02282  00120 00273 00313 00358 00403 00465 00669 00682 00782 00928
VTP0005  00002 000001B8 00276  00255 00263
VTP0009  00002 0000023C 00316  00295 00303
VTP0013  00002 000002D4 00361  00340 00348
VTP0017  00002 0000036C 00406  00385 00393
ZERO     00004 00000A4C 00972  00556 00626 00628
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

=A(72*1000)
         00004 00000B58 02598  00546
=F'100000'
         00004 00000B5C 02599  00548
=XL5'0000000000'
         00005 00000B60 02600  00150
=C'EX '  00003 00000B65 02601  00891
=C'EXP'  00003 00000B68 02602  00893
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT        811
TOTAL RECORDS READ FROM SYSTEM LIBRARY     3061
TOTAL RECORDS PUNCHED                        93
TOTAL RECORDS PRINTED                      1736
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25
VTOCEXCP  SD  0001 000000 000754
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                      2 ********************************************************************** 00000200
                                      3 *        SPACE                                                       00000300
                                      4 * AUTHOR;  R. F. MORSE, MIT INSTRUMENTATION LABORATORY  AUG 5,1968.  00000400
                                      5 * MODIFIED;   E.BANK, FIREMAN'S FUND  MAY 15,1975.                   00000500
                                      6 * MODIFIED;   R.MILLER  FIREMAN'S FUND  MAR 20,1977.                 00000600
                                      7 * FUNCTION; THIS SUBROUTINE READS THE VOLUME TABLE OF CONTENTS (VTOC) 00000700
                                      8 *        FROM A DIRECT-ACCESS DEVICE AND PRESENTS IT TO THE CALLER   00000800
                                      9 *        ONE RECORD (DSCB) AT A TIME.                                00000900
                                     10 *                                                                   00001000
                                     11 * OPERATION; THIS ROUTINE IS A SPECIALIZED SEQUENTIAL ACCESS METHOD 00001100
                                     12 *        FOR VTOC'S.  ITS ADVANTAGE OVER ORDINARY BSAM IS THAT IT READS 00001200
                                     13 *        AN ENTIRE TRACK IN ONE REVOLUTION, THUS SAVING CONSIDERABLE 00001300
                                     14 *        TIME.  THE ROUTINE HAS THREE CALL MODES;                    00001400
                                     15 *                                                                   00001500
                                     16 *        0 - READ.  RETURNS WITH THE CORE ADDRESS OF A DSCB IN THE 3RD 00001600
                                     17 *              PARAMETER.  THE CORE CONSISTS OF 148 CONSECUTIVE BYTES, 00001700
                                     18 *              CONTAINING THE COUNT (8 BYTES), KEY (44 BYTES), AND DATA 00001800
                                     19 *              (96 BYTES) FOR ONE DSCB.  RETURN CODES (REGISTER 15)  00001900
                                     20 *              ARE;                                                  00002000
                                     21 *                      0 - NORMAL;                                   00002100
                                     22 *                      4 - END OF FILE, NO DATA PRESENTED;           00002200
                                     23 *                      8 - PERMANENT I/O ERROR.  THE KEY AND DATA AREAS 00002300
                                     24 *                          WILL BE SET TO ZEROS; THE COUNT AREA WILL 00002400
                                     25 *                          CONTAIN THE CORRECT CCHHR.  SINCE READING 00002500
                                     26 *                          IS DONE A TRACK AT A TIME, ALL THE DSCB'S 00002600
                                     27 *                          FOR THAT TRACK WILL BE MARKED IN ERROR.   00002700
                                     28 *                          READING MAY CONTINUE ON TO THE NEXT TRACK. 00002800
                                     29 *                                                                   00002900
                                     30 *        1 - OPEN.  THE SECOND PARAMETER SHOULD POINT TO            00003000
                                     31 *              A  6-BYTE FIELD CONTAINING THE VOLSER TO BE USED FOR THE 00003100
                                     32 *              ALLOCATION.                                           00003200
                                     33 *              RETURN CODES ( REG 15 )  ARE DIRECT FROM DYNAMIC ALLOC. 00003300
                                     34 *                      0 - NORMAL;                                   00003400
                                     35 *                      4 - UNABLE TO OPEN (PROBABLY MISSING DD CARD); 00003500
                                     36 *                      8 - DD CARD DID NOT REFER TO A DIRECT-ACCESS  00003600
                                     37 *                          DEVICE, OR DEVICE TYPE UNKNOWN.           00003700
                                     38 *                                                                   00003800
                                     39 *        2 - CLOSE.  NO ARGUMENTS ARE REQUIRED OR RETURNED.  RETURN 00003900
                                     40 *              CODE ( REG 15 ) IS FROM DYNAMIC UNALLOCATION.         00004000

                                     42 * ENTRY POINTS:  ENTRY IS ALWAYS TO 'VTOCEXCP'.                     00004200
                                     43 *        ARGUMENTS ARE:                                             00004300
                                     44 *                      1 - A(FULL-WORD BINARY ENTRY TYPE);           00004400
                                     45 *                      2 - A(PTR FOR DSCB);                          00004500
                                     46 *                      3 - A(VOLSER).                                00004600
                                     47 * DATA SETS:  READS VOLUME TABLE OF CONTENTS FROM ANY DIRECT-ACCESS 00004700
                                     48 *        DEVICE.  USES EXCP TO EXECUTE A CHAINED CHANNEL PROGRAM TO 00004800
                                     49 *        READ AN ENTIRE TRACK AT A TIME.                            00004900
                                     50 *                                                                   00005000
                                     51 * EXTERNAL ROUTINES:  USES SUPERVISOR ROUTINE 'IECPCNVT' TO CONVERT 00005100
                                     52 *        A RELATIVE TRACK NUMBER TO AN ABSOLUTE ADDRESS.            00005200

                                     54 * EXITS - NORMAL;  RETURNS TO CALLER VIA R14 WITH RETURN            00005400
                                     55 *        CODE IN REGISTER 15.       (SEE ABOVE FOR RETURN CODE VALUES.) 00005500
                                     56 *                                                                   00005600
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   57 * TABLES AND WORK AREAS;  USES AN AREA PROVIDED BY THE CALLER FOR       00005700
                                   58 *        ITS SAVEAREA AND FOR WORKING STORAGE IMMEDIATELY FOLLOWING     00005800
                                   59 *        THE PRIOR SAVEAREA.  IT USES GETMAIN TO OBTAIN AN AREA FOR     00005900
                                   60 *        THE DSCB'S TO BE READ INTO.  THIS COULD BE AS LARGE AS         00006000
                                   61 *        8K FOR 3350'S.  IT IS FREED BY THE FINAL CALL.                 00006100
                                   62 *                                                                       00006200
                                   63 * ATTRIBUTES;  REENTRANT, REFRESHABLE.                                  00006300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    65 * ENTER HERE AND PERFORM STANDARD REGISTER SAVE AREA HOUSEKEEPING.      00006500

                                    67 VTOCEXCP ENTER 12,8                    USE THE PROVIDED SAVEAREA        00006700
000000                              68+VTOCEXCP CSECT                                                          00004220
000000 47F0 F00E      0000E         69+         B     14(0,15)                          BRANCH AROUND ID       00450000
000004 08                           70+         DC    AL1(8)                            LENGTH OF IDENTIFIER   00550000
000005 E5E3D6C3C5E7C3D7             71+         DC    CL8'VTOCEXCP'                     IDENTIFIER             00750000
00000D 00
00000E 90EC D00C      0000C         72+         STM   14,12,12(13)                      SAVE REGISTERS         03700000
000012 18CF                         73+         LR    12,15         SET FIRST BASE REG                         00004700
000014                              74+         CNOP  0,4                                                        00004800
                            00000   75+         USING VTOCEXCP,12                                                00008600
000014 5811 0008      00008         76+         L     1,8+0(1)       NUMERIC &SAVE IMPLIES A PASSED SAVEAREA   00012600
000018 50D1 0004      00004         77+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE            00012700
00001C 501D 0008      00008         78+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                00012800
000020 182D                         79+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS        00012900
000022 18D1                         80+         LR    13,1           THIS IS MY SAVEAREA                       00013000
000024 9802 2014      00014         81+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                     00013100
                            00000   82          USING VTOCWORK,R13   SET ADDRESSABILITY FOR WORK AREA          00006800
000028 18B1                         83          LR    R11,R1                  SAVE PARAMETER REGISTER          00006900
                            00000   84          USING VTOCOM,R11              SET ADDRESSABILITY               00007000
                                    85 *                                                                       00007100
                                    86 *        POINT TO THE DCB FOR LATER REFERENCES                          00007200
                                    87 *                                                                       00007300
00002A 4180 D0C8      000C8         88          LA    RDCB,VTOCDCB   POINT TO IT                             00007400
                            00000   89          USING IHADCB,RDCB    SET ADDRESSABILITY                        00007500

                                    91 * SELECT MODE FROM CONTENTS AT ADDRESS IN REGISTER 1.                   00007700

00002E 1B22                         93          SR    RWA,RWA                 CLEAR THE REGISTER               00007900
000030 4320 B1A4      001A4         94          IC    RWA,VTCEFUNC            GET CALL MODE                    00008000
000034 8920 0002      00002         95          SLL   RWA,2                   MODE TIMES 4                     00008100
000038 47F2 C03C      0003C         96          B     *+4(RWA)                BRANCH ON MODE                   00008200

00003C 47F0 C062      00062         98          B     GETDSB                  MODE 0, GET A DSCB               00008400
000040 47F0 C128      00128         99          B     OPEN                    MODE 1, OPEN A NEW VTOC          00008500
000044 47F0 C39A      0039A        100          B     CLOSE                   MODE 2, CLOSE                    00008600
000048 47F0 C04C      0004C        101          B     RETURN0                 MODE 3 NOT DEFINED, NO OP        00008700


                                  103 ***********                                                              00008900
                                  104 * RETURNS *                                                              00009000
                                  105 ***********                                                              00009100

00004C 1BFF                       107 RETURN0   SR    R15,R15                 CLEAR THE RETURN CODE            00009300
                                  108 RETURN    LEAVE EQ                      EXIT WITH THE CURRENT RET CODE   00009400
00004E 182D                       109+RETURN    LR    2,13                                                     00000400
000050 58DD 0004      00004       110+          L     13,4(13)                                                 00000500
000054 90F1 D010      00010       111+          STM   15,1,16(13)  STORE RETURN REGS                           00000800
000058 98EC D00C      0000C       112+          LM    14,12,12(13)                RESTORE THE REGISTERS        00650000
00005C 92FF D00C      0000C       113+          MVI   12(13),X'FF'                SET RETURN INDICATION        01600000
000060 07FE                       114+          BR    14                          RETURN                       02000000
                            00000 115+R0        EQU   0        *USED BY O.S.                                   00000100
                            00001 116+R1        EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST      00000200
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                          00002   117+R2       EQU   2                                                          00000300
                          00003   118+R3       EQU   3                                                          00000400
                          00004   119+R4       EQU   4                                                          00000500
                          00005   120+R5       EQU   5                                                          00000600
                          00006   121+R6       EQU   6                                                          00000700
                          00007   122+R7       EQU   7                                                          00000880
                          00008   123+R8       EQU   8                                                          00000900
                          00009   124+R9       EQU   9                                                          00001000
                          0000A   125+R10      EQU   10                                                         00001100
                          0000B   126+R11      EQU   11                                                         00001200
                          0000C   127+R12      EQU   12                                                         00001300
                          0000D   128+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS                00001400
                          0000E   129+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                   00001500
                          0000F   130+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE     00001600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   132 *********************                                                  00009600
                                   133 * MODE 0 - GET DSCB *                                                  00009700
                                   134 *********************                                                  00009800

                                   136 * IF END-OF-FILE WAS REACHED, RETURN AT ONCE.                         00010000

000062 41F0 0004      00004        138 GETDSB   LA    R15,4                   SET THE RETURN CODE, IN CASE     00010200
000066 9110 D0C4      000C4        139          TM    MODESW,EOFSW            TEST END-OF-FILE BIT             00010300
00006A 4710 C04E      0004E        140          BO    RETURN                  RETURN CODE 4 IF ON              00010400

                                   142 * IF CHANNEL PROGRAM HAS BEEN STARTED, GO TO CHECK IT.  OTHERWISE,      00010600
                                   143 * ASSUME THERE IS AT LEAST ONE FULL BUFFER.                           00010700

00006E 9140 D0C4      000C4        145          TM    MODESW,XCPRUN           TEST IF EXCP ISSUED              00010900
000072 4710 C0BE      000BE        146          BO    XCPTEST                 BRANCH IF SO                     00011000

                                   148 * SET BUFFER ADDRESS TO NEXT DSCB AND TEST IF LAST ON TRACK.  IF NOT,   00011200
                                   149 * EXIT WITH ITS ADDRESS IN R1.                                        00011300

000076 5820 D0A4      000A4        151          L     RWA,DSCBADR             LOAD BUFFER POINTER              00011500
00007A 4122 0094      00094        152          LA    RWA,148(RWA)            ADVANCE TO NEXT DSCB             00011600
00007E 5020 D0A4      000A4        153 NDXSTORE ST    RWA,DSCBADR             STORE UPDATED POINTER            00011700
000082 5920 D0A0      000A0        154          C     RWA,DSCBLIM             TEST IF LAST DSCB IN BUFFER      00011800
000086 47B0 C0A0      000A0        155          BNL   LASTDSCB                BRANCH IF SO                     00011900
00008A 1812                        156          LR    R1,RWA                  PASS ADDRESS TO USER             00012000
00008C 5010 B194      00194        157 GETOUT   ST    R1,DSCBADDR             STORE IT FOR THE CALLER          00012100
000090 9120 D0C4      000C4        158          TM    MODESW,RDERR            TEST IF ERROR ON THIS TRACK      00012200
000094 4780 C04C      0004C        159          BZ    RETURN0                 RETURN CODE 0 IF NOT             00012300
000098 41F0 0008      00008        160          LA    R15,8                   SET THE RETURN CODE              00012400
00009C 47F0 C04E      0004E        161          B     RETURN                  RETURN CODE 8 IF ERROR           00012500

                                   163 * IF THIS IS THE LAST DSCB, MOVE IT TO THE INTERNAL BUFFER AND START    00012700
                                   164 * READING THE NEXT TRACK.                                             00012800

0000A0 D293 D134 2000 00134 00000  166 LASTDSCB MVC   BUFF(148),0(RWA)        MOVE LAST DSCB                   00013000
0000A6 5830 D0A8      000A8        167          L     RWB,TTRN                LOAD RELATIVE TRACK NUMBER       00013100
0000AA 5E30 C740      00740        168          AL    RWB,=X'00010000'        INCREMENT TO NEXT TRACK          00013200
0000AE 5030 D0A8      000A8        169          ST    RWB,TTRN                                                 00013300
0000B2 4590 C480      00480        170          BAL   RRET,EXCP               START CHANNEL PROGRAM            00013400
0000B6 4110 D134      00134        171          LA    R1,BUFF                 LOAD DSCB ADDRESS FOR CALLER     00013500
0000BA 47F0 C08C      0008C        172          B     GETOUT                  TO RETURN                        00013600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   174 * WAIT FOR CHANNEL PROGRAM COMPLETION AND TEST THE OUTCOME.                00013800

                                   176 XCPTEST  WAIT  ECB=VTOCECB                                                 00014000
0000BE 4110 D130      00130        177+XCPTEST  LA    1,VTOCECB                        LOAD PARAMETER REG 1     01900002
0000C2 4100 0001      00001        178+         LA    0,1(0,0)                       COUNT OMITTED,1 USED       00950002
0000C6 0A01                        179+         SVC   1                                LINK TO WAIT ROUTINE     01400002

0000C8 94BF D0C4      000C4        181          NI    MODESW,X'FF'-XCPRUN     TURN EXCP STARTED BIT OFF          00014200
0000CC 957F D130      00130        182          CLI   VTOCECB,X'7F'           TEST COMPLETION CODE               00014300
0000D0 4770 C0DC      000DC        183          BNE   PERMERR                 BRANCH IF ERROR                    00014400
0000D4 5820 D09C      0009C        184 SETDSCBA L     RWA,DSCBSTRT            SET BUFFER POINTER TO 1ST DSCB     00014500
0000D8 47F0 C07E      0007E        185          B     NDXSTORE                                                   00014600

                                   187 * PERMANENT ERROR FOR THIS TRACK.  ZERO THE DSCB'S AND FILL IN THE         00014800
                                   188 * CCHHR PORTIONS OF THE COUNT AREAS.                                       00014900

0000DC 9620 D0C4      000C4        190 PERMERR  OI    MODESW,RDERR            SIGNAL READ ERROR                  00015100
0000E0 94FB D108      00108        191          NI    IOBFLAG1,X'FB'          TURN OFF BIT 5 OF IOB FLAG         00015200
0000E4 943F 802C      0002C        192          NI    DCBIFLGS,X'3F'          TURN OFF BITS 0 AND 1              00015300
0000E8 5820 D09C      0009C        193          L     RWA,DSCBSTRT            LOAD ADDRESS OF FIRST DSCB         00015400
0000EC 4130 0001      00001        194          LA    RWB,1                   LOAD RECORD NUMBER                 00015500

0000F0 D793 2000 2000 00000 00000  196 DSCBELUP XC    0(148,RWA),0(RWA)       ZERO DSCB BUFFER                   00015700
0000F6 D203 2000 D12B 00000 0012B  197          MVC   0(4,RWA),IOBSEEK+3      INSERT CCHH IN COUNT FIELD         00015800
0000FC 4232 0004      00004        198          STC   RWB,4(RWA)              INSERT R IN COUNT FIELD            00015900
000100 4122 0094      00094        199          LA    RWA,148(RWA)            POINT TO NEXT BUFFER               00016000
000104 4133 0001      00001        200          LA    RWB,1(RWB)              INCREMENT RECORD NUMBER            00016100
000108 5920 D0A0      000A0        201          C     RWA,DSCBLIM             TEST FOR LAST BUFFER               00016200
00010C 47D0 C0F0      000F0        202          BNH   DSCBELUP                                                   00016300
                                   203          VTOCMSG TRACKERR       ISSUE THE ERROR MESSAGE                   00016400
000110 4110 C63C      0063C        204+         LA    R1,TRACKERR    POINT TO THE FIRST MESSAGE                 00000300
000114 1B00                        205+         SR    R0,R0          NO SECOND LEVEL MESSAGE                    00000700
000116 9001 B078      00078        206+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                 00000800
                                   207+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                      00000900
00011A 4110 B000      00000        208+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                   00000300
00011E 58F0 B01C      0001C        209+         L     R15,VADMSG     POINT TO THE ROUTINE                       00000400
000122 05EF                        210+         BALR  R14,R15        THEN CALL IT                               00000900
000124 47F0 C0D4      000D4        211          B     SETDSCBA                BRANCH TO RESET BUFFER POINTER     00016500
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  213 *****************                                                      00016700
                                  214 * MODE 1 - OPEN *                                                    00016800
                                  215 *****************                                                      00016900

                                  217 * ENTER WITH A DDNAME IN SECOND PARAMETER POSITION.  PERFORM CLOSE   00017100
                                  218 * SUBROUTINE FIRST TO BE SURE EVERYTHING IS INITIALIZED.             00017200

000128                            220 OPEN     DS    0H                                                    00017400
000128 4590 C3A2      003A2       221          BAL   RRET,CLOSESUB           CALL CLOSE SUBROUTINE         00017500

                                  223 *                                                                   00017700
                                  224 *        INITIALIZE THE DATA AREAS                                  00017800
                                  225 *                                                                   00017900
                                  226 *        FIRST THE DCB                                              00018000
00012C D233 D0C8 C6B8 000C8 006B8 227          MVC   VTOCDCB(DCBLEN),VTOCDCBM  SET UP THE DCB           00018100
                                  228 *                                                                   00018200
                                  229 *        SET UP THE JFCB LISTS                                      00018300
                                  230 *                                                                   00018400
000132 4110 D280      00280       231          LA    R1,JEXLST      POINT TO THE EXIT LIST                00018500
000136 BE17 8025      00025       232          STCM  R1,B'0111',DCBEXLSA  PUT IT INTO THE DCB              00018600
00013A 4110 D284      00284       233          LA    R1,JFCBAREA    POINT TO THE JFCB AREA                00018700
00013E 5010 D280      00280       234          ST    R1,JEXLST      AND PUT THAT INTO THE EXIT LIST       00018800
000142 9287 D280      00280       235          MVI   JEXLST,X'87'   END OF LIST, JFCB EXIT                00018900
000146 9280 D0FC      000FC       236          MVI   OPENLIST,X'80' END OF THE OPEN LIST TOO               00019000
                                  237 *        INITIALIZE THE IOB                                         00019100
00014A D227 D108 C6F0 00108 006F0 238          MVC   VTOCIOB(IOBCONL),IOBCONST START IT OUT              00019200
000150 4110 D130      00130       239          LA    R1,VTOCECB     GET THE ECB ADDRESS                   00019300
000154 5010 D10C      0010C       240          ST    R1,IOBECB      AND STORE IT INTO THE IOB             00019400
000158 5080 D11C      0011C       241          ST    RDCB,IOBDCB    STORE THE DCB ADDRESS INTO THE IOB    00019500
                                  242 *        INITIALIZE THE CAMLST                                      00019600
00015C D203 D1C8 C6A8 001C8 006A8 243          MVC   DSCBFMT4(4),DSCBCON SET UP THE FIRST WORD           00019700
000162 4110 D12B      0012B       244          LA    R1,IOBSEEK+3   SEEK ADDRESS                          00019800
000166 5010 D1CC      001CC       245          ST    R1,DSCBFMT4+4  INTO THE CAMLST                       00019900
00016A 4110 B1B9      001B9       246          LA    R1,VOLID       VOLUME SERIAL NUMBER                  00020000
00016E 5010 D1D0      001D0       247          ST    R1,DSCBFMT4+8  INTO THE CAMLST                       00020100
000172 4110 B6E0      006E0       248          LA    R1,FMT4        DSCB AREA                             00020200
000176 5010 D1D4      001D4       249          ST    R1,DSCBFMT4+12 INTO THE CAMLST                       00020300
                                  250 *                                                                   00020400
                                  251 *        ALLOCATE THE VTOC OF THE CHOSEN PACK                       00020500
                                  252 *                                                                   00020600
00017A 4110 B1B0      001B0       253          LA    R1,ADDR        POINT TO THE UNIT ADDRESS             00020700
00017E 5010 D0B4      000B4       254          ST    R1,UNITADDR    SAVE THE ADDRESS                      00020800
000182 4110 0003      00003       255          LA    R1,3           ALSO GET THE LENGTH                   00020900
000186 4010 D0B8      000B8       256          STH   R1,UNITLEN     AND SAVE IT FOR DYNAMIC ALLOCATION MACRO  00021000
00018A 4110 B1B9      001B9       257          LA    R1,VOLID       POINT TO THE VOLUME SERIAL            00021100
00018E 5010 D0AC      000AC       258          ST    R1,VOLADDR     SAVE THE ADDRESS                      00021200
000192 4110 0006      00006       259          LA    R1,6           ALSO GET THE LENGTH                   00021300
000196 4010 D0B0      000B0       260          STH   R1,VOLLEN      AND SAVE IT FOR DYNAMIC ALLOCATION MACRO  00021400
                                  261          ALLOC DSN=VTOCNM,VOL=VOLADDR,UNIT=UNITADDR,DISP=SHR,     X00021500
                                               DDNTO=DCBDDNAM,ERROR=S99FAIL                               00021600
00019A                            262+         DS    0H                                                   00009900
00019A 4110 D1D8      001D8       263+         LA    R1,DYNSP1              LOAD ADDRESS OF PARAM LIST    00011000
                          00000   264+         USING DYN1DS,R1              USE GENERATED DSECT           00011100
00019E 41F0 1004      00004       265+         LA    R15,DYN1RB             LOAD ADDRESS OF S99 RB        00012900
                          00000   266+         USING S99RB,R15                                            00013000
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0001A2 50F1 0000      00000         267+         ST    R15,0(R1)                AND STORE IN RB POINTER          00013100
0001A6 D78B 1004 1004 00004 00004   268+         XC    4(DYN1LEN-4,R1),4(R1)    ZERO PARAMETER LIST              00013200
0001AC 9214 F000      00000         269+         MVI   S99RBLN,20               MOVE IN LIST LENGTH              00013300
0001B0 9201 F001      00001         270+         MVI   S99VERB,S99VRBAL         MOVE IN VERB CODE                00013400
0001B4 41E0 1018      00018         271+         LA    R14,DYN1TUP              LOAD ADDRESS OF TU POINTERS      00013500
0001B8 50E0 F008      00008         272+         ST    R14,S99TXTPP             STORE ADDRESS IN S99 RB          00013600
0001BC 41F0 102C      0002C         273+         LA    R15,DYN1TU               POINT TO SPACE FOR TEXT UNITS    00013700
                            00000   274+         USING S99TUNIT,R15                                              00013800

                                    276+*************************************************************************** 00000600
                                    277+**   BUILD THE DSNAME TEXT UNIT                                        ** 00000700
                                    278+*************************************************************************** 00000800
0001C0 1802                         279+         LR    R0,R2                    SAVE CONTENTS OF REGISTER 2      00001200
0001C2 58E0 C718      00718         280+         L     R14,VTOCNM               LOAD ADDRESS OF DSNAME           00001400
0001C6 4820 C71C      0071C         281+         LH    R2,VTOCNM+4              LOAD LENGTH OF DSNAME            00001500
0001CA 4020 F004      00004         282+         STH   R2,S99TULNG              STORE DSNAME LENGTH              00001600
0001CE 0620                         283+         BCTR  R2,0                     DECREMENT FOR EXECUTE            00001700
0001D0 4420 C268      00268         284+         EX    R2,DYN1MVC               MOVE DSNAME                      00001800
0001D4 9202 F001      00001         285+         MVI   S99TUKEY+1,DALDSNAM      MOVE IN DSNAME KEY               00001900
0001D8 9201 F003      00003         286+         MVI   S99TUNUM+1,1             SET NUMBER FIELD                 00002000
0001DC 50F0 1018      00018         287+         ST    R15,DYN1TUP+0            STORE TEXT UNIT ADDRESS          00000600
0001E0 41FF 0032      00032         288+         LA    R15,50(R15)              BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

                                    290+*************************************************************************** 00000400
                                    291+**    DDNAME RETURN TEXT UNIT                                          ** 00000500
                                    292+*************************************************************************** 00000600
0001E4 9255 F001      00001         293+         MVI   S99TUKEY+1,DALRTDDN      SET RETURN DDNAME KEY            00000700
0001E8 9201 F003      00003         294+         MVI   S99TUNUM+1,1             SET NUMBER FIELD                 00000800
0001EC 9208 F005      00005         295+         MVI   S99TULNG+1,8             SET LENGTH FIELD                 00000900
0001F0 D207 F006 C730 00006 00730   296+         MVC   S99TUPAR(8),=CL8' '      INITIALIZE FIELD TO BLANKS       00001000
0001F6 50F0 101C      0001C         297+         ST    R15,DYN1TUP+4            STORE TEXT UNIT ADDRESS          00000600
0001FA 41FF 000E      0000E         298+         LA    R15,14(R15)              BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

                                    300+*************************************************************************** 00000600
                                    301+**       UNIT NAME TEXT UNIT                                           ** 00000700
                                    302+*************************************************************************** 00000800
0001FE 4820 D0B8      000B8         303+         LH    R2,UNITADDR+4            LOAD LENGTH OF TEXT UNIT         00000800
000202 1222                         304+         LTR   R2,R2                    TEST FOR ZERO                    00000900
000204 4780 C222      00222         305+         BZ    *+30                     IF NO TEXT UNIT, SKIP            00001000
000208 58E0 D0B4      000B4         306+         L     R14,UNITADDR             LOAD ADDRESS OF TEXT UNIT        00001100
00020C 4020 F004      00004         307+         STH   R2,S99TULNG              STORE LENGTH OF TEXT UNIT        00001700
000210 0620                         308+         BCTR  R2,0                     DECREMENT FOR EXECUTE            00001800
000212 4420 C268      00268         309+         EX    R2,DYN1MVC               MOVE IN TEXT UNIT                00001900
000216 9215 F001      00001         310+         MVI   S99TUKEY+1,DALUNIT       MOVE IN TEXT UNIT KEY            00002000
00021A 9201 F003      00003         311+         MVI   S99TUNUM+1,1             SET NUMBER FIELD                 00002500
00021E 50F0 1020      00020         312+         ST    R15,DYN1TUP+8            STORE TEXT UNIT ADDRESS          00000600
000222 41FF 000E      0000E         313+         LA    R15,14(R15)              BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

                                    315+*************************************************************************** 00001200
                                    316+**       VOLUME SERIAL TEXT UNIT                                       ** 00001300
                                    317+*************************************************************************** 00001400
000226 4820 D0B0      000B0         318+         LH    R2,VOLADDR+4             LOAD LENGTH OF TEXT UNIT         00000800
00022A 1222                         319+         LTR   R2,R2                    TEST FOR ZERO                    00000900
00022C 4780 C24A      0024A         320+         BZ    *+30                     IF NO TEXT UNIT, SKIP            00001000
000230 58E0 D0AC      000AC         321+         L     R14,VOLADDR              LOAD ADDRESS OF TEXT UNIT        00001100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000234 4020 F004      00004         322+         STH   R2,S99TULNG             STORE LENGTH OF TEXT UNIT        00001700
000238 0620                         323+         BCTR  R2,0                    DECREMENT FOR EXECUTE            00001800
00023A 4420 C268      00268         324+         EX    R2,DYN1MVC              MOVE IN TEXT UNIT                00001900
00023E 9210 F001      00001         325+         MVI   S99TUKEY+1,DALVLSER     MOVE IN TEXT UNIT KEY            00002000
000242 9201 F003      00003         326+         MVI   S99TUNUM+1,1            SET NUMBER FIELD                 00002500
000246 50F0 1024      00024         327+         ST    R15,DYN1TUP+12          STORE TEXT UNIT ADDRESS          00000600
00024A 41FF 000E      0000E         328+         LA    R15,14(R15)             BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

                                    330+*********************************************************************** 00000700
                                    331+**     DATA SET INITIAL STATUS                                     ** 00000800
                                    332+*********************************************************************** 00000900
00024E D207 F000 C738 00000 00738   333+         MVC   S99TUKEY(8),=Y(DALSTATS,1,1,X'0800')                    00001900
000254 50F0 1028      00028         334+         ST    R15,DYN1TUP+16          STORE TEXT UNIT ADDRESS          00000600
000258 41FF 0008      00008         335+         LA    R15,8(R15)              BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

00025C 9280 1028      00028         337+         MVI   DYN1TUP+16,X'80'        SET HIGH ORDER BIT ON TEXT PTRS  00022800
000260 9280 1000      00000         338+         MVI   DYN1RBP,X'80'           SET HIGH ORDER BIT ON RB PTR     00022900
000264 47F0 C26E      0026E         339+         B     *+10                    SKIP NEXT INSTRUCTION            00001500
000268 D200 F006 E000 00006 00000   340+DYN1MVC  MVC   S99TUPAR(0),0(R14)      EXECUTED MOVE                    00001700
00026E 1820                         341+         LR    R2,R0                   RESTORE CONTENTS OF REGISTER 2   00001800
                                    342+         DROP  R1,R15                  DEACTIVATE ADDRESSABILITY        00023300
000270 41E1 0004      00004         343+         LA    R14,4(R1)               POINT TO REQUEST BLOCK           00023400
                                    344+*        MACDATE Y-2 73082                                            00300002
000274 0A63                         345+         SVC   99 CALL DYNAMIC ALLOCATION                             00400002
                            00004   346+         USING DYN1RB,R14              SET UP ADDRESSABILITY            00023700
                                    347+**       NOTE  R14 HAS RB ADDRESS, R15 HAS SVC 99 RETURN CODE       ** 00023800
000276 12FF                         348+         LTR   R15,R15                 TEST RETURN CODE                 00024000
000278 4770 C4D0      004D0         349+         BNZ   S99FAIL                 BRANCH IF NON ZERO               00024100
00027C D207 8028 E060 00028 00064   350+         MVC   DCBDDNAM(8),DYN1TU+54+2                                  00024800

000000                              352+DYN1DS   DSECT                         DSECT TO MAP SVC 99 DATA         00028700
000000                              353+DYN1RBP   DS   F                       SVC 99 REQ BLOCK POINTER         00026100
000004                              354+DYN1RB    DS   5F                      SVC 99 REQUEST BLOCK             00026200
000018                              355+DYN1TUP   DS   CL20                    SPACE FOR TEXT POINTERS          00026300
00002C                              356+DYN1TU    DS   CL100                   SPACE FOR TEXT UNITS             00026500
                            00090   357+DYN1LEN   EQU  *-DYN1RBP               LENGTH OF SPACE USED             00027800
000282                              358+VTOCEXCP CSECT                                                         00029200



000282 9608 D0C4      000C4         360          OI    MODESW,ALLOCSW          SET ALLOCATE FLAG ON             00021700

                                    362 * OPEN THE VTOC.                                                       00021900

                                    364 *                                                                      00022100
                                    365 *        FIRST READ THE JFCB TO SWITCH THE DSNAME TO HEX 04'S          00022200
                                    366 *                                                                      00022300
                                    367          RDJFCB ((RDCB)),MF=(E,OPENLIST)  READ THE JFCB                00022400
000286 4110 D0FC      000FC         368+         LA    1,OPENLIST                     LOAD PARAMETER REG 1     01900002
00028A 43E1 0000      00000         369+         IC    14,0(1,0)                      SAVE OPTION BYTE         03440000
00028E 5081 0000      00000         370+         ST    RDCB,0(1,0)                    STORE INTO LIST          03620000
000292 42E1 0000      00000         371+         STC   14,0(1,0)                      RESTORE OPTION BYTE      03520001
000296 0A40                         372+         SVC   64                             ISSUE RDJFCB SVC         00200000
000298 12FF                         373          LTR   R15,R15        TEST THE RETURN CODE                    00022500
00029A 4770 C578      00578         374          BNZ   ERRJFCB        BAD NEWS                                00022600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00029E 4110 D284      00284         375          LA    R1,JFCBAREA    POINT TO THE JFCB                        00022700
                            00000   376          USING JFCB,R1        SET UP ADDRESSABILITY                    00022800
0002A2 9204 1000      00000         377          MVI   JFCBDSNM,X'04' PUT IN THE FIRST ONE                    00022900
0002A6 D22A 1001 1000 00001 00000   378          MVC   JFCBDSNM+1(L'JFCBDSNM-1),JFCBDSNM  PROPAGATE IT        00023000
0002AC 9608 1034      00034         379          OI    JFCBTSDM,JFCNWRIT  DON'T REWRITE IT                    00023100
                                    380          DROP  R1                                                     00023200
                                    381          OPEN  ((RDCB),(INPUT)),MF=(E,OPENLIST),TYPE=J  OPEN THE VTOC 00023300
0002B0 4110 D0FC      000FC         382+         LA    1,OPENLIST                       LOAD PARAMETER REG 1  01900002
0002B4 94F0 1000      00000         383+         NI    0(1),X'F0'                       CLEAR OPTION 1 BITS   03780001
0002B8 43E1 0000      00000         384+         IC    14,0(1,0)                        SAVE OPTION BYTE      03440000
0002BC 5081 0000      00000         385+         ST    RDCB,0(1,0)                      STORE INTO LIST       03620000
0002C0 42E1 0000      00000         386+         STC   14,0(1,0)                        RESTORE OPTION BYTE   03520001
0002C4 0A16                         387+         SVC   22                               ISSUE OPENJ SVC       04040000
0002C6 9110 8030      00030         388          TM    DCBOFLGS,OPENBIT        TEST IF OPEN WORKED              00023400
0002CA 4780 C518      00518         389          BZ    OPENERR                 ERROR IF OPEN FAILED             00023500

                                    391 * ISSUE AN OBTAIN FOR THE FIRST DSCB ON THE VTOC ( FORMAT 4 )          00023700
0002CE 902D D048      00048         392 D3       STM   R2,R13,EXCPSAVE         SAVE OUR REGS                    00023800
0002D2 4130 D048      00048         393          LA    R3,EXCPSAVE    POINT TO THE REGISTER SAVE AREA          00023900
0002D6 BF0F C744      00744         394          ICM   R0,B'1111',=X'00000100' FIRST DSCB                       00024000
0002DA 5810 802C      0002C         395          L     R1,DCBDEBAD             DEB ADDRESS                      00024100
0002DE 4120 D128      00128         396          LA    R2,IOBSEEK              SAVE ADDRESS OF CCHHR            00024200
0002E2 58F0 0010      00010         397          L     R15,CVT                 GET ADDRESS OF CVT               00024300
0002E6 58FF 001C      0001C         398          L     R15,CVTPCNVT(R15)       GET ADDRESS OF CONVERT ROUTINE   00024400
0002EA 05EF                         399          BALR  R14,R15                 GO TO CONVERT ROUTINE            00024500
0002EC 982D 3000      00000         400          LM    R2,R13,0(R3)            GET MY REGS BACK                 00024600
                                    401          OBTAIN DSCBFMT4               GET FORMAT 4 DSCB                00024700
0002F0 4110 D1C8      001C8         402+         LA    1,DSCBFMT4                       LOAD PARAMETER REG 1  01900002
0002F4 0A1B                         403+         SVC   27                        ISSUE OBTAIN SVC               00100019
0002F6 12FF                         404          LTR   R15,R15                 DID WE GET IT                    00024800
0002F8 4770 C530      00530         405          BNZ   OBTERR                  NO - THEN ERROR, KEEP R15        00024900
0002FC 95F4 B70C      0070C         406          CLI   DS4IDFMT,X'F4'          MAKE SURE WE HAVE FORMAT 4       00025000
000300 4770 C548      00548         407          BNE   NOTFMT4                 NO - THEN ERROR                  00025100
000304 43F0 B72A      0072A         408          IC    R15,DS4DEVDT            GET NUMBER OF DSCBS PER TRACK    00025200
000308 50F0 D098      00098         409          ST    R15,NDSCBS              SAVE THE NUMBER OF DSCBS         00025300
00030C D603 D098 D098 00098 00098   410          OC    NDSCBS,NDSCBS           MAKE SURE NOT ZERO               00025400
000312 4780 C560      00560         411          BZ    DSCBNUM0                YES - GO TELL CALLER             00025500
                                    412 *                                                                      00025600
                                    413 * OBTAIN CORE FOR CHANNEL PROGRAM AND DSCB BUFFERS.                    00025700

000316 4100 009C      0009C         415          LA    R0,156                  CORE FOR ONE DSCB AND ITS CCW    00025900
00031A 4C00 D09A      0009A         416          MH    R0,NDSCBS+2             TIMES NUMBER PER TRACK           00026000
00031E 4A00 C750      00750         417          AH    R0,=H'15'               PLUS 1 CCW AND ROUNDING          00026100
000322 5400 C748      00748         418          N     R0,=X'FFFFFFF8'         ROUND TO DOUBLE-WORD MULTIPLE    00026200
000326 5000 D090      00090         419          ST    R0,CBSIZE               SAVE SIZE OF GOTTEN CORE         00026300
                                    420          GETMAIN  R,LV=(0)             GET TRACK BUFFERS                00026400
00032A 4510 C32E      0032E         421+         BAL   1,*+4                            INDICATE GETMAIN
00032E 0A0A                         422+         SVC   10                               ISSUE GETMAIN SVC
000330 5010 D094      00094         423          ST    R1,CBADDR               SAVE ADDRESS OF GOTTEN CORE      00026500
000334 9680 D0C4      000C4         424          OI    MODESW,CBGOT            INDICATE CORE GOTTEN             00026600

                                    426 * GENERATE CHANNEL PROGRAM.  IT CONSISTS OF A 'READ R0' ORDER WITH     00026800
                                    427 * THE SKIP FLAG ON, FOLLOWED BY A 'READ COUNT-KEY-AND-DATA' ORDER FOR  00026900
                                    428 * EACH DSCB.                                                           00027000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000338 5820 D098      00098         430          L     RWA,NDSCBS              NUMBER OF DSCB'S                  00027200
00033C 8920 0003      00003         431          SLL   RWA,3                    TIMES   8                         00027300
000340 4122 1008      00008         432          LA    RWA,8(RWA,R1)           PLUS 8 AND BASE = 1ST BUFFER ADD 00027400
000344 5020 D09C      0009C         433          ST    RWA,DSCBSTRT            SAVE ADDRESS OF FIRST BUFFER     00027500

000348 5010 D118      00118         435          ST    R1,IOBSTART             ADDRESS OF CHANNEL PROGRAM       00027700
00034C D207 1000 C698 00000 00698   436          MVC   0(8,R1),INITCCW         INSERT FIRST CCW                 00027800
000352 4131 0008      00008         437          LA    RWB,8(R1)               PLACE FOR NEXT CCW               00027900
000356 4140 0001      00001         438          LA    RWC,1                   BUFFER COUNTER                   00028000

00035A D207 3000 C6A0 00000 006A0   440 CCWLOOP  MVC   0(8,RWB),READCCW        INSERT READ CCW FOR ONE DSCB     00028200
000360 5023 0000      00000         441          ST    RWA,0(RWB)              SET ITS BUFFER ADDRESS           00028300
000364 921E 3000      00000         442          MVI   0(RWB),READCKD          RESTORE COMMAND CODE             00028400
000368 5940 D098      00098         443          C     RWC,NDSCBS              TEST BUFFER COUNTER              00028500
00036C 47B0 C380      00380         444          BNL   LASTCCW                 BRANCH IF LAST BUFFER            00028600
000370 4133 0008      00008         445          LA    RWB,8(RWB)              INCREMENT CCW ADDRESS            00028700
000374 4122 0094      00094         446          LA    RWA,148(RWA)            INCREMENT BUFFER ADDRESS         00028800
000378 4144 0001      00001         447          LA    RWC,1(RWC)              INCREMENT BUFFER COUNTER         00028900
00037C 47F0 C35A      0035A         448          B     CCWLOOP                 DO NEXT BUFFER                   00029000

000380 94BF 3004      00004         450 LASTCCW  NI    4(RWB),X'FF'-CC         TURN OFF COMMAND CHAIN BIT       00029200
000384 5020 D0A0      000A0         451          ST    RWA,DSCBLIM             SAVE ADDRESS OF LAST DSCB BUFFER 00029300

                                    453 * SET OTHER THINGS AND START PROGRAM TO FILL BUFFER.                    00029500

000388 1B00                         455          SR    R0,R0                                                    00029700
00038A 5000 D0A8      000A8         456          ST    R0,TTRN                 SET RELATIVE TRACK NUMBER TO 0   00029800
00038E 948F D0C4      000C4         457          NI    MODESW,X'FF'-XCPRUN-RDERR-EOFSW   SET FLAGS OFF          00029900
000392 4590 C480      00480         458          BAL   RRET,EXCP               START CHANNEL PROGRAM            00030000
000396 47F0 C04C      0004C         459          B     RETURN0                 INDICATE SUCCESSFUL OPEN         00030100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    461 ******************                                                    00030300
                                    462 * MODE 2 - CLOSE *                                                   00030400
                                    463 ******************                                                    00030500

00039A 4590 C3A2      003A2         465 CLOSE    BAL   RRET,CLOSESUB           CALL CLOSED CLOSE SUBROUTINE     00030700
00039E 47F0 C04C      0004C         466          B     RETURN0                                                00030800


                                    468 * IF THE CHANNEL PROGRAM IS RUNNING, WAIT FOR IT BEFORE TAKING FURTHER  00031000
                                    469 * ACTION.                                                             00031100

0003A2                              471 CLOSESUB DS    0H                                                     00031300
0003A2 9140 D0C4      000C4         472          TM    MODESW,XCPRUN           TEST IF CHANNEL PROGRAM RUNNING  00031400
0003A6 4780 C3B8      003B8         473          BZ    NOEXCP                  BRANCH IF NOT                    00031500
                                    474          WAIT  ECB=VTOCECB             WAIT UNTIL COMPLETE              00031600
0003AA 4110 D130      00130         475+         LA    1,VTOCECB                         LOAD PARAMETER REG 1   01900002
0003AE 4100 0001      00001         476+         LA    0,1(0,0)                        COUNT OMITTED,1 USED     00950002
0003B2 0A01                         477+         SVC   1                                 LINK TO WAIT ROUTINE   01400002
0003B4 94BF D0C4      000C4         478          NI    MODESW,X'FF'-XCPRUN     TURN RUNNING SWITCH OFF          00031700
0003B8                              479 NOEXCP   DS    0H                                                     00031800

                                    481 * CLOSE THE DCB.                                                      00032000

0003B8 9110 8030      00030         483          TM    DCBOFLGS,OPENBIT        TEST IF DCB OPEN                 00032200
0003BC 4780 C3D2      003D2         484          BZ    NOCLOSE                 BRANCH IF NOT                    00032300
                                    485          CLOSE ((RDCB)),MF=(E,OPENLIST)   CLOSE THE VTOC                00032400
0003C0 4110 D0FC      000FC         486+         LA    1,OPENLIST                        LOAD PARAMETER REG 1   01900002
0003C4 43E1 0000      00000         487+         IC    14,0(1,0)                         SAVE OPTION BYTE       01140000
0003C8 5081 0000      00000         488+         ST    RDCB,0(1,0)                       STORE DCB ADDR IN LIST 01320000
0003CC 42E1 0000      00000         489+         STC   14,0(1,0)                         RESTORE OPTION BYTE    01340000
0003D0 0A14                         490+         SVC   20                                ISSUE CLOSE SVC        01640000
0003D2                              491 NOCLOSE  DS    0H                                                     00032500

                                    493 * FREE UP THE DDNAME AND VOLUME                                       00032700

0003D2 9108 D0C4      000C4         495          TM    MODESW,ALLOCSW          DID WE ALLOCATE A DEVICE         00032900
0003D6 47E0 C464      00464         496          BNO   NOALLOC                 NO  - THEN NOTHING TO FREEUP     00033000
0003DA 4110 8028      00028         497          LA    R1,DCBDDNAM   POINT TO THE DDNAME                      00033100
0003DE 5010 D0BC      000BC         498          ST    R1,DDNPDL     SAVE IT FOR FREE                         00033200
0003E2 4110 0008      00008         499          LA    R1,8          GET THE DDNAME LENGTH                    00033300
0003E6 4010 D0C0      000C0         500          STH   R1,DDNPDL+4   SAVE IT FOR FREE                         00033400
                                    501          FREE  UNALC,DDN=DDNPDL,ERROR=S99FAIL  FREE THE DDNAME         00033500
0003EA                              502+         DS    0H                                                     00001500
0003EA 4110 D1D8      001D8         503+         LA    R1,DYNSP1               LOAD ADDRESS OF PARAM LIST       00002600
                            00000   504+         USING DYN2DS,R1               USE GENERATED DSECT              00002700
0003EE 41F0 1004      00004         505+         LA    R15,DYN2RB              LOAD ADDRESS OF S99 RB           00005300
                            00000   506+         USING S99RB,R15                                                00005400
0003F2 50F1 0000      00000         507+         ST    R15,0(R1)               AND STORE IN RB POINTER          00005500
0003F6 D72D 1004 1004 00004 00004   508+         XC    4(DYN2LEN-4,R1),4(R1)   ZERO PARAMETER LIST              00005600
0003FC 9214 F000      00000         509+         MVI   S99RBLN,20              MOVE IN LIST LENGTH              00005700
000400 9202 F001      00001         510+         MVI   S99VERB,S99VRBUN        MOVE IN VERB CODE                00005800
000404 41E0 1018      00018         511+         LA    R14,DYN2TUP             LOAD ADDRESS OF TU POINTERS      00005900
000408 50E0 F008      00008         512+         ST    R14,S99TXTPP            STORE ADDRESS IN S99 RB          00006000
00040C 41F0 1020      00020         513+         LA    R15,DYN2TU              POINT TO SPACE FOR TEXT UNITS    00006100
                            00000   514+         USING S99TUNIT,R15                                             00006200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   516+*********************************************************************** 00000500
                                   517+**        FREE DDNAME TEXT UNIT                                     ** 00000600
                                   518+*********************************************************************** 00000700
000410 1802                        519+         LR    R0,R2                    SAVE CONTENTS OF REGISTER 2      00001200
000412 58E0 D0BC      000BC        520+         L     R14,DDNPDL               LOAD ADDRESS OF DDNAME           00001200
000416 4820 D0C0      000C0        521+         LH    R2,DDNPDL+4              LOAD LENGTH OF DDNAME            00001300
00041A 4020 F004      00004        522+         STH   R2,S99TULNG              STORE DDNAME LENGTH              00001700
00041E 0620                        523+         BCTR  R2,0                     DECREMENT FOR EXECUTE            00001800
000420 4420 C44C      0044C        524+         EX    R2,DYN2MVC               MOVE DDNAME                      00001900
000424 9201 F001      00001        525+         MVI   S99TUKEY+1,DUNDDNAM      MOVE IN DDNAME KEY               00002000
000428 9201 F003      00003        526+         MVI   S99TUNUM+1,1             SET NUMBER FIELD                 00002100
00042C 50F0 1018      00018        527+         ST    R15,DYN2TUP+0            STORE TEXT UNIT ADDRESS          00000600
000430 41FF 000E      0000E        528+         LA    R15,14(R15)              BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

                                   530+*********************************************************************** 00000400
                                   531+**     FREE EVEN IF PERMANENTLY ALLOCATED                           ** 00000500
                                   532+*********************************************************************** 00000600
000434 9207 F001      00001        533+         MVI   S99TUKEY+1,DUNUNALC      SET TEXT UNIT KEY                00000700
000438 50F0 101C      0001C        534+         ST    R15,DYN2TUP+4            STORE TEXT UNIT ADDRESS          00000600
00043C 41FF 0004      00004        535+         LA    R15,4(R15)               BUMP TEXT UNIT PTR TO NEXT SLOT  00000700

000440 9280 101C      0001C        537+         MVI   DYN2TUP+4,X'80'          SET HIGH ORDER BIT ON TEXT PTRS  00008600
000444 9280 1000      00000        538+         MVI   DYN2RBP,X'80'            SET HIGH ORDER BIT ON RB PTR     00008700
000448 47F0 C452      00452        539+         B     *+10                     SKIP NEXT INSTRUCTION            00001500
00044C D200 F006 E000 00006 00000  540+DYN2MVC  MVC   S99TUPAR(0),0(R14)       EXECUTED MOVE                    00001700
000452 1820                        541+         LR    R2,R0                    RESTORE CONTENTS OF REGISTER 2   00001800
                                   542+         DROP  R1,R15                   DEACTIVATE ADDRESSABILITY        00009100
                                   543+*        MACDATE Y-2 73082                                               00300002
000454 0A63                        544+         SVC   99 CALL DYNAMIC ALLOCATION                               00400002
000456 41E0 D1DC      001DC        545+         LA    R14,DYNSP1+4              LOAD REG 14 WITH ADDRESS OF RB  00009500
                            00004  546+         USING DYN2RB,R14               SET UP ADDRESSABILITY            00009700
00045A 12FF                        547+         LTR   R15,R15                  TEST RETURN CODE                 00009800
00045C 4770 C4D0      004D0        548+         BNZ   S99FAIL                  BRANCH IF NON ZERO               00009900
                                   549+**       NOTE.  R14 POINTS TO REQUEST BLOCK, R15 HAS RETURN CODE     ** 00010000

000000                             551+DYN2DS   DSECT                          DSECT TO MAP SVC 99 DATA         00012600
000000                             552+DYN2RBP   DS   F                        SVC 99 REQ BLOCK POINTER         00010800
000004                             553+DYN2RB    DS   5F                       SVC 99 REQUEST BLOCK             00010900
000018                             554+DYN2TUP   DS   CL8                      SPACE FOR TEXT POINTERS          00011000
000020                             555+DYN2TU    DS   CL18                     SPACE FOR TEXT UNITS             00011200
                            00032  556+DYN2LEN   EQU  *-DYN2RBP                LENGTH OF SPACE USED             00011700
000460                             557+VTOCEXCP CSECT                                                          00013100


000460 94F7 D0C4      000C4        559          NI    MODESW,X'FF'-ALLOCSW     TURN OFF ALLOCATE SW             00033600

000464                             561 NOALLOC  DS    0H                                                       00033800

                                   563 * RELEASE CORE OBTAINED FOR DSCB BUFFERS.                               00034000

000464 9180 D0C4      000C4        565          TM    MODESW,CBGOT             TEST IF CORE GOTTEN              00034200
000468 4780 C47A      0047A        566          BZ    NOFREE                   BRANCH IF NOT                    00034300
00046C 9801 D090      00090        567          LM    R0,R1,CBSIZE             LOAD SIZE AND LOCATION           00034400
                                   568          FREEMAIN  R,LV=(0),A=(1)       FREE CORE                        00034500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    569+*      OS/VS2 RELEASE 3 VERSION  -- 10/25/74                                00001603
000470 4110 1000      00000         570+         LA    1,0(0,1)                          CLEAR HI ORDER BYTE    00150802
000474 0A0A                         571+         SVC   10                                ISSUE FREEMAIN SVC     00311202
000476 947F D0C4      000C4         572          NI    MODESW,X'FF'-CBGOT      SET CORE GOTTEN BIT OFF          00034600
00047A                              573 NOFREE   DS    0H                                                       00034700

00047A 94DF D0C4      000C4         575          NI    MODESW,X'FF'-RDERR      CLEAR ERROR SWITCH               00034900
00047E 07F9                         576          BR    RRET                                                     00035000
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                  578 ****************                                                      00035200
                                  579 * EXCP ROUTINE *                                                    00035300
                                  580 ****************                                                      00035400

                                  582 * CONVERT RELATIVE TRACK ADDRESS IN 'TTRN' TO ABSOLUTE SEEK ADDRESS IN  00035600
                                  583 * 'IOBSEEK', USING SUPERVISOR CONVERSION ROUTINE.                    00035700

000480                            585 EXCP     DS    0H                                                   00035900
000480 902D D048      00048       586          STM   R2,R13,EXCPSAVE         SAVE IMPORTANT REGISTERS     00036000
000484 4130 D048      00048       587          LA    R3,EXCPSAVE             SAVE REGS FOR RESTORING AFTER CL 00036100
000488 5800 D0A8      000A8       588          L     R0,TTRN                 LOAD RELATIVE TRACK NUMBER   00036200
00048C 5810 802C      0002C       589          L     R1,DCBDEBAD             LOAD DEB ADDRESS             00036300
000490 4120 D128      00128       590          LA    R2,IOBSEEK              LOAD ADDR TO RECEIVE MBBCCHHR 00036400
000494 58F0 0010      00010       591          L     R15,CVT                 LOAD CVT ADDRESS             00036500
000498 58FF 001C      0001C       592          L     R15,CVTPCNVT(R15)       LOAD ADDR OF CONVERT ROUTINE 00036600
00049C 05EF                       593          BALR  R14,R15                 CONVERT TTRN TO MBBCCHHR     00036700
                                  594 *                                       THAT CLOBBERED BASE REG      00036800
00049E 982D 3000      00000       595          LM    R2,R13,0(R3)            RESTORE REGISTERS            00036900
0004A2 12FF                       596          LTR   R15,R15                 TEST IF EXTENT VIOLATED (RC=4) 00037000
0004A4 4770 C4C8      004C8       597          BNZ   SETEOF                  IF SO, MEANS END-OF-FILE     00037100
0004A8 D504 B70D D12B 0070D 0012B 598          CLC   DS4HPCHR,IOBSEEK+3      CHECK FOR THE LAST FMT1      00037200
0004AE 4740 C4C8      004C8       599          BL    SETEOF                  IF SO, PRETEND END-OF-FILE   00037300

                                  601 * ZERO ECB AND START CHANNEL PROGRAM.                               00037500

0004B2 1B00                       603          SR    R0,R0                                              00037700
0004B4 5000 D130      00130       604          ST    R0,VTOCECB              CLEAR ECB                    00037800
0004B8 94DF D0C4      000C4       605          NI    MODESW,X'FF'-RDERR      RESET ERROR SWITCH           00037900
                                  606          EXCP  VTOCIOB                 START CHANNEL PROGRAM        00038000
0004BC 4110 D108      00108       607+         LA    1,VTOCIOB                       LOAD PARAMETER REG 1   01900002
0004C0 0A00                       608+         SVC   0                               ISSUE SVC FOR EXCP     00100000
0004C2 9640 D0C4      000C4       609          OI    MODESW,XCPRUN           SET 'RUNNING' FLAG           00038100
0004C6 07F9                       610          BR    RRET                                               00038200

                                  612 * WHEN EXTENT IS VIOLATED, SET END-FILE AND EXIT VIA CLOSE ROUTINE.  00038400

0004C8 9610 D0C4      000C4       614 SETEOF   OI    MODESW,EOFSW            SET END-OF-FILE BIT          00038600
0004CC 47F0 C3A2      003A2       615          B     CLOSESUB                EXIT VIA CLOSE SUBROUTINE    00038700
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  617 ********************************                                      00038900
                                  618 * DAIRFAIL ROUTINE             *                                      00039000
                                  619 ********************************                                      00039100
0004D0 18FA                       620 S99FAIL  LR    R15,RRCODE     SAVE THE RETURN CODE                  00039200
                                  621          S99FAIL MF=(E,S99FLIST,S99FLEN)  ISSUE THE APPROPRIATE MSG  00039300
0004D2                            622+         DS    0H                                                     00000700
                            00018 623+S99FLEN  EQU   24                     LENGTH OF PARAMETER LIST       00001800
0004D2 4110 D268      00268       624+         LA    R1,S99FLIST        LOAD DAIRFAIL PARAM LIST ADDRESS    00002100
0004D6 50E1 0000      00000       625+         ST    R14,0(R1)          STORE S99 RB ADDRESS                00003000
0004DA 41E1 0014      00014       626+         LA    R14,20(R1)         LOAD ADDR RET CODE FLD              00003900
0004DE 50FE 0000      00000       627+         ST    R15,0(R14)         STORE RET CODE                      00004000
0004E2 50E1 0004      00004       628+         ST    R14,4(R1)          AND STORE ITS ADDRESS               00004100
0004E6 41E0 C74C      0074C       629+         LA    R14,=A(0)          LOAD ADDR OF FULLWORD OF 0          00004200
0004EA 50E1 0008      00008       630+         ST    R14,8(R1)          STORE IT.                           00004300
0004EE 41E0 C752      00752       631+         LA    R14,=X'8032'       LOAD ADDRESS OF CALLERID            00004500
0004F2 50E1 000C      0000C       632+         ST    R14,12(R1)          AND STORE IT                       00004600
0004F6 D703 1010 1010 00010 00010 633+         XC    16(4,R1),16(R1)    CLEAR CPPL POINTER                  00004700
0004FC                            634+         CNOP  0,4                                                    04900000
0004FC 45F0 C510      00510       635+         BAL   15,*+20            BRANCH AROUND CONSTANTS             04950000
000500 00000508                   636+         DC    A(*+8)             ADDR. OF PARM. LIST                 05050000
000504 00000000                   637+         DC    A(0)                DCB ADDRESS PARAMETER              06650000
000508 C9D2D1C5C6C6F1F8           638+         DC    CL8'IKJEFF18'       EP PARAMETER                       06750000
000510 0A06                       639+         SVC   6                   ISSUE LINK SVC                     48000000
000512 18FA                       640          LR    R15,RRCODE     RELOAD THE RETURN CODE                00039400
000514 47F0 C04E      0004E       641          B     RETURN         AND THEN EXIT                         00039500


                                  643 *                                                                     00039700
                                  644 *        VARIOUS OTHER ERROR ROUTINES                                 00039800
                                  645 *                                                                     00039900
                                  646 OPENERR  VTOCMSG OPENERRM  ISSUE THE MESSAGE                          00040000
000518 4110 C594      00594       647+OPENERR  LA    R1,OPENERRM    POINT TO THE FIRST MESSAGE            00000300
00051C 1B00                       648+         SR    R0,R0          NO SECOND LEVEL MESSAGE               00000700
00051E 9001 B078      00078       649+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES            00000800
                                  650+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                 00000900
000522 4110 B000      00000       651+         LA    R1,VTOCOM      POINT TO THE COMMON AREA              00000300
000526 58F0 B01C      0001C       652+         L     R15,VADMSG     POINT TO THE ROUTINE                  00000400
00052A 05EF                       653+         BALR  R14,R15        THEN CALL IT                          00000900
00052C 47F0 C58C      0058C       654          B     ERRET          THEN RETURN                           00040100
                                  655 OBTERR   VTOCMSG OBTERRM  ISSUE THE MESSAGE                           00040200
000530 4110 C5BA      005BA       656+OBTERR   LA    R1,OBTERRM     POINT TO THE FIRST MESSAGE            00000300
000534 1B00                       657+         SR    R0,R0          NO SECOND LEVEL MESSAGE               00000700
000536 9001 B078      00078       658+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES            00000800
                                  659+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                 00000900
00053A 4110 B000      00000       660+         LA    R1,VTOCOM      POINT TO THE COMMON AREA              00000300
00053E 58F0 B01C      0001C       661+         L     R15,VADMSG     POINT TO THE ROUTINE                  00000400
000542 05EF                       662+         BALR  R14,R15        THEN CALL IT                          00000900
000544 47F0 C58C      0058C       663          B     ERRET          THEN RETURN                           00040300
                                  664 NOTFMT4  VTOCMSG NOTFMT4M  ISSUE THE MESSAGE                          00040400
000548 4110 C5DA      005DA       665+NOTFMT4  LA    R1,NOTFMT4M    POINT TO THE FIRST MESSAGE            00000300
00054C 1B00                       666+         SR    R0,R0          NO SECOND LEVEL MESSAGE               00000700
00054E 9001 B078      00078       667+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES            00000800
                                  668+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                 00000900
000552 4110 B000      00000       669+         LA    R1,VTOCOM      POINT TO THE COMMON AREA              00000300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000556 58F0 B01C      0001C         670+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
00055A 05EF                         671+         BALR  R14,R15        THEN CALL IT                              00000900
00055C 47F0 C58C      0058C         672          B     ERRET          THEN RETURN                               00040500
                                    673 DSCBNUM0 VTOCMSG DSCBNUMM  ISSUE THE MESSAGE                             00040600
000560 4110 C606      00606         674+DSCBNUM0 LA    R1,DSCBNUMM    POINT TO THE FIRST MESSAGE                00000300
000564 1B00                         675+         SR    R0,R0          NO SECOND LEVEL MESSAGE                   00000700
000566 9001 B078      00078         676+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    677+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
00056A 4110 B000      00000         678+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
00056E 58F0 B01C      0001C         679+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
000572 05EF                         680+         BALR  R14,R15        THEN CALL IT                              00000900
000574 47F0 C58C      0058C         681          B     ERRET          THEN RETURN                               00040700
                                    682 *                                                                        00040800
                                    683 ERRJFCB  VTOCMSG ERRJFCBM   ERROR IN READING JFCB                        00040900
000578 4110 C66E      0066E         684+ERRJFCB  LA    R1,ERRJFCBM    POINT TO THE FIRST MESSAGE                00000300
00057C 1B00                         685+         SR    R0,R0          NO SECOND LEVEL MESSAGE                   00000700
00057E 9001 B078      00078         686+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    687+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                     00000900
000582 4110 B000      00000         688+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000586 58F0 B01C      0001C         689+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
00058A 05EF                         690+         BALR  R14,R15        THEN CALL IT                              00000900
                                    691 *                                                                        00041000
00058C 41F0 0008      00008         692 ERRET    LA    R15,8          SET AN ERROR RETURN CODE                  00041100
000590 47F0 C04E      0004E         693          B     RETURN         THEN EXIT                                 00041200
                                    694 *                                                                        00041300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    696 ********************************                                    00041500
                                    697 * CONSTANTS, VARIABLES, ETC... *                                    00041600
                                    698 ********************************                                    00041700

                                    700 *        ERROR MESSAGES                                            00041900
                                    701 *                                                                  00042000
                                    702 OPENERRM MSG   ' VTOCEXCP - ERROR IN OPENING VTOC '                00042100
000594 0026000040E5E3D6             703+OPENERRM DC    H'38',H'0',C' VTOCEXCP - ERROR IN OPENING VTOC '    00000500
                                    704 OBTERRM  MSG   ' VTOCEXCP - ERROR IN OBTAIN '                      00042200
0005BA 0020000040E5E3D6             705+OBTERRM  DC    H'32',H'0',C' VTOCEXCP - ERROR IN OBTAIN '          00000500
                                    706 NOTFMT4M MSG   ' VTOCEXCP - FORMAT 4 DSCB WAS NOT FIRST'           00042300
0005DA 002B000040E5E3D6             707+NOTFMT4M DC    H'43',H'0',C' VTOCEXCP - FORMAT 4 DSCB WAS NOT FIRST'  00000500
                                    708 DSCBNUMM MSG   ' VTOCEXCP - THE FORMAT 4 DSCB HAS DSCB S/TRK = 0 '  00042400
000605 00
000606 0035000040E5E3D6             709+DSCBNUMM DC    H'53',H'0',C' VTOCEXCP - THE FORMAT 4 DSCB HAS DSCB S/TRX00000500
00060E C3C5E7C3D7406040                +               K = 0 '
                                    710 TRACKERR MSG   ' VTOCEXCP - A READ ERROR OCCURRED ON THE VTOC '    00042500
00063B 00
00063C 0032000040E5E3D6             711+TRACKERR DC    H'50',H'0',C' VTOCEXCP - A READ ERROR OCCURRED ON THE VTX00000500
000644 C3C5E7C3D7406040                +               OC '
                                    712 ERRJFCBM MSG   ' VTOCEXCP - A RDJFCB ERROR OCCURRED '              00042600
00066E 0028000040E5E3D6             713+ERRJFCBM DC    H'40',H'0',C' VTOCEXCP - A RDJFCB ERROR OCCURRED '  00000500

000696 0000
000698 1600000070000008             715 INITCCW  CCW   READR0,0,CC+SLI+SKIP,8                             00042800
0006A0 1E00000040000094             716 READCCW  CCW   READCKD,0,CC,148                                   00042900

                                    718 DSCBCON  CAMLST SEEK,0,0,0   FILLED IN WITH IOBSEEK+3, VOLID, FMT4  00043100
0006A8                              719+DSCBCON  DS    0F                                ALIGN ON FULL WORD   00349401
0006A8 C0                           720+         DC    AL1(192)                          THREE BYTES OF FLAGS 00349501
0006A9 80                           721+         DC    AL1(128)                          INDICATING THE FUNC- 00349601
0006AA 00                           722+         DC    AL1(0)                            TION TO BE PERFORMED 00399601
0006AB 00                           723+         DC    AL1(0)                            NO OPTION THREE      00419601
0006AC 00000000                     724+         DC    A(0)                              PARAMETER TWO        00441601
0006B0 00000000                     725+         DC    A(0)                              PARAMETER THREE      00448001
0006B4 00000000                     726+         DC    A(0)                              PARAMETER FOUR       00448801
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   728 * DATA CONTROL BLOCK                                                        00043300
                                   729          PRINT   GEN                                                        00043400
                                   730 VTOCDCBM DCB   DDNAME=VTOCDD,MACRF=(E),EXLST=1                              00043500


                                   732+*                       DATA CONTROL BLOCK                                  22770020
                                   733+*                                                                           22860020
0006B8                             734+VTOCDCBM DS    0F'0'                   ORIGIN ON WORD BOUNDARY             23040020
0006B8                      006BC  735+         ORG   *+4                    TO ORIGIN GENERATION                23130020

                                   737+*                       DIRECT ACCESS DEVICE INTERFACE                      27360020

0006BC 0000000000000000            739+         DC    BL12'0'                  FDAD,DVTBL                         27540020
0006C8 00000000                    740+         DC    A(0)                     KEYLE,DEVT,TRBAL                   27720020

                                   742+*                       COMMON ACCESS METHOD INTERFACE                      48690020

0006CC 00                          744+         DC    AL1(0)                  BUFNO                               49050020
0006CD 000001                      745+         DC    AL3(1)                  BUFCB                               54720020
0006D0 0000                        746+         DC    AL2(0)             BUFL                                     55170020
0006D2 0000                        747+         DC    BL2'0000000000000000'                                      *55800020
                                     +                                                  DSORG                       55890020
0006D4 00000001                    748+         DC    A(1)                     IOBAD                              56340020

                                   750+*                       FOUNDATION EXTENSION                                56610020

0006D8 00                          752+         DC    BL1'00000000'                  BFTEK,BFLN,HIARCHY           59850020
0006D9 000001                      753+         DC    AL3(1)                  EODAD                               65970020
0006DC 00                          754+         DC    BL1'00000000'                                              *66150020
                                     +                                     RECFM                                   66240020
0006DD 000001                      755+         DC    AL3(1)                  EXLST                               66330020

                                   757+*                       FOUNDATION BLOCK                                    66690020

0006E0 E5E3D6C3C4C44040            759+         DC    CL8'VTOCDD'             DDNAME                              66870020
0006E8 02                          760+         DC    BL1'00000010'           OFLGS                               68220020
0006E9 00                          761+         DC    BL1'00000000'                          IFLG                 68310020
0006EA D004                        762+         DC    BL2'1101000000000100'                                      *68400020
                                     +                                                                            *68490020
                                     +                                     MACR                                    68580020
                            00034  763 DCBLEN   EQU   *-VTOCDCBM                                                  00043600

                                   765 * IOB FOR CHANNEL PROGRAM                                                   00043800

0006F0                             767 IOBCONST DS    0D                                                          00044000
0006F0 42000000                    768          DC    X'42000000'     COMMAND CHAIN, NOT RELATED                  00044100
0006F4 00000000                    769          DC    A(0)            ECB ADDRESS                                 00044200
0006F8 0000000000000000            770          DC    2F'0'                                                       00044300
000700 00000000                    771          DC    A(0)            CHANNEL PROGRAM BEGINNING                   00044400
000704 00000000                    772          DC    A(0)            DCB ADDRESS                                 00044500
000708 03000000                    773          DC    X'03000000'                                                 00044600
00070C 00000000                    774          DC    F'0'                                                        00044700
000710 0000000000000000            775          DC    D'0'            INITIAL SEEK ADDRESS                        00044800
                            00028  776 IOBCONL  EQU   *-IOBCONST                                                  00044900
                                   777 * VTOC NAME FOR ALLOCATION                                                  00045000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000718 0000071E                    778 VTOCNM   DC    A(VTOCNAME)                                                 00045100
00071C 000C                        779          DC    Y(12)                                                       00045200
00071E C6D6D9D4C1E3F44B            780 VTOCNAME DC    CL12'FORMAT4.DSCB'   DATA SET NAME FOR VTOC                 00045300
                                   781 *                                                                           00045400
                                   782 *                                                                           00045500
000730                             783          LTORG                                                               00045600
000730 4040404040404040            784                =CL8' '
000738 0004000100010800            785                =Y(DALSTATS,1,1,X'0800')
000740 00010000                    786                =X'00010000'
000744 00000100                    787                =X'00000100'
000748 FFFFFFF8                    788                =X'FFFFFFF8'
00074C 00000000                    789                =A(0)
000750 000F                        790                =H'15'
000752 8032                        791                =X'8032'
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  793 * SECTION DEFINITION AND REGISTER ASSIGNMENTS;                                00045800


                           00002   795 RWA      EQU   2                                                             00046000
                           00003   796 RWB      EQU   3                                                             00046100
                           00004   797 RWC      EQU   4                                                             00046200
                           00008   798 RDCB     EQU   8              DCB POINTER                                    00046300
                           0000A   799 RRCODE   EQU   10              RETURN CODE REGISTER                           00046400
                           00009   800 RRET     EQU   9               LOCAL SUBROUTINE EXIT REGISTER                00046500


                                  802 * TAGS FOR CHANNEL COMMANDS AND FLAG BITS:                                    00046700

                           00016   804 READR0   EQU   X'16'           READ RECORD 0                                  00046900
                           0001E   805 READCKD  EQU   X'1E'           READ COUNT, KEY, AND DATA                      00047000

                           00040   807 CC       EQU   X'40'           COMMAND CHAIN FLAG                             00047200
                           00020   808 SLI      EQU   X'20'           SUPPRESS LENGTH INDICATION FLAG                00047300
                           00010   809 SKIP     EQU   X'10'           SKIP DATA TRANSFER FLAG                        00047400


                                  811 * COMMUNICATION VECTOR TABLE (CVT) DEFINITIONS:                               00047600

                           00010   813 CVT      EQU   16              LOCATION OF CVT BASE ADDRESS                   00047800
                           0001C   814 CVTPCNVT EQU   28              OFFSET TO CONVERT ROUTINE ADDRESS              00047900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    816 *                                                                          00048100
                                    817 *        AREA USED BY VTOCREAD, PASSED VIA R13                             00048200
                                    818 *                                                                          00048300
000000                              819 VTOCWORK DSECT                                                             00048400
000000                              820          DS    18F             SAVE AREA                                   00048500

000048                              822 EXCPSAVE DS    18F             INTERNAL SAVE AREA                          00048700
000090                              823 CBSIZE   DS    2F              SIZE AND LOCATION OF GOTTEN CORE            00048800
                            00094   824 CBADDR   EQU   CBSIZE+4                                                    00048900
000098                              825 NDSCBS   DS    F               NUMBER OF DSCB'S PER TRACK                  00049000
00009C                              826 DSCBSTRT DS    F               ADDRESS OF 1ST DSCB BUFFER                  00049100
0000A0                              827 DSCBLIM  DS    F               ADDRESS OF LAST DSCB BUFFER                 00049200
0000A4                              828 DSCBADR  DS    F               ADDRESS OF CURRENT DSCB                     00049300
0000A8                              829 TTRN     DS    F               RELATIVE TRACK NUMBER                       00049400
0000AC                              830 VOLADDR  DS    A               FAKE PDL FOR ALLOC MACRO - ADDRESS          00049500
0000B0                              831 VOLLEN   DS    H                       AND LENGTH OF VOLID                 00049600
0000B4                              832 UNITADDR DS    A               FAKE PDL FOR ALLOC MACRO - ADDRESS          00049700
0000B8                              833 UNITLEN  DS    H                       AND LENGTH OF UNIT ADDRESS          00049800
0000BC                              834 DDNPDL   DS    2F            SPACE FOR DDNAME PDL                          00049900

                                    836 * MODE SWITCH AND BIT DEFINITIONS                                          00050100

0000C4 00                           838 MODESW   DC    X'00'                                                       00050300
                            00080   839 CBGOT    EQU   X'80'           CORE GOTTEN FOR BUFFER                      00050400
                            00040   840 XCPRUN   EQU   X'40'           CHANNEL PROGRAM STARTED BUT NOT CHECKED     00050500
                            00020   841 RDERR    EQU   X'20'           PERMANENT I/O ERROR                         00050600
                            00010   842 EOFSW    EQU   X'10'           END-OF-FILE SENSED                          00050700
                            00008   843 ALLOCSW  EQU   X'08'           ALLOCATE VOLUME FLAG                        00050800

                                    845 VTOCDCB  DCB   DDNAME=VTOCDD,MACRF=(E),EXLST=1                             00051000


                                    847+*                       DATA CONTROL BLOCK                                 22770020
                                    848+*                                                                          22860020
0000C8                              849+VTOCDCB  DS    0F'0'                   ORIGIN ON WORD BOUNDARY            23040020
0000C8                      000CC   850+         ORG   *+4                    TO ORIGIN GENERATION                23130020

                                    852+*                       DIRECT ACCESS DEVICE INTERFACE                     27360020

0000CC 0000000000000000             854+         DC    BL12'0'                 FDAD,DVTBL                         27540020
0000D8 00000000                     855+         DC    A(0)                    KEYLE,DEVT,TRBAL                   27720020

                                    857+*                       COMMON ACCESS METHOD INTERFACE                     48690020

0000DC 00                           859+         DC    AL1(0)                  BUFNO                              49050020
0000DD 000001                       860+         DC    AL3(1)                  BUFCB                              54720020
0000E0 0000                         861+         DC    AL2(0)             BUFL                                    55170020
0000E2 0000                         862+         DC    BL2'0000000000000000'                                     *55800020
                                       +                                                 DSORG                     55890020
0000E4 00000001                     863+         DC    A(1)                    IOBAD                              56340020

                                    865+*                       FOUNDATION EXTENSION                               56610020

0000E8 00                           867+         DC    BL1'00000000'                 BFTEK,BFLN,HIARCHY           59850020
0000E9 000001                       868+         DC    AL3(1)                  EODAD                              65970020
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0000EC 00                          869+         DC    BL1'00000000'                                          *66150020
                                      +                                     RECFM                              66240020
0000ED 000001                      870+         DC    AL3(1)                EXLST                            66330020

                                   872+*                      FOUNDATION BLOCK                               66690020

0000F0 E5E3D6C3C4C44040            874+         DC    CL8'VTOCDD'           DDNAME                           66870020
0000F8 02                          875+         DC    BL1'00000010'         OFLGS                            68220020
0000F9 00                          876+         DC    BL1'00000000'                          IFLG            68310020
0000FA D004                        877+         DC    BL2'1101000000000100'                                  *68400020
                                      +                                                                      *68490020
                                      +                                     MACR                             68580020

                           00010   879 OPENBIT  EQU   X'10'                                                  00051200
0000FC                             880 OPENLIST DS    2F                                                     00051300

                                   882 * IOB FOR CHANNEL PROGRAM                                             00051500

000108                             884 VTOCIOB  DS    0D                                                     00051700
000108 42000000                    885 IOBFLAG1 DC    X'42000000'     COMMAND CHAIN, NOT RELATED             00051800
00010C 00000130                    886 IOBECB   DC    A(VTOCECB)                                             00051900
000110 0000000000000000            887          DC    2F'0'                                                  00052000
000118 00000000                    888 IOBSTART DC    A(0)            CHANNEL PROGRAM BEGINNING              00052100
00011C 000000C8                    889 IOBDCB   DC    A(VTOCDCB)                                             00052200
000120 03000000                    890          DC    X'03000000'                                            00052300
000124 00000000                    891          DC    F'0'                                                   00052400
000128 0000000000000000            892 IOBSEEK  DC    D'0'            INITIAL SEEK ADDRESS                   00052500

                                   894 * EVENT CONTROL BLOCK FOR CHANNEL PROGRAM:                            00052700

000130 00000000                    896 VTOCECB  DC    F'0'            EVENT CONTROL BLOCK                    00052900


                                   898 * INTERNAL BUFFER FOR LAST DSCB                                       00053100
000134                             899 BUFF     DS    XL148                                                  00053200


                                   901 DSCBFMT4 CAMLST SEEK,IOBSEEK+3,VOLID,FMT4                             00053400
0001C8                             902+DSCBFMT4 DS    0F                                ALIGN ON FULL WORD   00349401
0001C8 C0                          903+         DC    AL1(192)                          THREE BYTES OF FLAGS 00349501
0001C9 80                          904+         DC    AL1(128)                          INDICATING THE FUNC- 00349601
0001CA 00                          905+         DC    AL1(0)                            TION TO BE PERFORMED 00399601
0001CB 00                          906+         DC    AL1(0)                            NO OPTION THREE      00419601
0001CC 0000012B                    907+         DC    A(IOBSEEK+3)                      PARAMETER TWO        00441601
0001D0 000001B9                    908+         DC    A(VOLID)                          PARAMETER THREE      00448001
0001D4 000006E0                    909+         DC    A(FMT4)                           PARAMETER FOUR       00448801

                                   911 *   WORK AREA FOR DYNAMIC ALLOCATION                                  00053600
                                   912          DYNSPACE                                                  00053700
                                   913+*                                                                     00004600
                                   914+**     RESERVE SPACE FOR ALLOC/FREE MACRO WORK AREA                   00004700
                                   915+*                                                                     00004800
0001D8                             916+DYNSP1   DS    0F,CL144                RESERVE SPACE                  00004900
000268                             917 S99FLIST DS    XL(S99FLEN)                                            00053800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    919 *                                                                    00054000
                                    920 *        JFCB EXIT LIST AND AREA                                     00054100
                                    921 *                                                                    00054200
000280                              922 JEXLST   DS    F                                                     00054300
000284                              923 JFCBAREA DS    XL176                                                 00054400
000338                              924          DS    0D                                                    00054500
                             00338  925 VTOCWLEN EQU   *-VTOCWORK                                            00054600


                                    927          PRINT GEN                                                   00054800
                                    928          VTOCOM                                                      00054900
                                    929+*                                                                    00000300
                                    930+*        THIS IS THE VTOC COMMAND COMMON AREA                        00000400
                                    931+*                                                                    00000500
000000                              932+VTOCOM   DSECT                                                       00000700
                                    933+*                                                                    00001200
                                    934+*        WORKING STORAGE AREAS FOR THE VARIOUS ROUTINES              00001300
                                    935+*                                                                    00001400
000000                              936+VTCWMSG  DS    A             WORKING STORAGE FOR THE MSG  ROUTINE    00001500
000004                              937+VTCWEXIT DS    A             WORKING STORAGE FOR THE EXIT ROUTINE    00001600
000008                              938+VTCWEXCP DS    A             WORKING STORAGE FOR THE EXCP ROUTINE    00001700
00000C                              939+VTCWCHEK DS    A             WORKING STORAGE FOR THE CHEK ROUTINE    00001800
000010                              940+VTCWFORM DS    A             WORKING STORAGE FOR THE FORM ROUTINE    00001900
000014                              941+VTCWPRNT DS    A             WORKING STORAGE FOR THE PRNT ROUTINE    00002000
000018                              942+VTCWSORT DS    A             WORKING STORAGE FOR THE SORT ROUTINE    00002100
                                    943+*                                                                    00002200
                                    944+*        ADDRESSES OF THE ROUTINES                                   00002300
                                    945+*                                                                    00002400
00001C 00000000                     946+VADMSG   DC    V(VTOCMSG)    ADDRESS OF THE MESSAGE ROUTINE        00002500
000020 00000000                     947+VADEXIT  DC    V(VTOCEXIT)   ADDRESS OF THE EXIT ROUTINE           00002600
000024 00000000                     948+VADEXCP  DC    V(VTOCEXIT)   ADDRESS OF THE EXCP ROUTINE           00002700
000028 00000000                     949+VADCHEK  DC    V(VTOCEXIT)   ADDRESS OF THE CHECK ROUTINE          00002800
00002C 00000000                     950+VADFORM  DC    V(VTOCEXIT)   ADDRESS OF THE FORMAT ROUTINE         00002900
000030 00000000                     951+VADPRNT  DC    V(VTOCEXIT)   ADDRESS OF THE PRINT ROUTINE          00003000
000034 00000000                     952+VADSORT  DC    V(VTOCEXIT)   ADDRESS OF THE SORT ROUTINE           00003100
                                    953+*                                                                    00003200
                                    954+*        TSO COMMAND PROCESSOR AND PARSE DATA                        00003300
                                    955+*                                                                    00003400
000038                              956+ADDRUPT  DS    A             USER PROFILE TABLE                    00003500
00003C                              957+ADDRECT  DS    A             ENVIRONMENT CONTROL TABLE             00003600
000040                              958+ADDRPSCB DS    A             PROTECTED STEP CONTROL BLOCK          00003700
000044                              959+ADDRCBUF DS    A             COMMAND BUFFER                        00003800

000048                              961+ADDRANSR DS    A             PARSE ANSWER OR PDL ADDRESS           00004000

00004C                              963+PARMLIST DS    8A            INTERNAL PARM AREA ( MSG )            00004200
00006C                              964+ATTNECB  DS    F             ECB FOR ATTENTIONS                    00004300
000070                              965+DOUBLE   DS    D                                                   00004400

000078                              967+MSGADDRS DS    2A            ADDRESSES OF MESSAGES FOR VTOCMSG     00004600
000080                              968+MSGTEXT1 DS    XL124                                               00004700
0000FC                              969+MSGTEXT2 DS    XL124                                               00004800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000178                              971+PUTOLD1  DS    3F                                                    00005000
000184                              972+PUTOLD2  DS    3F                                                    00005100
                                    973+*                                                                    00005200
                                    974+*        PARAMETER LIST FOR THE EXIT ROUTINE                         00005300
                                    975+*                                                                    00005400
000190                              976+EXITLIST DS    0F                                                    00005500
000190                              977+EXITAREA DS    A       WORKAREA LOCATION                             00005600
000194                              978+DSCBADDR DS    A       ADDRESS OF THE DSCB                           00005700
000198                              979+FORMATAD DS    A       ADDRESS OF THE FORMATTED DSCB                 00005800
00019C                              980+CPPLADDR DS    A       ADDRESS OF THE CPPL                           00005900
0001A0                              981+ACTIONAD DS    A       ADDRESS OF THE RECOMMENDED OR REQUESTED ACTION 00006000
                                    982+*                                                                    00006100
                                    983+*        INTER ROUTINE FLAGS                                         00006200
                                    984+*                                                                    00006300
0001A4                              985+VTCEFUNC DS    X              VTOCEXCP FUNCTION FLAG                 00006400
0001A5                              986+VTCFMTCK DS    X              FORMAT IS CALLED BY CHECK RTN          00006500
                            00080   987+VTCFMTCD EQU   X'80'          FORMAT WAS CALLED BY CHECK             00006600
                            00008   988+VTCFMTCC EQU   X'08'          FORMAT WAS CALLED BY CHECK THIS CALL   00006700
                                    989+*                                                                    00006800
0001A6                              990+TABFULL  DS    X             FLAG TABLES FULL, STOP INPUT           00006900
0001A7                              991+LOCAT    DS    X              FLAG TO PERFORM CATALOG LOCATE         00007000
0001A8                              992+VTCEPRNT DS    X               PRINT END AND CLEANUP FLAG            00007100
0001AA                              993+DSNLEN   DS    H              LENGTH OF THE DSNAME (NON-BLANKS)      00007200
0001AC                              994+ATABTITL DS    A              ADDRESS OF TABLE OF TITLES, LENGTHS    00007300
                                    995+*                                                                    00007400
                                    996+*                                                                    00007500
                                    997+*                                                                    00007600
                                    998+*        WORKING STORAGE FOR VOLUME UCB SEARCH                       00007700
                                    999+*                                                                    00007800
0001B0                             1000+ADDR     DS    CL3     UCB ADDRESS IN CHARACTERS                     00007900
0001B3                             1001+VOLSER   DS    CL6     VOLUME SERIAL NUMBER FROM PARSE               00008000
0001B9                             1002+VOLID    DS    CL6     CURRENT VOLUME SERIAL NUMBER TO PROCESS       00008100
0001BF                             1003+FLAG     DS    X       UCB SEARCH FLAG                               00008200
0001C0                             1004+LASTADR  DS    F       LAST UCB ADDRESS FOUND ( NO DUP'S )           00008300
0001C4                             1005+UCBDEVT  DS    CL4     PRINTABLE FORM OF DEVICE TYPE          RPRIN1 00008310
                                   1006+*                                                                    00008400
                                   1007+*                                                                    00008500
                                   1008+*                                                                    00008600
0001C8                             1009+SORTTAB  DS    16F                                                   00008700
                                   1010+*                                                                    00008800
                                   1011+* EACH ENTRY CONTAINS A KEY OFFSET (2 BYTES) AND A KEY LENGTH (2 BYTES) 00008900
                                   1012+* THIS TABLE IS BUILT AT PARSE TIME ACCORDING TO THE SORT PARAMETERS   00009000
                                   1013+* SPECIFIED. THE 1ST PARM IS THE HIGH KEY AND SO ON.                  00009100
                                   1014+*                                                                    00009200
                                   1015+*                                                                    00009300
                                   1016+*                                                                    00009400
                                   1017+*        ADDRESSES OF GETMAIN FOR FORMATTED DATA                     00009500
                                   1018+*                                                                    00009600
000208                             1019+VTCCURAD DS    A             CURRENT AVAILABLE ADDRESS               00009700
00020C                             1020+VTCCURLN DS    A             CURRENT AVAILABLE LENGTH                00009800
000210                             1021+VTCGETMN DS    50A           ADDRESSES OF BLOCKS                     00009900
                            00032  1022+VTCGETMX EQU  (*-VTCGETMN)/4  NUMBER OF BLOCKS  MAXIMUM             00010000
                            08000  1023+VTCGETMS EQU   32768          GETMAIN SIZE                          00010100
                                   1024+*                                                                    00010200
                                   1025+*        HASH SORT TABLE, POINTERS TO FIRST ENTRIES                  00010300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   1026+*                                                                    00010400
0002D8                             1027+VTCSORTH DS    256A           POINT TO FORMATED ENTRIES              00010500
                            006D8  1028+VTCSORTE EQU   *              END OF LIST                            00010600
                                   1029+*                                                                    00010700
                                   1030+*        PRINT ENTRIES - PAGE AND LINE COUNTERS                      00010800
                                   1031+*                                                                    00010900
0006D8                             1032+LINECT   DS    H              LINE COUNT                             00011000
0006DA                             1033+LINEMAX  DS    H              MAXIMUM LINES PER PAGE                 00011100
0006DC                             1034+PAGECT   DS    H              PAGE COUNT                             00011200
0006DE                             1035+LINELEN  DS    H              LENGTH OF THE PRINT LINE               00011300
                                   1036+*                                                                    00011400
                                   1037+*                                                                    00011500
                                   1038+*          VARIOUS ITEMS                                             00011600
                                   1039+*                                                                    00011700
0006E0                             1040+FMT4     DS    XL44           SPACE FOR DSCB NAME                    00011800
                            0070C  1041+IECSDSL4 EQU   *                   FORMAT 4 DSCB                     16000000
                            0070C  1042+IECSDSF4 EQU   IECSDSL4                                              16050000
00070C                             1043+DS4IDFMT DS    CL1                FORMAT IDENTIFIER                  16100000
00070D                             1044+DS4HPCHR DS    XL5                HIGHEST ADDRESS OF A FORMAT 1 DSCB 16150000
000712                             1045+DS4DSREC DS    XL2                NUMBER OF AVAILABLE DSCB'S         16200000
000714                             1046+DS4HCCHH DS    XL4                CCHH OF NEXT AVAILABLE ALTERNATE TRK 16250000
000718                             1047+DS4NOATK DS    XL2                NUMBER OF REMAINING ALTERNATE TRACKS 16300000
00071A                             1048+DS4VTOCI DS    XL1                VTOC INDICATORS                    16350000
                            00080  1049+DS4DOSBT EQU   X'80'              DOS BIT                            16400000
                            00010  1050+DS4DSTKP EQU   X'10'              DOS STACKED PACK                   16450000
                            00008  1051+DS4DOCVT EQU   X'08'              DOS CONVERTED VTOC                 16500000
                            00004  1052+DS4DIRF  EQU   X'04'              DIRF BIT                           16550000
                            00002  1053+DS4DICVT EQU   X'02'              DIRF RECLAIMED                     16600000
                            00001  1054+DS4IVTOC EQU   X'01'              VOLUME USES AN INDEXED VTOC     @01A 16650000
00071B                             1055+DS4NOEXT DS    XL1                NUMBER OF EXTENTS IN THE VTOC      16700000
00071C                             1056+         DS    XL2                RESERVED                           16750000
00071E                             1057+DS4DEVCT DS    0XL14              DEVICE CONSTANTS                   16800000
00071E                             1058+DS4DEVSZ DS    XL4                DEVICE SIZE                        16850000
000722                             1059+DS4DEVTK DS    XL2                DEVICE TRACK LENGTH                16900000
000724                             1060+DS4DEVOV DS    0XL2               KEYED RECORD OVERHEAD              16950000
000724                             1061+DS4DEVI  DS    XL1                   NON-LAST KEYED RECORD OVERHEAD  17000000
000725                             1062+DS4DEVL  DS    XL1                   LAST KEYED RECORD OVERHEAD      17050000
000726                             1063+DS4DEVK  DS    XL1                NON-KEYED RECORD OVERHEAD          17100000
                                   1064+*                                   DIFFERENTIAL                    17150000
000727                             1065+DS4DEVFG DS    XL1                FLAG BYTE                          17200000
000728                             1066+DS4DEVTL DS    XL2                DEVICE TOLERANCE                   17250000
00072A                             1067+DS4DEVDT DS    XL1                NUMBER OF DSCB'S PER TRACK         17300000
00072B                             1068+DS4DEVDB DS    XL1                NUMBER OF DIRECTORY BLOCKS PER TRACK 17350000
00072C                             1069+DS4AMTIM DS    XL8                VSAM TIME STAMP                    17400000
000734                             1070+DS4AMCAT DS    0XL3               VSAM CATALOG INDICATOR             17450000
000734                             1071+DS4VSIND DS    XL1                VSAM INDICATORS                    17500000
000735                             1072+DS4VSCRA DS    XL2                RELATIVE TRACK LOCATION OF THE CRA 17550000
000737                             1073+DS4R2TIM DS    XL8                VSAM VOLUME/CATALOG MATCH          17600000
                                   1074+*                                TIME STAMP                         17650000
00073F                             1075+         DS    XL5                RESERVED                           17700000
000744                             1076+DS4F6PTR DS    XL5                POINTER TO FIRST FORMAT 6 DSCB     17750000
000749                             1077+DS4VTOCE DS    XL10               VTOC EXTENT DESCRIPTION            17800000
000753                             1078+         DS    XL25               RESERVED                           17850000
                            0076C  1079+DS4END   EQU   *                                                    17900000
000770                             1080+         DS    0D                                                    00012000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000770                           1081+FMT3     DS    0XL148         SPACE FOR FORMAT3 DSCB                    00012100
                           00770 1082+IECSDSL3 EQU   *                   FORMAT 3 DSCB                          15250000
                           00770 1083+IECSDSF3 EQU   IECSDSL3                                                   15300000
000770                           1084+         DS    XL4                 KEY IDENTIFIER                         15350000
000774                           1085+DS3EXTNT DS    XL40                FOUR EXTENT DESCRIPTIONS               15400000
                                 1086+*        FIRST BYTE                EXTENT TYPE INDICATOR                  15450000
                                 1087+*        SECOND BYTE               EXTENT SEQUENCE NUMBER                 15500000
                                 1088+*        THIRD - SIXTH BYTES       LOWER LIMIT                            15550000
                                 1089+*        SEVENTH - TENTH BYTES     UPPER LIMIT                            15600000
00079C                           1090+DS3FMTID DS    CL1                 FORMAT IDENTIFIER                      15650000
00079D                           1091+DS3ADEXT DS    XL90                NINE ADDITIONAL EXTENT DESCRIPTIONS    15700000
0007F7                           1092+DS3PTRDS DS    XL5                 RESERVED                               15750000
                           007FC 1093+DS3END   EQU   *                                                        15800000
000800                           1094+         DS    0D                                                       00012300
                                 1095          PRINT NOGEN                                                    00055000

                                 1097          IEFZB4D0                                                       00055200

                                 1237          IEFZB4D2                                                       00055400

                                 1434          DCBD  DEVD=DA,DSORG=PS                                         00055600

000000                           1993 JFCB     DSECT                                                          00055800
                                 1994          IEFJFCBN                                                       00055900
                                 2019+         PRINT OFF                                                      00803202
                                 2606          END                                                            00056000
```

POS.ID	REL.ID	FLAGS	ADDRESS
0001	0001	0C	000500
0001	0001	0C	000718

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ADDR     00003 000001B0 01000  00253
ALLOCSW  00001 00000008 00843  00360 00495 00559
BUFF     00148 00000134 00899  00166 00171
CBADDR   00004 00000094 00824  00423
CBGOT    00001 00000080 00839  00424 00565 00572
CBSIZE   00004 00000090 00823  00419 00567 00824
CC       00001 00000040 00807  00450 00715 00716
CCWLOOP  00006 0000035A 00440  00448
CLOSE    00004 0000039A 00465  00100
CLOSESUB 00002 000003A2 00471  00221 00465 00615
CVT      00001 00000010 00813  00397 00591
CVTPCNVT 00001 0000001C 00814  00398 00592
DALDSNAM 00001 00000002 01275  00285
DALRTDDN 00001 00000055 01358  00293
DALSTATS 00001 00000004 01277  00785
DALUNIT  00001 00000015 01294  00310
DALVLSER 00001 00000010 01289  00325
DCBBIT0  00001 00000080 01456  01542 01550 01562 01585 01612 01614 01615 01617 01640 01643 01663 01667 01682 01719 01774
                               01805 01844 01848 01861 01961 01963 01973
DCBBIT1  00001 00000040 01457  01543 01551 01564 01586 01587 01596 01612 01614 01616 01617 01645 01663 01665 01667 01685
                               01686 01687 01722 01723 01774 01807 01850 01852 01864 01908 01961 01965 01974
DCBBIT2  00001 00000020 01458  01544 01552 01565 01566 01567 01586 01587 01591 01597 01612 01613 01618 01647 01668 01669
                               01690 01691 01692 01726 01727 01775 01812 01853 01869 01911 01914 01961 01975
DCBBIT3  00001 00000010 01459  01545 01565 01567 01568 01586 01599 01619 01650 01668 01671 01694 01695 01696 01730 01731
                               01775 01814 01817 01819 01855 01870 01911 01915 01961
DCBBIT4  00001 00000008 01460  01553 01600 01620 01651 01673 01678 01679 01699 01700 01734 01735 01737 01738 01776 01822
                               01871 01911 01916
DCBBIT5  00001 00000004 01461  01554 01601 01623 01624 01653 01673 01675 01676 01679 01703 01705 01706 01707 01741 01742
                               01743 01744 01776 01824 01827 01857 01873 01906
DCBBIT6  00001 00000002 01462  01546 01602 01603 01606 01623 01625 01654 01710 01711 01712 01713 01747 01748 01749 01750
                               01777 01830 01875 01917
DCBBIT7  00001 00000001 01463  01547 01602 01604 01606 01627 01658 01715 01716 01753 01754 01756 01757 01833 01859 01876
                               01919
DCBDDNAM 00008 00000028 01637  00350 00497
DCBDEBAD 00004 0000002C 01772  00395 00589
DCBEXLSA 00003 00000025 01629  00232
DCBFDAD  00008 00000005 01483  01486
DCBIFLGS 00001 0000002C 01773  00192
DCBLEN   00001 00000034 00763  00227
DCBOFLGS 00001 00000030 01639  00388 00483
DDNPDL   00004 000000BC 00834  00498 00500 00520 00521
DSCBADDR 00004 00000194 00978  00157
DSCBADR  00004 000000A4 00828  00151 00153
DSCBCON  00004 000006A8 00719  00243
DSCBELUP 00006 000000F0 00196  00202
DSCBFMT4 00004 000001C8 00902  00243 00245 00247 00249 00402
DSCBLIM  00004 000000A0 00827  00154 00201 00451
DSCBNUMM 00002 00000606 00709  00674
DSCBNUM0 00004 00000560 00674  00411
DSCBSTRT 00004 0000009C 00826  00184 00193 00433
DS4DEVDT 00001 0000072A 01067  00408
DS4HPCHR 00005 0000070D 01044  00598
DS4IDFMT 00001 0000070C 01043  00406
DUNDDNAM 00001 00000001 01423  00525
DUNUNALC 00001 00000007 01427  00533
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

DYNSP1   00004 000001D8 00916  00263 00503 00545
DYN1DS   00001 00000000 00352  00264
DYN1LEN  00001 00000090 00357  00268
DYN1MVC  00006 00000268 00340  00284 00309 00324
DYN1RB   00004 00000004 00354  00265 00346
DYN1RBP  00004 00000000 00353  00338 00357
DYN1TU   00100 0000002C 00356  00273 00350
DYN1TUP  00020 00000018 00355  00271 00287 00297 00312 00327 00334 00337
DYN2DS   00001 00000000 00551  00504
DYN2LEN  00001 00000032 00556  00508
DYN2MVC  00006 0000044C 00540  00524
DYN2RB   00004 00000004 00553  00505 00546
DYN2RBP  00004 00000000 00552  00538 00556
DYN2TU   00018 00000020 00555  00513
DYN2TUP  00008 00000018 00554  00511 00527 00534 00537
EOFSW    00001 00000010 00842  00139 00457 00614
ERRET    00004 0000058C 00692  00654 00663 00672 00681
ERRJFCB  00004 00000578 00684  00374
ERRJFCBM 00002 0000066E 00713  00684
EXCP     00002 00000480 00585  00170 00458
EXCPSAVE 00004 00000048 00822  00392 00393 00586 00587
FMT4     00044 000006E0 01040  00248 00909
GETDSB   00004 00000062 00138  00098
GETOUT   00004 0000008C 00157  00172
IECSDSL3 00001 00000770 01082  01083
IECSDSL4 00001 0000070C 01041  01042
IHADCB   00001 00000000 01439  00089 01524 01571 01636 01765 01780 01787 01800 01896 01902 01929 01952
INITCCW  00008 00000698 00715  00436
IOBCONL  00001 00000028 00776  00238
IOBCONST 00008 000006F0 00767  00238 00776
IOBDCB   00004 0000011C 00889  00241
IOBECB   00004 0000010C 00886  00240
IOBFLAG1 00004 00000108 00885  00191
IOBSEEK  00008 00000128 00892  00197 00244 00396 00590 00598 00907
IOBSTART 00004 00000118 00888  00435
JEXLST   00004 00000280 00922  00231 00234 00235
JFCB     00001 00000000 01993  00376
JFCBAREA 00176 00000284 00923  00233 00375
JFCBDSNM 00044 00000000 02025  00377 00378 00378 00378
JFCBTSDM 00001 00000034 02031  00379
JFCNWRIT 00001 00000008 02040  00379
JFCRESRV 00004 0000006C 02469  02494
LASTCCW  00004 00000380 00450  00444
LASTDSCB 00006 000000A0 00166  00155
MODESW   00001 000000C4 00838  00139 00145 00158 00181 00190 00360 00424 00457 00472 00478 00495 00559 00565 00572 00575
                               00605 00609 00614
MSGADDRS 00004 00000078 00967  00206 00649 00658 00667 00676 00686
NDSCBS   00004 00000098 00825  00409 00410 00410 00416 00430 00443
NDXSTORE 00004 0000007E 00153  00185
NOALLOC  00002 00000464 00561  00496
NOCLOSE  00002 000003D2 00491  00484
NOEXCP   00002 000003B8 00479  00473
NOFREE   00002 0000047A 00573  00566
NOTFMT4  00004 00000548 00665  00407
NOTFMT4M 00002 000005DA 00707  00665
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

OBTERR   00004 00000530 00656  00405
OBTERRM  00002 000005BA 00705  00656
OPEN     00002 00000128 00220  00099
OPENBIT  00001 00000010 00879  00388 00483
OPENERR  00004 00000518 00647  00389
OPENERRM 00002 00000594 00703  00647
OPENLIST 00004 000000FC 00880  00236 00368 00382 00486
PERMERR  00004 000000DC 00190  00183
RDCB     00001 00000008 00798  00088 00089 00241 00370 00385 00488
RDERR    00001 00000020 00841  00158 00190 00457 00575 00605
READCCW  00008 000006A0 00716  00440
READCKD  00001 0000001E 00805  00442 00716
READR0   00001 00000016 00804  00715
RETURN   00002 0000004E 00109  00140 00161 00641 00693
RETURN0  00002 0000004C 00107  00101 00159 00459 00466
RRCODE   00001 0000000A 00799  00620 00640
RRET     00001 00000009 00800  00170 00221 00458 00465 00576 00610
RWA      00001 00000002 00795  00093 00093 00094 00095 00096 00151 00152 00152 00153 00154 00156 00166 00184 00193 00196
                               00196 00197 00198 00199 00199 00201 00430 00431 00432 00432 00433 00441 00446 00446 00451
RWB      00001 00000003 00796  00167 00168 00169 00194 00198 00200 00200 00437 00440 00441 00442 00445 00445 00450
RWC      00001 00000004 00797  00438 00443 00447 00447
R0       00001 00000000 00115  00205 00205 00206 00279 00341 00394 00415 00416 00417 00418 00419 00455 00455 00456 00519
                               00541 00567 00588 00603 00603 00604 00648 00648 00649 00657 00657 00658 00666 00666 00667
                               00675 00675 00676 00685 00685 00686
R1       00001 00000001 00116  00083 00156 00157 00171 00204 00206 00208 00231 00232 00233 00234 00239 00240 00244 00245
                               00246 00247 00248 00249 00253 00254 00255 00256 00257 00258 00259 00260 00263 00264 00267
                               00268 00268 00342 00343 00375 00376 00380 00395 00423 00432 00435 00436 00437 00497 00498
                               00499 00500 00503 00504 00507 00508 00508 00542 00567 00589 00624 00625 00626 00628 00630
                               00632 00633 00633 00647 00649 00651 00656 00658 00660 00665 00667 00669 00674 00676 00678
                               00684 00686 00688
R11      00001 0000000B 00126  00083 00084
R13      00001 0000000D 00128  00082 00392 00400 00586 00595
R14      00001 0000000E 00129  00210 00271 00272 00280 00306 00321 00340 00343 00346 00399 00511 00512 00520 00540 00545
                               00546 00593 00625 00626 00627 00628 00629 00630 00631 00632 00653 00662 00671 00680 00690
R15      00001 0000000F 00130  00107 00107 00138 00160 00209 00210 00265 00266 00267 00273 00274 00287 00288 00288 00297
                               00298 00298 00312 00313 00313 00327 00328 00328 00334 00335 00335 00342 00348 00348 00373
                               00373 00397 00398 00398 00399 00404 00404 00408 00409 00505 00506 00507 00513 00514 00527
                               00528 00528 00534 00535 00535 00542 00547 00547 00591 00592 00592 00593 00596 00596 00620
                               00627 00640 00652 00653 00661 00662 00670 00671 00679 00680 00689 00690 00692
R2       00001 00000002 00117  00279 00281 00282 00283 00284 00303 00304 00304 00307 00308 00309 00318 00319 00319 00322
                               00323 00324 00341 00392 00396 00400 00519 00521 00522 00523 00524 00541 00586 00590 00595
R3       00001 00000003 00118  00393 00400 00587 00595
SETDSCBA 00004 000000D4 00184  00211
SETEOF   00004 000004C8 00614  00597 00599
SKIP     00001 00000010 00809  00715
SLI      00001 00000020 00808  00715
S99FAIL  00002 000004D0 00620  00349 00548
S99FLEN  00001 00000018 00623  00917
S99FLIST 00024 00000268 00917  00624
S99RB    00001 00000000 01153  00266 00506
S99RBLN  00001 00000000 01155  00269 00509
S99TUKEY 00002 00000000 01225  00285 00293 00310 00325 00333 00525 00533
S99TULNG 00002 00000004 01228  00282 00295 00307 00322 00522
S99TUNIT 00001 00000000 01224  00274 00514
S99TUNUM 00002 00000002 01226  00286 00294 00311 00326 00526
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

S99TUPAR 00001 00000006 01229  00296 00340 00540
S99TXTPP 00004 00000008 01187  00272 00512
S99VERB  00001 00000001 01156  00270 00510
S99VRBAL 00001 00000001 01157  00270
S99VRBUN 00001 00000002 01158  00510
TRACKERR 00002 0000063C 00711  00204
TTRN     00004 000000A8 00829  00167 00169 00456 00588
UNITADDR 00004 000000B4 00832  00254 00303 00306
UNITLEN  00002 000000B8 00833  00256
VADMSG   00004 0000001C 00946  00209 00652 00661 00670 00679 00689
VOLADDR  00004 000000AC 00830  00258 00318 00321
VOLID    00006 000001B9 01002  00246 00257 00908
VOLLEN   00002 000000B0 00831  00260
VTCEFUNC 00001 000001A4 00985  00094
VTCGETMN 00004 00000210 01021  01022
VTOCDCB  00004 000000C8 00849  00088 00227 00889
VTOCDCBM 00004 000006B8 00734  00227 00763
VTOCECB  00004 00000130 00896  00177 00182 00239 00475 00604 00886
VTOCEXCP 00001 00000000 00068  00075 00358 00557
VTOCIOB  00008 00000108 00884  00238 00607
VTOCNAME 00012 0000071E 00780  00778
VTOCNM   00004 00000718 00778  00280 00281
VTOCOM   00001 00000000 00932  00084 00208 00651 00660 00669 00678 00688
VTOCWORK 00001 00000000 00819  00082 00925
XCPRUN   00001 00000040 00840  00145 00181 00457 00472 00478 00609
XCPTEST  00004 000000BE 00177  00146
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

=CL8' '  00008 00000730 00784  00296
=Y(DALSTATS,1,1,X'0800')
         00002 00000738 00785  00333
=X'00010000'
         00004 00000740 00786  00168
=X'00000100'
         00004 00000744 00787  00394
=X'FFFFFFF8'
         00004 00000748 00788  00418
=A(0)    00004 0000074C 00789  00629
=H'15'   00002 00000750 00790  00417
=X'8032' 00002 00000752 00791  00631
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT        560
TOTAL RECORDS READ FROM SYSTEM LIBRARY     9615
TOTAL RECORDS PUNCHED                        38
TOTAL RECORDS PRINTED                      1395
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25

VTOCFORM  SD  0001 000000 00053A
PCLMAIN   SD  0002 000540 0007F6
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    2 ************************************************************************* 00000200
                                    3 *                                                                       * 00000300
                                    4 *                                                                       * 00000400
                                    5 * TITLE -      VTOC COMMAND FORMAT ROUTINE                              * 00000500
                                    6 *                                                                       * 00000600
                                    7 * FUNCTION -   FORMAT THE DATA INTO THE VTFMT  DSECT FROM THE           * 00000700
                                    8 *              FORMAT 1 ( AND 3 IF NEEDED ) DSCB.  THIS ROUTINE         * 00000800
                                    9 *              ALSO GETS THE AREA TO CONTAIN THE FORMATTED              * 00000900
                                   10 *              DSCB INFORMATION.                                        * 00001000
                                   11 *                                                                       * 00001100
                                   12 * OPERATION -  FIRST GET AN AREA FROM THE CURRENT BLOCK, OR GET         * 00001200
                                   13 *              A BLOCK ( 32K ) OF STORAGE TO USE FOR THE FORMATTED      * 00001300
                                   14 *              DSCB'S.  MOVE THE DATA OVER FROM THE FORMAT 1 DSCB.      * 00001400
                                   15 *              THE SPACE CALCULATIONS MAY NEED THE FORMAT 3 DSCB.       * 00001500
                                   16 *              CATALOG INFORMATION IS OBTIANED VIA LOCATE.  SOME        * 00001600
                                   17 *              OF THE DSCB INFORMATION IS CONVERTED HERE.               * 00001700
                                   18 *                                                                       * 00001800
                                   19 * INPUT -      VTOC COMMON AREA ( VTOCOM )                              * 00001900
                                   20 *              POINTED TO BY REGISTER 1                                 * 00002000
                                   21 *              USE PARSE DATA, CURRENT FORMATTED DSCB, LOCATE           * 00002100
                                   22 *                                                                       * 00002200
                                   23 * OUTPUT -     THE FORMATTED DSCB INFORMATION WITH ITS ADDRESS IN       * 00002300
                                   24 *              FORMATAD.                                                * 00002400
                                   25 *                                                                       * 00002500
                                   26 * ATTRIBUTES - REENTRANT, REUSEABLE, REFRESHABLE.                       * 00002600
                                   27 *                                                                       * 00002700
                                   28 *         PROGRAMMED BY R. L. MILLER  (415) 485-6241                    * 00002800
                                   29 *                                                                       * 00002900
                                   30 * 3/24/92 - MODIFIED BY ART TANSKY AT SUNGARD TO MAKE ALL VSAM  TANSKY* 00003010
                                   31 *           DATASETS "FULL" INSTEAD OF 0% USED.                 TANSKY* 00003120
                                   32 *         - ADDED UPD AND RACF INDICATORS AND OPTIONS           TANSKY* 00003230
                                   33 *                                                                       * 00003300
                                   34 *                                                                       * 00003400
                                   35 ************************************************************************* 00003500
                                   36 *                                                                         00003600
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   38          MACRO                                                          00003800
                                   39 &LAB     DS1TST  &FIELD,&VALUE,&CODE                                    00003900
                                   40 &LAB     TM    DS1&FIELD,X'&VALUE'  TEST IT                             00004000
                                   41          BNO   D&SYSNDX       IF NOT THERE, SKIP ALONG                  00004100
                                   42          MVC   VTF&FIELD,=CL3'&CODE'                                    00004200
                                   43 D&SYSNDX DS    0H                                                       00004300
                                   44          MEND                                                           00004400
                                   45 *                                                                       00004500
                                   46 *                                                                       00004600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    48 VTOCFORM ENTER 12,16          DO THE HOUSEKEEPING                        00004800
000000                              49+VTOCFORM CSECT                                                           00004220
000000 47F0 F00E      0000E         50+         B     14(0,15)                        BRANCH AROUND ID         00450000
000004 08                           51+         DC    AL1(8)                          LENGTH OF IDENTIFIER     00550000
000005 E5E3D6C3C6D6D9D4             52+         DC    CL8'VTOCFORM'                   IDENTIFIER               00750000
00000D 00
00000E 90EC D00C      0000C         53+         STM   14,12,12(13)                    SAVE REGISTERS           03700000
000012 18CF                         54+         LR    12,15         SET FIRST BASE REG                         00004700
000014                              55+         CNOP  0,4                                                        00004800
                            00000   56+         USING VTOCFORM,12                                                00008600
000014 5811 0010      00010         57+         L     1,16+0(1)      NUMERIC &SAVE IMPLIES A PASSED SAVEAREA   00012600
000018 50D1 0004      00004         58+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE            00012700
00001C 501D 0008      00008         59+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                00012800
000020 182D                         60+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS        00012900
000022 18D1                         61+         LR    13,1           THIS IS MY SAVEAREA                       00013000
000024 9802 2014      00014         62+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                     00013100
000028 18B1                         63          LR    R11,R1         SAVE ADDR OF VTOCOM                       00004900
                            00000   64          USING VTOCOM,R11     SET ITS ADDRESSABILITY                    00005000
00002A 5890 B048      00048         65          L     R9,ADDRANSR    POINT TO THE PARSE ANSWER                 00005100
                            00000   66          USING PDL,R9         SET ITS ADDRESSABILITY                    00005200
                            00000   67          USING FORMWORK,R13   SET ADDRESSABILITY FOR LOCAL WORK AREA    00005300


                                    69 *                                                                         00005500
                                    70 *        CHECK FOR THE FIRST TIME THROUGH                                 00005600
                                    71 *        IF SO, PERFORM SOME INITIALIZATION                               00005700
                                    72 *                                                                         00005800
00002E 9500 D048      00048         73          CLI   FIRSTFRM,0     IS THIS THE FIRST TIME?                   00005900
000032 4770 C040      00040         74          BNE   GETAREA        NO, KEEP ON TRUCKIN'                      00006000
                                    75 *                                                                         00006100
                                    76 *        ROUTINE INITIALIZATION                                           00006200
                                    77 *                                                                         00006300
000036 92FF D048      00048         78          MVI   FIRSTFRM,255   NOTE THE INITIALIZATION AS DONE           00006400
00003A D20F D05C C490 0005C 00490   79          MVC   CAMLOC(CAMLEN),CAMCONST  SET UP THE CAMLST               00006500
                                    80 *                                                                         00006600
                                    81 *        FIND OR GET AN AREA FOR THE FORMATTED DSCB                       00006700
                                    82 *              FIRST SEE HOW BIG IT IS                                    00006800
                                    83 *                                                                         00006900
000040 5870 B194      00194         84 GETAREA  L     R7,DSCBADDR    POINT TO THE DSCB                         00007000
000044 4177 0008      00008         85          LA    R7,8(R7)       GET PAST THE HEADER                       00007100
                            00000   86          USING DSCB1,R7       SET ADDRESSABILITY                        00007200
000048 4810 B1AA      001AA         87          LH    R1,DSNLEN     GET THE DSNAME LENGTH                      00007300
00004C 4141 0046      00046         88          LA    R4,VTFMTL(R1)  GET THE FORMATTED DSCB LENGTH             00007400
                                    89 *                                                                         00007500
                                    90 *        SEE IF THE CURRENT BLOCK CAN HANDLE IT                           00007600
                                    91 *                                                                         00007700
000050 5830 B20C      0020C         92 FORMFIT  L     R3,VTCCURLN    GET THE CURRENT AVAILABLE                 00007800
000054 1B34                         93          SR    R3,R4          SEE IF IT WILL FIT                        00007900
000056 4740 C3C8      003C8         94          BM    GOGETMN        NO, GET ANOTHER BLOCK                     00008000
                                    95 *                                                                         00008100
                                    96 *        NO SWEAT, GET THE SPACE FROM THIS BLOCK                          00008200
                                    97 *                                                                         00008300
00005A 5030 B20C      0020C         98          ST    R3,VTCCURLN    STORE THE NEW ( REDUCED ) CURRENT LENGTH  00008400
00005E 5830 B208      00208         99          L     R3,VTCCURAD    POINT TO THE CURRENT ADDRESS              00008500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000062 4153 4000      00000         100          LA    R5,0(R3,R4)    POINT TO THE END OF THE BLOCK             00008600
000066 5050 B208      00208         101          ST    R5,VTCCURAD    AND PLACE THE NEW AVAILABLE ADDRESS       00008700
                                    102 *                                                                      00008800
                                    103 *        NOW FILL IN THE DATA IN THE FORMATTED DSCB                    00008900
                                    104 *                                                                      00009000
                            00000   105          USING VTFMT,R3       SET FORMATTED DSCB ADDRESSABILITY         00009100
00006A 5030 B198      00198         106          ST    R3,FORMATAD    SAVE THIS BLOCK'S ADDRESS                 00009200
00006E D703 3000 3000 00000 00000   107          XC    VTFNEXT,VTFNEXT  CLEAR THE SORT POINTER                 00009300
000074 D205 3012 B1B9 00012 001B9   108          MVC   VTFVOLUM,VOLID SAVE THE VOLUME SERIAL NUMBER             00009400
00007A D203 3018 B1C4 00018 001C4   109          MVC   VTFUNIT,UCBDEVT SAVE THE DEVICE TYPE                     00009500
000080 4810 B1AA      001AA         110          LH    R1,DSNLEN     GET THE LENGTH OF THE DSNAME               00009600
000084 4010 3044      00044         111          STH   R1,VTFDSNL     SAVE THE DSNAME LENGTH                    00009700
000088 0610                         112          BCTR  R1,0           SUBTRACT ONE FOR THE EX                   00009800
00008A 4410 C464      00464         113          EX    R1,MOVEDSN     MOVE IN THE DSNAME                        00009900
00008E D200 3025 703B 00025 0003B   114          MVC   VTFNOEPV,DS1NOEPV  NUMBER OF EXTENTS                     00010000
000094 D201 302E 7058 0002E 00058   115          MVC   VTFLRECL,DS1LRECL  LOGICAL RECORD LENGTH                 00010100
00009A D201 3030 7056 00030 00056   116          MVC   VTFBLKSZ,DS1BLKL   BLOCK SIZE                            00010200
                                    117 *                                                                      00010300
                                    118 *     MOVE IN THE CREATION DATE, EXPIRATION DATE, AND LAST ACCESS DATE 00010400
                                    119 *                                                                      00010500
0000A0 D202 301C 7035 0001C 00035   120          MVC   VTFCREDT,DS1CREDT  MOVE OVER CREATION DATE               00010600
0000A6 D202 301F 7038 0001F 00038   121          MVC   VTFEXPDT,DS1EXPDT  MOVE OVER EXPIRATION DATE             00010700
0000AC D202 3022 704B 00022 0004B   122          MVC   VTFLSTAC,DS1REFD   MOVE OVER LAST ACCESS DATE            00010800
                                    123 *                                                                      00010900
                                    124 *        FORMAT THE RECORD FORMAT INTO CHARACTERS                      00011000
                                    125 *                                                                      00011100
                                    126 *                                                                      00011200
0000B2 D204 3029 C488 00029 00488   127          MVC   VTFRECFM,BLANKS  BLANK THE FIELD TO START               00011300
0000B8 D207 303B C488 0003B 00488   128          MVC   VTFACTON,BLANKS  ANOTHER BLANK FIELD                    00011400
0000BE 9240 303A      0003A         129          MVI   VTFDSTYP,C' ' AND STILL ANOTHER                          00011500
0000C2 4120 3029      00029         130          LA    R2,VTFRECFM    POINT TO THE FIELD                        00011600
0000C6 91C0 7054      00054         131          TM    DS1RECFM,X'C0' UNKNOWN RECFM?                            00011700
0000CA 4780 C0FA      000FA         132          BZ    RECFM2         YES, TROUBLE                              00011800
0000CE 9140 7054      00054         133          TM    DS1RECFM,X'40' IS IT FIXED?                              00011900
0000D2 4770 C0E2      000E2         134          BNZ   RECFM3         NO, KEEP TRYING                           00012000
0000D6 92C6 2000      00000         135          MVI   0(R2),C'F'     YES, SET UP THE FIRST CHAR                00012100
0000DA 4122 0001      00001         136          LA    R2,1(R2)       AND BUMP THE POINTER                      00012200
0000DE 47F0 C0FA      000FA         137          B     RECFM2         CHECK OTHER ATTRIBUTES                    00012300
0000E2 9180 7054      00054         138 RECFM3   TM    DS1RECFM,X'80' SEE IF IT'S V OR U                        00012400
0000E6 4780 C0F2      000F2         139          BZ    RECFM4         VARIABLE RECFM                            00012500
0000EA 92E4 2000      00000         140          MVI   0(R2),C'U'     RECFM = U                                 00012600
0000EE 47F0 C0F6      000F6         141          B     RECFM4A        ADD TO THE POINTER AND KEEP LOOKING       00012700
0000F2 92E5 2000      00000         142 RECFM4   MVI   0(R2),C'V'     VARIABLE                                  00012800
0000F6 4122 0001      00001         143 RECFM4A  LA    R2,1(R2)       GET PAST THIS CHAR                        00012900
0000FA                              144 RECFM2   DS    0H                                                       00013000
0000FA 9110 7054      00054         145 RECFM5   TM    DS1RECFM,X'10' IS IT BLOCKED?                            00013100
0000FE 4780 C10A      0010A         146          BZ    RECFM6         NO, SKIP ON                               00013200
000102 92C2 2000      00000         147          MVI   0(R2),C'B'     YES, SET THE SYMBOL                       00013300
000106 4122 0001      00001         148          LA    R2,1(R2)       GET PAST THE CHAR                         00013400
00010A 9108 7054      00054         149 RECFM6   TM    DS1RECFM,X'08' IS IT SPANNED OR STANDARD?                00013500
00010E 4780 C11A      0011A         150          BZ    RECFM6A        NO                                        00013600
000112 92E2 2000      00000         151          MVI   0(R2),C'S'     YES, SET IT                               00013700
000116 4122 0001      00001         152          LA    R2,1(R2)       GET PAST THIS CHARACTER                   00013800
00011A 9120 7054      00054         153 RECFM6A  TM    DS1RECFM,X'20' CHECK TRACK OVERFLOW                      00013900
00011E 4780 C12A      0012A         154          BZ    RECFM7         NO DICE                                   00014000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000122 92E3 2000      00000         155          MVI   0(R2),C'T'     YES, SET IT                                00014100
000126 4122 0001      00001         156          LA    R2,1(R2)       PUSH THE POINTER ON                        00014200
00012A 9104 7054      00054         157 RECFM7   TM    DS1RECFM,X'04' IS IT ASA CONTROL                          00014300
00012E 4780 C13A      0013A         158          BZ    RECFM8         NO, SKIP ON                                00014400
000132 92C1 2000      00000         159          MVI   0(R2),C'A'     YES, SET IT                                00014500
000136 4122 0001      00001         160          LA    R2,1(R2)       GET PAST THIS CHAR                         00014600
00013A 9102 7054      00054         161 RECFM8   TM    DS1RECFM,X'02' HOW ABOUT MACHINE CARRIAGE CONTROL         00014700
00013E 4780 C146      00146         162          BZ    RECFM9         NO, SKIP ON                                00014800
000142 92D4 2000      00000         163          MVI   0(R2),C'M'     YES, SET IT                                00014900
000146                              164 RECFM9   DS    0H                                                        00015000
                                    165 *                                                                        00015100
                                    166 *        FORMAT THE DSORG                                                00015200
                                    167 *                                                                        00015300
000146 D202 3026 C528 00026 00528   168          MVC   VTFDSORG,=CL3'   '  CLEAR THE FIELD                       00015400
                                    169          DS1TST DSORG,80,IS   TRY ISAM                                  00015500
00014C 9180 7052      00052         170+         TM    DS1DSORG,X'80'       TEST IT                             00004000
000150 47E0 C15A      0015A         171+         BNO   D0003          IF NOT THERE, SKIP ALONG                   00004100
000154 D202 3026 C52B 00026 0052B   172+         MVC   VTFDSORG,=CL3'IS'                                         00004200
00015A                              173+D0003    DS    0H                                                        00004300
                                    174          DS1TST DSORG,40,PS   TRY SEQUENTIAL                            00015600
00015A 9140 7052      00052         175+         TM    DS1DSORG,X'40'       TEST IT                             00004000
00015E 47E0 C168      00168         176+         BNO   D0004          IF NOT THERE, SKIP ALONG                   00004100
000162 D202 3026 C52E 00026 0052E   177+         MVC   VTFDSORG,=CL3'PS'                                         00004200
000168                              178+D0004    DS    0H                                                        00004300
                                    179          DS1TST DSORG,20,DA   TRY DIRECT ACCESS                         00015700
000168 9120 7052      00052         180+         TM    DS1DSORG,X'20'       TEST IT                             00004000
00016C 47E0 C176      00176         181+         BNO   D0005          IF NOT THERE, SKIP ALONG                   00004100
000170 D202 3026 C531 00026 00531   182+         MVC   VTFDSORG,=CL3'DA'                                         00004200
000176                              183+D0005    DS    0H                                                        00004300
                                    184          DS1TST DSORG,02,PO   TRY PARTITIONED                           00015800
000176 9102 7052      00052         185+         TM    DS1DSORG,X'02'       TEST IT                             00004000
00017A 47E0 C184      00184         186+         BNO   D0006          IF NOT THERE, SKIP ALONG                   00004100
00017E D202 3026 C534 00026 00534   187+         MVC   VTFDSORG,=CL3'PO'                                         00004200
000184                              188+D0006    DS    0H                                                        00004300
000184 D501 7052 C520 00052 00520   189          CLC   DS1DSORG(2),=X'0008'  IS IT VSAM?                        00015900
00018A 4770 C194      00194         190          BNE   DSORG05       NO, KEEP LOOKING                           00016000
00018E D202 3026 C537 00026 00537   191          MVC   VTFDSORG,=CL3'VS ' YES, FLAG IT                          00016100
000194 9101 7052      00052         192 DSORG05  TM    DS1DSORG,X'01'      IS IT UNMOVEABLE?                    00016200
000198 47E0 C1A0      001A0         193          BNO   DSORG06       NO, KEEP ON TRUCKIN'                       00016300
00019C 92E4 3028      00028         194          MVI   VTFDSORG+2,C'U'     YES, NOTE IT                           00016400
0001A0                              195 DSORG06  DS    0H                                                        00016500
                                    196 *                                                                        00016600
                                    197 *        FORMAT THE SECONDARY ALLOCATION                                 00016700
                                    198 *                                                                        00016800
0001A0 1B11                         199          SR    R1,R1          CLEAR A WORK REGISTER                      00016900
0001A2 4310 705E      0005E         200          IC    R1,DS1SCALO    GET THE ALLOCATION FLAG                    00017000
0001A6 8810 0006      00006         201          SRL   R1,6           REMOVE THE BOTTOM 6 BITS ( 75 CENTS )      00017100
0001AA 4321 C4A2      004A2         202          IC    R2,SECAL(R1)   GET THE CHARACTER CODE                     00017200
0001AE 4220 3039      00039         203          STC   R2,VTFSECAL    AND SAVE IT FOR LATER                      00017300
0001B2 D201 3037 7060 00037 00060   204          MVC   VTFSECAM,DS1SCALO+2  SAVE THE SECONDARY AMOUNT TOO        00017400
0001B8 92D5 3032      00032         205          MVI   VTFROUND,C'N'  SET CODE FOR NO ROUND                     00017500
0001BC 9101 705E      0005E         206          TM    DS1SCALO,X'01' SEE IF ROUND WAS SET                      00017600
0001C0 47E0 C1C8      001C8         207          BNO   PROTFORM       NO, THE CODE IS SET RIGHT                  00017700
0001C4 92D9 3032      00032         208          MVI   VTFROUND,C'R'  YES, RESET THE CODE                        00017800
                                    209 *                                                                        00017900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   210 *        FORMAT THE PASSWORD PROTECTION                                   00018000
                                   211 *                                                                         00018100
0001C8 9114 705D      0005D        212 PROTFORM TM    DS1DSIND,X'14' CHECK THE PASSWORD BITS                   00018200
0001CC 4710 C1DC      001DC        213          BO    PROTWRIT       WRITE PROTECT IS X'14'                    00018300
0001D0 4740 C1E4      001E4        214          BM    PROTREAD       READ PROTECT IS X'10'                     00018400
0001D4 92D5 3033      00033        215          MVI   VTFPROT,C'N'   NO PASSWORD PROTECTION                    00018500
0001D8 47F0 C1E8      001E8        216          B     PROTEND        END OF PROTECTION FORMATTING              00018600
0001DC 92E6 3033      00033        217 PROTWRIT MVI   VTFPROT,C'W'   SET CODE FOR WRITE PROTECT                00018700
0001E0 47F0 C1E8      001E8        218          B     PROTEND        THEN CHECK OTHER ITEMS                    00018800
0001E4 92D9 3033      00033        219 PROTREAD MVI   VTFPROT,C'R'   SET CODE FOR READ/WRITE PROTECT           00018900
0001E8                             220 PROTEND  DS    0H             END OF PROTECTION FORMATTING              00019000
                                   221 *                                                            TANSKY   00019102
                                   222 *        FORMAT THE RACF INDICATOR                           TANSKY   00019205
                                   223 *                                                            TANSKY   00019308
0001E8 92D5 3034      00034        224          MVI   VTFRACF,C'N'        ASSUME NOT RACF INDICATED  TANSKY   00019410
0001EC 9140 705D      0005D        225          TM    DS1DSIND,DS1IND40   RACF IND?                  TANSKY   00019515
0001F0 47E0 C1F8      001F8        226          BNO   RACFEND               NO, WE'RE RIGHT            TANSKY   00019618
0001F4 92E8 3034      00034        227          MVI   VTFRACF,C'Y'        YES, SHOW IT                TANSKY   00019720
0001F8                             228 RACFEND  DS    0H                                              TANSKY   00019822
                                   229 *                                                            TANSKY   00019925
                                   230 *        FORMAT THE UPDATED INDICATOR                        TANSKY   00020030
                                   231 *                                                            TANSKY   00020132
0001F8 92D5 3035      00035        232          MVI   VTFUPD,C'N'         ASSUME NOT UPDATED         TANSKY   00020234
0001FC 9102 705D      0005D        233          TM    DS1DSIND,DS1IND02   UPDATED?                   TANSKY   00020336
000200 47E0 C208      00208        234          BNO   UPDEND               NO, WE'RE RIGHT            TANSKY   00020438
000204 92E8 3035      00035        235          MVI   VTFUPD,C'Y'         YES, SHOW IT                TANSKY   00020540
000208                             236 UPDEND   DS    0H                                              TANSKY   00020642
                                   237 *                                                                         00020700
                                   238 *        FORMAT THE CATLG                                                 00020800
                                   239 *                                                                         00020900
000208 9240 3036      00036        240          MVI   VTFCATLG,C' ' INITIALIZE IT TO BLANKS                    00021000
00020C 9500 902D      0002D        241          CLI   CATK+1,0       SHOULD WE DO THE LOCATE?                  00021100
000210 4780 C252      00252        242          BE    CATEND         NO, SKIP PAST IT                          00021200
                                   243 *                                                                         00021300
                                   244 *        SET UP THE CAMLST                                                00021400
                                   245 *                                                                         00021500
000214 4110 7000      00000        246          LA    R1,DS1DSNAM    POINT TO THE DSNAME                       00021600
000218 5010 D060      00060        247          ST    R1,CAMLOC+4    SAVE IT IN THE CAMLST                     00021700
00021C 4110 D070      00070        248          LA    R1,LOCWORK     LOCATE WORKAREA                           00021800
000220 5010 D068      00068        249          ST    R1,CAMLOC+12   SAVE IT IN THE CAMLST                     00021900
                                   250          LOCATE CAMLOC        CHECK THE CATALOG                         00022000
000224 4110 D05C      0005C        251+         LA    1,CAMLOC                         LOAD PARAMETER REG 1  01900002
000228 0A1A                        252+         SVC   26                               LINK TO SERVICE ROUT. 00100000
00022A 12FF                        253          LTR   R15,R15        TEST THE CATALOG RETURN CODE              00022100
00022C 4780 C240      00240        254          BZ    CATOK          ZERO, THERE IS AN ENTRY                   00022200
000230 92D5 3036      00036        255          MVI   VTFCATLG,C'N'  SET CODE FOR NOT CATALOGED                00022300
000234 49F0 C4A0      004A0        256          CH    R15,H8         SEE IF THAT'S THE CASE                    00022400
000238 4780 C252      00252        257          BE    CATEND         YES, LET IT STAND                         00022500
00023C 92C5 3036      00036        258          MVI   VTFCATLG,C'E'  CATALOG ERROR, PROBLEMS                   00022600
                                   259 *                                                                         00022700
                                   260 *        CATALOG ENTRY IS THERE, SEE THAT THE VOLUME IS THIS ONE          00022800
                                   261 *                                                                         00022900
000240 92C3 3036      00036        262 CATOK    MVI   VTFCATLG,C'C'  SET UP AS A GOOD ENTRY                    00023000
000244 D505 B1B9 D076 001B9 00076  263          CLC   VOLID,LOCWORK+6  COMPARE THE VOLUME SERIAL NUMBERS       00023100
00024A 4780 C252      00252        264          BE    CATEND         GOOD, WE'RE DONE                          00023200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00024E 92E6 3036      00036         265          MVI   VTFCATLG,C'W'  WRONG VOLUME, NOT CATALOGED                00023300
000252                              266 CATEND   DS    0H                                                        00023400
                                    267 *                                                                        00023500
                                    268 *        FORMAT THE ALLOCATION AND USED QUANTITIES                       00023600
                                    269 *                                                                        00023700

                                    271 *        CHECK THROUGH THE EXTENTS                                       00023900

000252 1B22                         273          SR    R2,R2          CLEAR A WORK REGISTER                     00024100
000254 BF21 703B      0003B         274          ICM   R2,B'0001',DS1NOEPV  GET THE NUMBER OF EXTENTS             00024200
000258 4780 C2D2      002D2         275          BZ    SPACEND        NO EXTENTS MEANS NO SPACE                 00024300
00025C 1B44                         276          SR    R4,R4          ZERO THE SPACE COUNTER FOR THE DATA SET   00024400
                                    277 *                                                                        00024500
                                    278 *        GET EACH EXTENT AND PROCESS IT                                  00024600
                                    279 *                                                                        00024700
00025E 1B66                         280          SR    R6,R6          FIRST EXTENT                              00024800
000260 1856                         281 EXTNEXT  LR    R5,R6          GET THE CURRENT EXTENT NUMBER             00024900
000262 8950 0002      00002         282          SLL   R5,2           MULTIPLY IT BY FOUR                       00025000
000266 4405 C424      00424         283          EX    R0,GETEXT(R5)  GET THE CORRECT ADDRESS                   00025100
                                    284 *                                                                        00025200
                                    285 *        PROCESS THIS EXTENT                                             00025300
                                    286 *                                                                        00025400
                            00000   287          USING XTDSECT,R5     SET ADDRESSABILITY                        00025500
00026A 9500 5000      00000         288          CLI   XTFLAGS,XTNOEXT  IS THERE AN EXTENT                      00025600
00026E 4780 C2C0      002C0         289          BE    NOEXT          NO, THE EXTENT ISN'T THERE                00025700
000272 9581 5000      00000         290          CLI   XTFLAGS,XTCYLBD  IS IT ON CYLINDER BOUNDARIES             00025800
000276 4770 C2A6      002A6         291          BNE   FORMALOC       NO, DO IT FOR CYLS AND TRACKS             00025900
                                    292 *                                                                        00026000
                                    293 *        CYLINDER BOUNDS - BE SURE THE ALLOCATION IS CORRECT             00026100
                                    294 *                                                                        00026200
00027A BF13 5004      00004         295          ICM   R1,B'0011',XTLOWHH GET THE LOWER TRACK                   00026300
00027E 4780 C28C      0028C         296          BZ    LOWOK          IT'S ZERO                                 00026400
000282 D205 303B C522 0003B 00522   297          MVC   VTFACTON(6),=C'CYLERR'  NOTE THE ERROR                   00026500
000288 92D3 3041      00041         298          MVI   VTFACTON+6,C'L'  ON THE LOW CCHH                         00026600
00028C 4810 5008      00008         299 LOWOK    LH    R1,XTHIHH      GET THE HIGH TRACK                        00026700
000290 4111 0001      00001         300          LA    R1,1(R1)       ADD ONE FOR ZERO ADDRESSING               00026800
000294 4910 B720      00720         301          CH    R1,DS4DEVSZ+2  IS THIS THE NUMBER OF TRACKS/CYL          00026900
000298 4780 C2A6      002A6         302          BE    FORMALOC       YES, GO CALCULATE                         00027000
00029C D205 303B C522 0003B 00522   303          MVC   VTFACTON(6),=C'CYLERR'  NOTE THE ERROR                   00027100
0002A2 92C8 3042      00042         304          MVI   VTFACTON+7,C'H'  ON THE HIGH CCHH                        00027200
                                    305 *                                                                        00027300
                                    306 *        GET THE SPACE FOR NON-CYLINDER ALLOCATIONS                      00027400
                                    307 *                                                                        00027500
0002A6 4810 5006      00006         308 FORMALOC LH    R1,XTHICC      GET THE HIGH CYLINDER                     00027600
0002AA 4B10 5002      00002         309          SH    R1,XTLOWCC     MINUS THE LOW CYLINDER                    00027700
0002AE 4C10 B720      00720         310          MH    R1,DS4DEVSZ+2  TIMES THE NUMBER OF TRACKS PER CYLINDER   00027800
0002B2 4880 5008      00008         311          LH    R8,XTHIHH      GET THE HIGH TRACK                        00027900
0002B6 4B80 5004      00004         312          SH    R8,XTLOWHH     MINUS THE LOW TRACK                       00028000
0002BA 1A81                         313          AR    R8,R1          TRACKS IN THIS EXTENT ( MINUS 1 )         00028100
0002BC 4144 8001      00001         314          LA    R4,1(R4,R8)    ADD THE TRACKS TOGETHER FOR THIS DATA SET 00028200
                                    315 *                                                                        00028300
                                    316 *        GET THE NEXT EXTENT                                             00028400
                                    317 *                                                                        00028500
0002C0 4166 0001      00001         318 NOEXT    LA    R6,1(R6)       INCREMENT THE EXTENT COUNTER              00028600
0002C4 1962                         319          CR    R6,R2          CHECK FOR THE END                         00028700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0002C6 4740 C260      00260         320          BL    EXTNEXT        NOT YET, KEEP GOING                      00028800
                                    321 *                                                                        00028900
                                    322 *        ALL THE EXTENTS ARE SUMMED REGISTER 4 HAS THE SUM               00029000
                                    323 *                                                                        00029100
0002CA 4580 C366      00366         324          BAL   R8,SPACUNIT    CHANGE IT TO THE APPROPRIATE UNITS       00029200
0002CE 5040 3004      00004         325          ST    R4,VTFALLOC    STORE IT FOR LATER                       00029300
0002D2                              326 SPACEND  DS    0H                                                       00029400
                                    327 *                                                                        00029500
                                    328 *        GET THE TRACKS USED                                             00029600
                                    329 *                                                                        00029700
0002D2 1B44                         330          SR    R4,R4          CLEAR THE TRACK ( WOO WOO )              00029800
0002D4 D502 7062 C46C 00062 0046C   331          CLC   DS1LSTAR,ZEROES IS THE TRACK USED COUNTER SET?           00029900
0002DA 4770 C314      00314         332          BNE   USEDOK         YES, ACCEPT IT                           00030000
                                    333 *        NO, SEE IF THE ZERO IS VALID                                    00030100
0002DE 9140 7052      00052         334          TM    DS1DSORG,X'40' IS IT SEQUENTIAL?                        00030200
0002E2 4710 C320      00320         335          BO    USEDOK0        YES,THE ZERO IS VALID                    00030300
0002E6 9108 7053      00053         336          TM    DS1DSORG+1,DS1ACBM  VSAM?                        TANSKY  00030410
0002EA 47E0 C2F8      002F8         337          BNO   USEDNVSM              NO, MORE CHECKING              TANSKY  00030520
0002EE D203 3008 3004 00008 00004   338          MVC   VTFUSED,VTFALLOC    IF VSAM, SET USED=ALLOC          TANSKY  00030630
0002F4 47F0 C324      00324         339          B     USEDEND             AND CONTINUE                     TANSKY  00030740
0002F8                              340 USEDNVSM DS    0H                                                   TANSKY  00030850
0002F8 D503 000A C46C 0000A 0046C   341          CLC   DSORG(4),ZEROES  MAYBE IT WASN'T EVER OPENED             00030900
0002FE 4780 C320      00320         342          BE    USEDOK0        THEN NO SPACE USED IS OK                 00031000
000302 910C 7052      00052         343          TM    DS1DSORG,X'0C' CHECK FOR AN INVALID DSORG               00031100
000306 4710 C320      00320         344          BO    USEDOK0        NO SPACE USED IS STILL OK                00031200
00030A D203 3008 C474 00008 00474   345          MVC   VTFUSED,FMIN1  SET A FLAG UNUSED SPACE UNKNOWN          00031300
000310 47F0 C324      00324         346          B     USEDEND        USED SPACE IS SET                        00031400
                                    347 *                                                                        00031500
                                    348 *        THE TRACKS USED COUNTER SEEMS OK                                00031600
                                    349 *                                                                        00031700
000314 4840 7062      00062         350 USEDOK   LH    R4,DS1LSTAR    GET THE LAST TRACK USED                  00031800
000318 4144 0001      00001         351          LA    R4,1(R4)       ADD ONE ( ZERO ADDRESSING )              00031900
00031C 4580 C366      00366         352          BAL   R8,SPACUNIT    CONVERT TO APPROPRIATE UNITS             00032000
000320 5040 3008      00008         353 USEDOK0  ST    R4,VTFUSED     SAVE THE AMOUNT OF SPACE USED            00032100
000324                              354 USEDEND  DS    0H                                                       00032200
000324 58E0 3004      00004         355          L     R14,VTFALLOC   ALLOCATED TRACKS                         00032300
000328 5BE0 3008      00008         356          S     R14,VTFUSED    MINUS USED TRACKS                        00032400
00032C 50E0 300C      0000C         357          ST    R14,VTFUNUSD   EQUALS UNUSED TRACKS                     00032500
000330 1BEE                         358          SR    R14,R14                                                 00032600
000332 1BFF                         359          SR    R15,R15                                                 00032700
000334 D503 3004 C518 00004 00518   360          CLC   VTFALLOC(4),=F'0'                                       00032800
00033A 4780 C34A      0034A         361          BE    USEDEND1                                                00032900
00033E 58F0 3008      00008         362          L     R15,VTFUSED    USED TRACKS                              00033000
000342 5CE0 C51C      0051C         363          M     R14,=F'100'    MULT BY 100 TO GET PCT                   00033100
000346 5DE0 3004      00004         364          D     R14,VTFALLOC   DIVIDE BY ALLOC TO GET PCT USED          00033200
00034A 40F0 3010      00010         365 USEDEND1 STH   R15,VTFPCT     SAVE PCT USED                            00033300
                                    366 *                                                                        00033400
                                    367 *        RETURN                                                          00033500
                                    368 *                                                                        00033600
                                    369 FORMRET  LEAVE EQ,RC=0                                                   00033700
00034E 182D                         370+FORMRET  LR    2,13                                                    00000400
000350 58DD 0004      00004         371+         L     13,4(13)                                                00000500
000354 41F0 0000      00000         372+         LA    15,0           LOAD THE RETURN CODE                     00000700
000358 90F1 D010      00010         373+         STM   15,1,16(13)  STORE RETURN REGS                          00000800
00035C 98EC D00C      0000C         374+         LM    14,12,12(13)                      RESTORE THE REGISTERS  00650000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000360 92FF D00C      0000C         375+         MVI   12(13),X'FF'                      SET RETURN INDICATION  01600000
000364 07FE                         376+         BR    14                                RETURN                 02000000
                            00000   377+R0       EQU   0        *USED BY O.S.                                   00000100
                            00001   378+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST      00000200
                            00002   379+R2       EQU   2                                                        00000300
                            00003   380+R3       EQU   3                                                        00000400
                            00004   381+R4       EQU   4                                                        00000500
                            00005   382+R5       EQU   5                                                        00000600
                            00006   383+R6       EQU   6                                                        00000700
                            00007   384+R7       EQU   7                                                        00000880
                            00008   385+R8       EQU   8                                                        00000900
                            00009   386+R9       EQU   9                                                        00001000
                            0000A   387+R10      EQU   10                                                       00001100
                            0000B   388+R11      EQU   11                                                       00001200
                            0000C   389+R12      EQU   12                                                       00001300
                            0000D   390+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS              00001400
                            0000E   391+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                 00001500
                            0000F   392+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE     00001600
                                    393 *                                                                       00033800
                                    394 *                                                                       00033900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  396 *                                                                    00034100
                                  397 *        ROUTINES USED ABOVE                                         00034200
                                  398 *                                                                    00034300
                                  399 *                                                                    00034400
                                  400 *        CONVERT FROM TRACKS TO THE APPROPRIATE UNITS                00034500
                                  401 *              KBYTES, MBYTES, TRKS, OR CYLS                         00034600
                                  402 *                                                                    00034700
000366 4810 902A      0002A       403 SPACUNIT LH    R1,SPACEK      GET THE UNIT TYPE                      00034800
00036A 8910 0002      00002       404          SLL   R1,2           MULTIPLY BY 4                          00034900
00036E 47F1 C372      00372       405          B     *+4(R1)        THEN BRANCH TO THE CORRECT ROUTINE     00035000
000372 47F0 C386      00386       406          B     SPACTRK        R1=0  KILOBYTES                        00035100
000376 47F0 C386      00386       407          B     SPACTRK        R1=1  KILOBYTES                        00035200
00037A 47F0 C386      00386       408          B     SPACTRK        R1=2  MEGABYTES                        00035300
00037E 47F0 C386      00386       409          B     SPACTRK        R1=3  TRACKS                           00035400
000382 47F0 C386      00386       410          B     SPACTRK        R1=4  CYLINDERS                        00035500
                                  411 *        TRACKS                                                      00035600
000386 07F8                       412 SPACTRK  BR    R8             WAS SET WHEN WE STARTED                00035700
                                  413 *        CYLINDERS                                                   00035800
000388 1B00                       414 SPACCYL  SR    R0,R0          CLEAR A REGISTER                       00035900
00038A 1814                       415          LR    R1,R4          GET THE NUMBER OF TRACKS               00036000
00038C 4840 B720      00720       416          LH    R4,DS4DEVSZ+2  GET THE NUMBER OF TRACKS PER CYLINDER  00036100
000390 8840 0002      00002       417          SRL   R4,2           DIVIDE BY 2 FOR ROUNDING               00036200
000394 1A14                       418          AR    R1,R4          ADD IT IN                              00036300
000396 4840 B720      00720       419          LH    R4,DS4DEVSZ+2  GET THE NUMBER OF TRACKS PER CYLINDER  00036400
00039A 1D04                       420          DR    R0,R4          DIVIDE TO GET ROUNDED CYLINDERS        00036500
00039C 1841                       421          LR    R4,R1          GET THE ANSWER BACK INTO R4            00036600
00039E 07F8                       422          BR    R8             THEN RETURN                            00036700
                                  423 *        KILOBYTES                                                   00036800
0003A0 4C40 B722      00722       424 SPACKB   MH    R4,DS4DEVTK    MULTIPLY BY BYTES PER TRACK            00036900
0003A4 1B00                       425          SR    R0,R0          CLEAR THE TOP                          00037000
0003A6 1814                       426          LR    R1,R4          GET THE NUMBER TO DIVIDE               00037100
0003A8 5A10 C478      00478       427          A     R1,F500        ADD UP TO ROUND                        00037200
0003AC 5D00 C47C      0047C       428          D     R0,F1000       DIVIDE TO GET KILOBYTES                00037300
0003B0 1841                       429          LR    R4,R1          GET THE ANSWER BACK INTO R4            00037400
0003B2 07F8                       430          BR    R8             THEN RETURN                            00037500
                                  431 *        MEGABYTES                                                   00037600
0003B4 4C40 B722      00722       432 SPACMB   MH    R4,DS4DEVTK    MULTIPLY BY BYTES PER TRACK            00037700
0003B8 1B00                       433          SR    R0,R0          CLEAR THE TOP                          00037800
0003BA 1814                       434          LR    R1,R4          GET THE NUMBER TO DIVIDE               00037900
0003BC 5A10 C480      00480       435          A     R1,F500000     ADD UP TO ROUND                        00038000
0003C0 5D00 C484      00484       436          D     R0,F1000000    DIVIDE TO GET MEGABYTES                00038100
0003C4 1841                       437          LR    R4,R1          GET THE ANSWER BACK INTO R4            00038200
0003C6 07F8                       438          BR    R8             THEN RETURN                            00038300
                                  439 *                                                                    00038400
                                  440 *        GET A NEW BLOCK OF MAIN STORAGE                             00038500
                                  441 *                                                                    00038600
                                  442 GOGETMN  GETMAIN R,LV=VTCGETMS  GET SOME                            00038700
0003C8                            443+         CNOP  0,4
0003C8 4510 C3D0      003D0       444+GOGETMN  BAL   1,*+8                          BRANCH AROUND LENGTH
0003CC 00008000                   445+         DC    A(VTCGETMS)                    LENGTH
0003D0 5800 1000      00000       446+         L     0,0(0,1)                       LOAD LENGTH
0003D4 0A0A                       447+         SVC   10                             ISSUE GETMAIN SVC
0003D6 5010 B208      00208       448          ST    R1,VTCCURAD    SET UP THE AVAILABLE ADDRESS           00038800
0003DA 4120 0020      00020       449          LA    R2,VTCGETMS/1024   GET THE SIZE OF THE BLOCK IN K     00038900
0003DE 8920 000A      0000A       450          SLL   R2,10          GET IT INTO BYTES ( TIMES 1024 )       00039000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

0003E2 5020 B20C      0020C         451          ST    R2,VTCCURLN    SO THE FORMATTED DSCB'S CAN USE IT        00039100
                                    452 *                                                                        00039200
                                    453 *        SAVE THE BLOCK ADDRESS IN THE VTCGETMN TABLE                    00039300
                                    454 *                                                                        00039400
0003E6 4120 B210      00210         455          LA    R2,VTCGETMN    POINT TO THE TABLE                        00039500
0003EA 4150 0032      00032         456          LA    R5,VTCGETMX    GET THE NUMBER OF ENTRIES IN THE TABLE    00039600
0003EE BF3F 2000      00000         457 GOGETTAB ICM   R3,B'1111',0(R2) GET THIS ENTRY                          00039700
0003F2 4770 C3FE      003FE         458          BNZ   GOGETINC       IF NOT ZERO, KEEP LOOKING                 00039800
0003F6 5012 0000      00000         459          ST    R1,0(R2)       SAVE THE NEW ENTRY                        00039900
0003FA 47F0 C050      00050         460          B     FORMFIT        THEN GO ALLOCATE A FORMATTED DSCB         00040000
                                    461 *                                                                        00040100
                                    462 *        THIS ENTRY WAS TAKEN, GET THE NEXT ONE                          00040200
                                    463 *                                                                        00040300
0003FE 4122 0004      00004         464 GOGETINC LA    R2,4(R2)       POINT TO THE NEXT ENTRY                   00040400
000402 4650 C3EE      003EE         465          BCT   R5,GOGETTAB    COUNT AND LOOP                            00040500
                                    466 *                                                                        00040600
                                    467 *        TABLE OVERFLOW  - ISSUE ERROR MSG                               00040700
                                    468 *              SET A FLAG TO STOP INPUT                                  00040800
                                    469 *                                                                        00040900
                                    470          VTOCMSG TABOVFLW,TABOVSEC  ISSUE A MESSAGE                      00041000
000406 4110 C4A6      004A6         471+         LA    R1,TABOVFLW    POINT TO THE FIRST MESSAGE                00000300
00040A 4100 C4F0      004F0         472+         LA    R0,TABOVSEC    POINT TO THE SECOND MESSAGE               00000500
00040E 9001 B078      00078         473+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                00000800
                                    474+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                      00000900
000412 4110 B000      00000         475+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
000416 58F0 B01C      0001C         476+         L     R15,VADMSG     POINT TO THE ROUTINE                      00000400
00041A 05EF                         477+         BALR  R14,R15        THEN CALL IT                              00000900
00041C 92FF B1A6      001A6         478          MVI   TABFULL,255    SET A STOP FLAG                           00041100
000420 47F0 C34E      0034E         479          B     FORMRET        RETURN FROM FORMATTING                    00041200
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   481 *                                                                    00041400
                                   482 *                                                                    00041500
                                   483 *                                                                    00041600
                                   484 *        PROGRAM CONSTANTS                                           00041700
                                   485 *                                                                    00041800

                                   487 *        INSTRUCTIONS EXECUTED TO GET THE NEXT EXTENT                00042000
000424 4150 7069      00069        488 GETEXT   LA    R5,DS1EXT1        1ST EXTENT                        00042100
000428 4150 7073      00073        489          LA    R5,DS1EXT2        2ND EXTENT                        00042200
00042C 4150 707D      0007D        490          LA    R5,DS1EXT3        3RD EXTENT                        00042300
000430 4150 B774      00774        491          LA    R5,DS3EXTNT+00    4TH EXTENT                        00042400
000434 4150 B77E      0077E        492          LA    R5,DS3EXTNT+10    5TH EXTENT                        00042500
000438 4150 B788      00788        493          LA    R5,DS3EXTNT+20    6TH EXTENT                        00042600
00043C 4150 B792      00792        494          LA    R5,DS3EXTNT+30    7TH EXTENT                        00042700
000440 4150 B79D      0079D        495          LA    R5,DS3ADEXT+00    8TH EXTENT                        00042800
000444 4150 B7A7      007A7        496          LA    R5,DS3ADEXT+10    9TH EXTENT                        00042900
000448 4150 B7B1      007B1        497          LA    R5,DS3ADEXT+20   10TH EXTENT                        00043000
00044C 4150 B7BB      007BB        498          LA    R5,DS3ADEXT+30   11TH EXTENT                        00043100
000450 4150 B7C5      007C5        499          LA    R5,DS3ADEXT+40   12TH EXTENT                        00043200
000454 4150 B7CF      007CF        500          LA    R5,DS3ADEXT+50   13TH EXTENT                        00043300
000458 4150 B7D9      007D9        501          LA    R5,DS3ADEXT+60   14TH EXTENT                        00043400
00045C 4150 B7E3      007E3        502          LA    R5,DS3ADEXT+70   15TH EXTENT                        00043500
000460 4150 B7ED      007ED        503          LA    R5,DS3ADEXT+80   16TH EXTENT                        00043600
000464 D200 3046 7000 00046 00000  504 MOVEDSN  MVC   VTFDSN(0),DS1DSNAM   EXECUTED COMPARE              00043700
00046A 0000
00046C 0000000000000000            505 ZEROES   DC    2F'0'                                               00043800
000474 FFFFFFFF                    506 FMIN1    DC    F'-1'                                               00043900
000478 000001F4                    507 F500     DC    F'500'                                              00044000
00047C 000003E8                    508 F1000    DC    F'1000'                                             00044100
000480 0007A120                    509 F500000  DC    F'500000'                                           00044200
000484 000F4240                    510 F1000000 DC    F'1000000'                                          00044300
000488 404040404040404040          511 BLANKS   DC    CL8'                '                               00044400
                                   512 CAMCONST CAMLST NAME,*,,*                                          00044500
000490                             513+CAMCONST DS    0F                                ALIGN ON FULL WORD  00349401
000490 44                          514+         DC    AL1(68)                           THREE BYTES OF FLAGS 00349501
000491 00                          515+         DC    AL1(0)                            INDICATING THE FUNC- 00349601
000492 00                          516+         DC    AL1(0)                            TION TO BE PERFORMED 00399601
000493 00                          517+         DC    AL1(0)                            NO OPTION THREE      00419601
000494 00000494                    518+         DC    A(*)                              PARAMETER TWO        00441601
000498 00000000                    519+         DC    A(0)                              PARAM. THREE OMMITTED 00445601
00049C 0000049C                    520+         DC    A(*)                              PARAMETER FOUR       00448801
0004A0 0008                        521 H8       DC    H'8'                                                 00044600
0004A2 C1C2E3C3                    522 SECAL    DC    C'ABTC'        SECONDARY ALLOCATION CODES            00044700
                                   523 *             ABSOLUTE TRK, BLOCKS, TRACKS, CYLINDERS              00044800
                                   524 *                                                                  00044900
                                   525 *                                                                  00045000
                                   526 *                                                                  00045100
                                   527          PRINT NOGEN                                               00045200
                                   528 *                                                                  00045300
                                   529 *        PROGRAM MESSAGES                                          00045400
                                   530 *                                                                  00045500
                                   531 TABOVFLW MSG   ' THE VTOC TABLES (1.6 MEG) ARE NOT LARGE ENOUGH TO HANDX00045600
                                                      LE THIS REQUEST'                                    00045700
                                   533 TABOVSEC MSG   ' PARTIAL PROCESSING WILL CONTINUE '                00045800
                                   535 *                                                                  00045900
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  536 *                                                                   00046000
                                  537 *                                                                   00046100
                                  538 *                                                                   00046200
                                  539 *                                                                   00046300
                                  540 *                                                                   00046400
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   542 *                                                                    00046600
                                   543 *                                                                    00046700
                                   544 *        P A R S E   C O N T R O L   L I S T                         00046800
                                   545 *                                                                    00046900
                                   546 *                                                                    00047000
                                   547          PRINT OFF                                                   00047100
                                   549          PUSH  PRINT                                                 00000100
                                   550          PRINT NOGEN                                                 00000200
                                  1736          POP   PRINT                                                 00017600
                                  1763          PRINT ON                                                    00047300
                                  1764 *                                                                    00047400
                                  1765 *        DYNAMIC WORK AREA                                           00047500
                                  1766 *                                                                    00047600



000000                            1768 FORMWORK DSECT                                                     00047800
000000                            1769          DS    18A            PRINT ROUTINE SAVE AREA              00047900
000048                            1770 FIRSTFRM DS    X              INITIALIZATION FOR THIS ROUTINE      00048000
000049                            1771 CHARS    DS    CL16           CONVERSION TO CHARACTERS             00048100
                                  1772 CAMLOC   CAMLST NAME,*,,*                                          00048200
                            00010 1781 CAMLEN   EQU   *-CAMLOC                                            00048300
000070                            1782          DS    0D                                                  00048400
000070                            1783 LOCWORK  DS    265C                                                00048500

000180                            1785          DS    0D                                                  00048700
                            00180 1786 LENWORK  EQU   *-FORMWORK                                          00048800
                                  1787 *                                                                  00048900
                                  1788 *        VTOC COMMAND COMMON AREA                                  00049000
                                  1789 *                                                                  00049100
                                  1790          PRINT NOGEN                                               00049200
                                  1791          VTOCOM                                                    00049300



                                  1959 *                                                                  00049500
                                  1960 *        FORMATTED DSCB                                            00049600
                                  1961 *                                                                  00049700
                                  1962          PRINT GEN                                                 00049800
                                  1963          VTFMT                                                     00049900
                                  1964+*                                                                  00000300
                                  1965+*        THIS DSECT DESCRIBES THE FORMATTED DSCB                   00000400
                                  1966+*                                                                  00000500
000000                            1967+VTFMT    DSECT                                                     00000600
000000                            1968+VTFNEXT  DS    A              POINTER TO NEXT DSCB                 00000700
000004                            1969+VTFALLOC DS    F              ALLOCATION IN UNITS AS DEFINED BY THE 00000800
                                  1970+*                               COMMAND.  KBYTES, MBYTES, TRACKS, OR 00000900
                                  1971+*                               CYLS MAY BE THE UNIT.                00001000
000008                            1972+VTFUSED  DS    F                AMOUNT USED, SAME UNIT               00001100
00000C                            1973+VTFUNUSD DS    F                AMOUNT UNUSED, SAME UNIT             00001200
000010                            1974+VTFPCT   DS    H                PERCENT USED,  0-100                 00001300
000012                            1975+VTFVOLUM DS    CL6            VOLUME SERIAL NUMBER                 00001400
000018                            1976+VTFUNIT  DS    CL4            UCB UNIT TYPE                   RPRIN1 00001410
00001C                            1977+VTFCREDT DS    XL3            CREATION DATE YYDDD                  00001500
00001F                            1978+VTFEXPDT DS    XL3            EXPIRATION DATE YYDDD                00001600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000022                            1979+VTFLSTAC DS    XL3            LAST ACCESS DATE YYDDD                    00001700
000025                            1980+VTFNOEPV DS    AL1            NUMBER OF EXTENTS PER VOLUME              00001800
000026                            1981+VTFDSORG DS    CL3            DATA SET ORGANIZATION                     00001900
                                  1982+*                               PS, PO, DA, VS, IS, PERHAPS U           00002000
000029                            1983+VTFRECFM DS    CL5            RECORD FORMAT                             00002000
                                  1984+*                               F,V, OR U, B, T, S, A, M                00002100
00002E                            1985+VTFLRECL DS    H              LOGICAL RECORD LENTGH                     00002200
000030                            1986+VTFBLKSZ DS    H              BLOCK SIZE                                00002300
000032                            1987+VTFROUND DS    C             R IF ROUND WAS SPECIFIED                   00002400
000033                            1988+VTFPROT  DS    C              PASSWORD PROTECTION FLAG                  00002500
000034                            1989+VTFRACF  DS    C              RACF INDICATOR FLAG               TANSKY  00002600
000035                            1990+VTFUPD   DS    C              UPDATE FLAG (UPDATED SINCE BACKUP) TANSKY 00002700
000036                            1991+VTFCATLG DS    C              CATALOG INDICATION                        00002800
000037                            1992+VTFSECAM DS    XL2           SECONDARY AMOUNT                           00002900
000039                            1993+VTFSECAL DS    C              SECONDARY ALLOCATION TYPE                 00003000
                                  1994+*                               C FOR CYL, T FOR TRKS, B FOR BLOCKS     00003100
                                  1995+*                               R FOR BLOCKS WITH ROUND                 00003200
00003A                            1996+VTFDSTYP DS    C              DATA SET TYPE, USER MAY DEFINE            00003300
                                  1997+*                               S = SYSTEM TEMPORARY DATA SET           00003400
                                  1998+*                               T = TEST DATA SET                       00003500
                                  1999+*                               P = PRODUCTION DATA SET                 00003600
00003B                            2000+VTFACTON DS    CL8            REQUESTED ACTION OR COMMENT               00003700
000044                            2001+VTFDSNL  DS    H              LENGTH OF DSNAME                          00003800
                            00046 2002+VTFMTL   EQU   *-VTFMT        FIXED LENGTH OF THIS DSECT                00003900
000046                            2003+VTFDSN   DS    44C            VARIABLE LENGTH FIELD                     00004000
                                  2004          PRINT NOGEN                                                   00050000


                                  2006          PDEDSNAM                                                      00050200




000000                            2029 DSCB1    DSECT                                                         00050500
                                  2030          IECSDSL1 1                                                    00050600


                                  2113 *        FORMAT 1 AND 3 EXTENT DESCRIPTION                             00050800
000000                            2114 XTDSECT  DSECT                                                         00050900
000000                            2115 XTFLAGS  DS    X                                                       00051000
                            00000 2116 XTNOEXT  EQU   X'00'          NO EXTENT                                00051100
                            00001 2117 XTDATAB  EQU   X'01'          DAT BLOCKS                               00051200
                            00002 2118 XTOVFLW  EQU   X'02'          OVERFLOW AREA                            00051300
                            00004 2119 XTINDEX  EQU   X'04'          INDEX AREA                               00051400
                            00040 2120 XTUSRLAB EQU   X'40'          USER LABEL EXTENT                        00051500
                            00080 2121 XTSHRCYL EQU   X'80'          SHARING CYLINDERS                        00051600
                            00081 2122 XTCYLBD  EQU   X'81'          CYLINDER BOUNDARIES                      00051700
000001                            2123 XTSEQ    DS    X              EXTENT SEQUENCE NUMBER                   00051800
000002                            2124 XTLOWCC  DS    H              LOWER CYLINDER                           00051900
000004                            2125 XTLOWHH  DS    H              LOWER TRACK                              00052000
000006                            2126 XTHICC   DS    H              UPPER CYLINDER                           00052100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000008                            2127 XTHIHH   DS    H              UPPER TRACK                                 00052200
                                  2128          END                                                               00052300
000518 00000000                   2129                =F'0'
00051C 00000064                   2130                =F'100'
000520 0008                       2131                =X'0008'
000522 C3E8D3C5D9D9               2132                =C'CYLERR'
000528 404040                     2133                =CL3'   '
00052B C9E240                     2134                =CL3'IS'
00052E D7E240                     2135                =CL3'PS'
000531 C4C140                     2136                =CL3'DA'
000534 D7D640                     2137                =CL3'PO'
000537 E5E240                     2138                =CL3'VS '
```

POS.ID	REL.ID	FLAGS	ADDRESS
0001	0001	0C	000494
0001	0001	0C	00049C

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ADDRANSR 00004 00000048 01824  00065
AL00381  00001 00000671 00780  00779
AL00391  00001 0000067F 00794  00793
ANDOR1K  00002 00000034 00768  00765
ANDOR2K  00002 00000036 00807  00804
ANDOR3K  00002 00000038 00838  00835
BLANKS   00008 00000488 00511  00127 00128
BLKSZSET 00004 000000AC 01226  01215
BREAK    00004 0000009C 01179  01166
BREAKK   00002 00000030 00726  00723
CAMCONST 00004 00000490 00513  00079
CAMLEN   00001 00000010 01781  00079
CAMLOC   00004 0000005C 01773  00079 00247 00249 00251 01781
CATEND   00002 00000252 00266  00242 00257 00264
CATK     00002 0000002C 00676  00241 00673
CATOK    00004 00000240 00262  00254
CHARSK   00002 0000003C 00899  00896
CHARSPL  00004 000000A4 01206  01195
CONTAIN  00004 00000084 01123  01105
CONTAINK 00002 00000028 00632  00629
DEND0069 00001 0000082D 01121  01104
DEND0071 00001 00000849 01148  01138
DEND0073 00001 0000087C 01177  01165
DEND0075 00001 000008AD 01204  01194
DEND0076 00001 000008CE 01224  01214
DEND0078 00001 000008FF 01251  01241
DEND0080 00001 00000925 01278  01268
DEND0081 00001 00000941 01298  01288
DEND0085 00001 0000097D 01345  01333
DEND0087 00001 000009B8 01372  01362
DEND0088 00001 00000A07 01395  01383
DEND0089 00001 00000A4B 01417  01406
DEND0091 00001 00000A86 01444  01434
DEND0092 00001 00000AD5 01467  01455
DEND0093 00001 00000B19 01489  01478
DEND0095 00001 00000B54 01516  01506
DEND0096 00001 00000BA3 01539  01527
DEND0097 00001 00000BE7 01561  01550
DEND0099 00001 00000C22 01588  01578
DEND0100 00001 00000C71 01611  01599
DEND0101 00001 00000CB5 01633  01622
DEND0103 00001 00000CDE 01662  01650
DEND0105 00001 00000D0B 01691  01679
DENT0069 00001 000007CD 01102  01104
DENT0071 00001 00000830 01136  01138
DENT0073 00001 0000084C 01163  01165
DENT0075 00001 0000087F 01192  01194
DENT0076 00001 000008AD 01212  01214
DENT0078 00001 000008D1 01239  01241
DENT0080 00001 00000902 01266  01268
DENT0081 00001 00000925 01286  01288
DENT0085 00001 0000094E 01331  01333
DENT0087 00001 00000980 01360  01362
DENT0088 00001 000009B8 01381  01383
DENT0089 00001 00000A07 01404  01406
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

DENT0091 00001 00000A4E 01432  01434
DENT0092 00001 00000A86 01453  01455
DENT0093 00001 00000AD5 01476  01478
DENT0095 00001 00000B1C 01504  01506
DENT0096 00001 00000B54 01525  01527
DENT0097 00001 00000BA3 01548  01550
DENT0099 00001 00000BEA 01576  01578
DENT0100 00001 00000C22 01597  01599
DENT0101 00001 00000C71 01620  01622
DENT0103 00001 00000CB8 01648  01650
DENT0105 00001 00000CE1 01677  01679
DSCBADDR 00004 00000194 01841  00084
DSCB1    00001 00000000 02029  00086
DSNLEN   00002 000001AA 01856  00087 00110
DSNLNTYP 00002 00000154 01706  01701
DSNPLN   00004 0000014C 01693  01680
DSNPLNK  00002 00000048 01033  01030
DSORG    00001 0000000A 01746  00341
DSORG05  00004 00000194 00192  00190
DSORG06  00002 000001A0 00195  00193
DS1ACBM  00001 00000008 02067  00336
DS1BLKL  00002 00000056 02073  00116
DS1CREDT 00003 00000035 02037  00120
DS1DSIND 00001 0000005D 02077  00212 00225 00233
DS1DSNAM 00044 00000000 02033  00246 00504
DS1DSORG 00002 00000052 02046  00170 00175 00180 00185 00189 00192 00334 00336 00343
DS1EXPDT 00003 00000038 02038  00121
DS1EXT1  00010 00000069 02103  00488
DS1EXT2  00010 00000073 02108  00489
DS1EXT3  00010 0000007D 02109  00490
DS1IND01 00001 00000001 02097  02098
DS1IND02 00001 00000002 02093  00233 02096
DS1IND40 00001 00000040 02080  00225
DS1LRECL 00002 00000058 02074  00115
DS1LSTAR 00003 00000062 02100  00331 00350
DS1NOEPV 00001 0000003B 02039  00114 00274
DS1RECFM 00001 00000054 02071  00131 00133 00138 00145 00149 00153 00157 00161
DS1REFD  00003 0000004B 02044  00122
DS1SCALO 00004 0000005E 02099  00200 00204 00206
DS3ADEXT 00090 0000079D 01954  00495 00496 00497 00498 00499 00500 00501 00502 00503
DS3EXTNT 00040 00000774 01948  00491 00492 00493 00494
DS4DEVSZ 00004 0000071E 01921  00301 00310 00416 00419
DS4DEVTK 00002 00000722 01922  00424 00432
D0003    00002 0000015A 00173  00171
D0004    00002 00000168 00178  00176
D0005    00002 00000176 00183  00181
D0006    00002 00000184 00188  00186
ENDING   00004 00000068 01083  01077
ENDKEY   00002 00000026 00611  00608
EXTNEXT  00002 00000260 00281  00320
FIRSTFRM 00001 00000048 01770  00073 00078
FMIN1    00004 00000474 00506  00345
FORMALOC 00004 000002A6 00308  00291 00302
FORMATAD 00004 00000198 01842  00106
FORMATK  00002 00000046 01012  01009
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

FORMATSP 00004 00000140 01664  01651
FORMFIT  00004 00000050 00092  00460
FORMRET  00002 0000034E 00370  00479
FORMWORK 00001 00000000 01768  00067 01786
F1000    00004 0000047C 00508  00428
F1000000 00004 00000484 00510  00436
F500     00004 00000478 00507  00427
F500000  00004 00000480 00509  00435
GETAREA  00004 00000040 00084  00074
GETEXT   00004 00000424 00488  00283
GOGETINC 00004 000003FE 00464  00458
GOGETMN  00004 000003C8 00444  00094
GOGETTAB 00004 000003EE 00457  00465
HEADING  00004 000000D0 01318  01314
HEADK    00002 00000040 00941  00938
H8       00002 000004A0 00521  00256
IECSDSL1 00001 00000000 02031  02032
IECSDSL3 00001 00000770 01945  01946
IECSDSL4 00001 0000070C 01904  01905
IKJ$0017 00001 00000D36 01733  00553
IKJ$0019 00001 000005BD 00574  00570
IKJ$0069 00001 000007F8 01115  01114
IKJ$0073 00001 0000087C 01176  01175
IKJ$0085 00001 0000097D 01344  01343
IKJ$0088 00001 00000A07 01394  01393
IKJ$0089 00001 00000A4B 01416  01415
IKJ$0092 00001 00000AD5 01466  01465
IKJ$0093 00001 00000B19 01488  01487
IKJ$0096 00001 00000BA3 01538  01537
IKJ$0097 00001 00000BE7 01560  01559
IKJ$0100 00001 00000C71 01610  01609
IKJ$0101 00001 00000CB5 01632  01631
IKJ$0103 00001 00000CDE 01661  01660
IKJ$0105 00001 00000D0B 01690  01689
IKJ@0017 00001 00000158 01731  00554
IKJ@0018 00001 0000007D 00583  00555
IKJ@0019 00001 00000574 00569  00568
IKJ@0021 00001 000005CD 00598  00597
IKJ@0023 00001 000005E0 00619  00618
IKJ@0025 00001 000005F7 00640  00639
IKJ@0026 00001 00000604 00653  00652
IKJ@0027 00001 0000060D 00664  00663
IKJ@0029 00001 0000061B 00684  00683
IKJ@0031 00001 0000062A 00704  00703
IKJ@0032 00001 00000637 00714  00713
IKJ@0034 00001 00000647 00734  00733
IKJ@0036 00001 00000659 00755  00754
IKJ@0038 00001 0000066A 00776  00775
IKJ@0039 00001 00000679 00790  00789
IKJ@0041 00001 0000068E 00815  00814
IKJ@0042 00001 00000698 00825  00824
IKJ@0044 00001 000006A9 00846  00845
IKJ@0045 00001 000006B3 00856  00855
IKJ@0047 00001 000006C5 00877  00876
IKJ@0048 00001 000006D3 00887  00886
```

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ@0050	00001	000006E3	00907	00906
IKJ@0052	00001	000006F5	00928	00927
IKJ@0054	00001	00000709	00949	00948
IKJ@0055	00001	00000719	00959	00958
IKJ@0057	00001	0000072A	00979	00978
IKJ@0059	00001	0000073D	01000	00999
IKJ@0061	00001	0000074E	01020	01019
IKJ@0063	00001	00000761	01041	01040
IKJ@0064	00001	00000258	01068	01049
IKJ@0065	00001	00000798	01059	01058
IKJ@0066	00001	0000028A	01089	01070
IKJ@0067	00001	000007CA	01080	01079
IKJ@0068	00001	000002ED	01128	01091
IKJ@0069	00001	000007E8	01112	01111
IKJ@0070	00001	00000309	01155	01130
IKJ@0071	00001	00000848	01146	01145
IKJ@0072	00001	0000033C	01184	01157
IKJ@0073	00001	00000879	01173	01172
IKJ@0074	00001	0000038E	01231	01186
IKJ@0075	00001	000008AC	01202	01201
IKJ@0076	00001	000008CD	01222	01221
IKJ@0077	00001	000003BF	01258	01233
IKJ@0078	00001	000008FE	01249	01248
IKJ@0079	00001	00000401	01305	01260
IKJ@0080	00001	00000924	01276	01275
IKJ@0081	00001	00000940	01296	01295
IKJ@0082	00001	0000040B	01323	01307
IKJ@0084	00001	0000043D	01352	01325
IKJ@0085	00001	0000097A	01341	01340
IKJ@0086	00001	0000050B	01424	01354
IKJ@0087	00001	000009B7	01370	01369
IKJ@0088	00001	000009DC	01391	01390
IKJ@0089	00001	00000A24	01414	01413
IKJ@0090	00001	000005D9	01496	01426
IKJ@0091	00001	00000A85	01442	01441
IKJ@0092	00001	00000AAA	01463	01462
IKJ@0093	00001	00000AF2	01486	01485
IKJ@0094	00001	000006A7	01568	01498
IKJ@0095	00001	00000B53	01514	01513
IKJ@0096	00001	00000B78	01535	01534
IKJ@0097	00001	00000BC0	01558	01557
IKJ@0098	00001	00000775	01640	01570
IKJ@0099	00001	00000C21	01586	01585
IKJ@0100	00001	00000C46	01607	01606
IKJ@0101	00001	00000C8E	01630	01629
IKJ@0102	00001	0000079E	01669	01642
IKJ@0103	00001	00000CDB	01658	01657
IKJ@0104	00001	000007CB	01697	01671
IKJ@0105	00001	00000D07	01687	01686
IKJ@0106	00001	00000D1A	01703	01702
IKJ@0107	00001	00000D27	01714	01713
IKJ@0108	00001	00000D35	01723	01722
IKJA0069	00001	0000082D	01120	01116
IKJ00191	00001	000005BD	00573	00572
IKJ00691	00001	0000082D	01119	01118

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

KEND0020 00001 000005C3 00588  00586
KEND0022 00001 000005D5 00609  00607
KEND0024 00001 000005E8 00630  00628
KEND0026 00001 00000604 00654  00650
KEND0028 00001 00000613 00674  00672
KEND0030 00001 00000621 00694  00692
KEND0033 00001 0000063D 00724  00722
KEND0035 00001 0000064F 00745  00743
KEND0037 00001 00000661 00766  00764
KEND0040 00001 00000685 00805  00803
KEND0043 00001 000006A0 00836  00834
KEND0046 00001 000006BB 00867  00865
KEND0049 00001 000006D9 00897  00895
KEND0051 00001 000006EB 00918  00916
KEND0053 00001 000006FD 00939  00937
KEND0056 00001 0000071F 00969  00967
KEND0058 00001 00000732 00990  00988
KEND0060 00001 00000743 01010  01008
KEND0062 00001 00000756 01031  01029
KEND0106 00001 00000D1A 01704  01700
KEYW0020 00001 000005BD 00584  00586
KEYW0022 00001 000005CF 00605  00607
KEYW0024 00001 000005E2 00626  00628
KEYW0026 00001 000005F9 00648  00650
KEYW0028 00001 0000060D 00670  00672
KEYW0030 00001 0000061B 00690  00692
KEYW0033 00001 00000637 00720  00722
KEYW0035 00001 00000649 00741  00743
KEYW0037 00001 0000065B 00762  00764
KEYW0040 00001 0000067F 00801  00803
KEYW0043 00001 0000069A 00832  00834
KEYW0046 00001 000006B5 00863  00865
KEYW0049 00001 000006D3 00893  00895
KEYW0051 00001 000006E5 00914  00916
KEYW0053 00001 000006F7 00935  00937
KEYW0056 00001 00000719 00965  00967
KEYW0058 00001 0000072C 00986  00988
KEYW0060 00001 0000073D 01006  01008
KEYW0062 00001 00000750 01027  01029
KEYW0106 00001 00000D0B 01698  01700
LEVEL    00004 0000004C 01062  01056
LEVKEY   00002 00000024 00590  00587
LIMITK   00002 00000032 00747  00744
LINESK   00002 0000003E 00920  00917
LINESPP  00004 000000B4 01253  01242
LOCWORK  00001 00000070 01783  00248 00263
LOWOK    00004 0000028C 00299  00296
MOVEDSN  00006 00000464 00504  00113
MSGADDRS 00004 00000078 01830  00473
NAME0021 00001 000005C3 00594  00596
NAME0023 00001 000005D5 00615  00617
NAME0025 00001 000005E8 00636  00638
NAME0027 00001 00000604 00660  00662
NAME0029 00001 00000613 00680  00682
NAME0031 00001 00000621 00700  00702
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

NAME0032 00001 0000062C 00710  00712
NAME0034 00001 0000063D 00730  00732
NAME0036 00001 0000064F 00751  00753
NAME0038 00001 00000661 00772  00774
NAME0039 00001 00000671 00786  00788
NAME0041 00001 00000685 00811  00813
NAME0042 00001 00000690 00821  00823
NAME0044 00001 000006A0 00842  00844
NAME0045 00001 000006AB 00852  00854
NAME0047 00001 000006BB 00873  00875
NAME0048 00001 000006C7 00883  00885
NAME0050 00001 000006D9 00903  00905
NAME0052 00001 000006EB 00924  00926
NAME0054 00001 000006FD 00945  00947
NAME0055 00001 0000070B 00955  00957
NAME0057 00001 0000071F 00975  00977
NAME0059 00001 00000732 00996  00998
NAME0061 00001 00000743 01016  01018
NAME0063 00001 00000756 01037  01039
NAME0107 00001 00000D1A 01710  01712
NAME0108 00001 00000D27 01719  01721
NEND0021 00001 000005CF 00600  00596
NEND0023 00001 000005E2 00621  00617
NEND0025 00001 000005F9 00642  00638
NEND0027 00001 0000060D 00665  00662
NEND0029 00001 0000061B 00685  00682
NEND0031 00001 0000062C 00706  00702
NEND0032 00001 00000637 00715  00712
NEND0034 00001 00000649 00736  00732
NEND0036 00001 0000065B 00757  00753
NEND0038 00001 00000671 00782  00774
NEND0039 00001 0000067F 00796  00788
NEND0041 00001 00000690 00817  00813
NEND0042 00001 0000069A 00827  00823
NEND0044 00001 000006AB 00848  00844
NEND0045 00001 000006B5 00858  00854
NEND0047 00001 000006C7 00879  00875
NEND0048 00001 000006D3 00888  00885
NEND0050 00001 000006E5 00909  00905
NEND0052 00001 000006F7 00930  00926
NEND0054 00001 0000070B 00951  00947
NEND0055 00001 00000719 00960  00957
NEND0057 00001 0000072C 00981  00977
NEND0059 00001 0000073D 01001  00998
NEND0061 00001 00000750 01022  01018
NEND0063 00001 00000763 01043  01039
NEND0107 00001 00000D27 01715  01712
NEND0108 00001 00000D35 01724  01721
NOEXT    00004 000002C0 00318  00289
OUTPUTK  00002 00000044 00992  00989
PCLMAIN  00001 00000540 00552  00553 00556 00562 00582 00583 00593 00599 00604 00614 00620 00625 00635 00641 00647 00659
                               00669 00679 00689 00699 00705 00709 00719 00729 00735 00740 00750 00756 00761 00771 00777
                               00785 00791 00800 00810 00816 00820 00826 00831 00841 00847 00851 00857 00862 00872 00878
                               00882 00892 00902 00908 00913 00923 00929 00934 00944 00950 00954 00964 00974 00980 00985
                               00995 01005 01015 01021 01026 01036 01042 01047 01052 01067 01068 01073 01088 01089 01099
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                          ASM 0201 14.37 04/05/25

                                01127 01128 01133 01154 01155 01160 01183 01184 01189 01209 01230 01231 01236 01257 01258
                                01263 01283 01304 01305 01310 01322 01323 01328 01351 01352 01357 01378 01401 01423 01424
                                01429 01450 01473 01495 01496 01501 01522 01545 01567 01568 01573 01594 01617 01639 01640
                                01645 01668 01669 01674 01696 01697 01709 01718 01727 01732
PDL       00001 00000000 00557  00066 00566 00576 00587 00589 00608 00610 00629 00631 00651 00655 00673 00675 00693 00695
                                00723 00725 00744 00746 00765 00767 00804 00806 00835 00837 00866 00868 00896 00898 00917
                                00919 00938 00940 00968 00970 00989 00991 01009 01011 01030 01032 01056 01061 01077 01082
                                01105 01122 01139 01149 01166 01178 01195 01205 01215 01225 01242 01252 01269 01279 01289
                                01299 01314 01317 01334 01346 01363 01373 01384 01396 01407 01418 01435 01445 01456 01468
                                01479 01490 01507 01517 01528 01540 01551 01562 01579 01589 01600 01612 01623 01634 01651
                                01663 01680 01692 01701 01705 01729 01731
PEND0019 00001 000005BD 00575   00565
PEND0065 00001 00000798 01060   01055
PEND0067 00001 000007CA 01081   01076
PEND0083 00001 0000094B 01316   01313
POST0019 00001 00000546 00563   00565
POST0065 00001 00000766 01053   01055
POST0067 00001 0000079B 01074   01076
POST0083 00001 00000944 01311   01313
PRINTK   00002 0000003A 00869   00866
PROTEND  00002 000001E8 00220   00216 00218
PROTFORM 00004 000001C8 00212   00207
PROTREAD 00004 000001E4 00219   00214
PROTWRIT 00004 000001DC 00217   00213
RACFEND  00002 000001F8 00228   00226
RECFM2   00002 000000FA 00144   00132 00137
RECFM3   00004 000000E2 00138   00134
RECFM4   00004 000000F2 00142   00139
RECFM4A  00004 000000F6 00143   00141
RECFM6   00004 0000010A 00149   00146
RECFM6A  00004 0000011A 00153   00150
RECFM7   00004 0000012A 00157   00154
RECFM8   00004 0000013A 00161   00158
RECFM9   00002 00000146 00164   00162
R0       00001 00000000 00377   00283 00414 00414 00420 00425 00425 00428 00433 00433 00436 00472 00473
R1       00001 00000001 00378   00063 00087 00088 00110 00111 00112 00113 00199 00199 00200 00201 00202 00246 00247 00248
                                00249 00295 00299 00300 00300 00301 00308 00309 00310 00313 00403 00404 00405 00415 00418
                                00421 00426 00427 00429 00434 00435 00437 00448 00459 00471 00473 00475
R11      00001 0000000B 00388   00063 00064
R13      00001 0000000D 00390   00067
R14      00001 0000000E 00391   00355 00356 00357 00358 00358 00363 00364 00477
R15      00001 0000000F 00392   00253 00253 00256 00359 00359 00362 00365 00476 00477
R2       00001 00000002 00379   00130 00135 00136 00136 00140 00142 00143 00143 00147 00148 00148 00151 00152 00152 00155
                                00156 00156 00159 00160 00160 00163 00202 00203 00273 00273 00274 00319 00449 00450 00451
                                00455 00457 00459 00464 00464
R3       00001 00000003 00380   00092 00093 00098 00099 00100 00105 00106 00457
R4       00001 00000004 00381   00088 00093 00100 00276 00276 00314 00314 00325 00330 00330 00350 00351 00351 00353 00415
                                00416 00417 00418 00419 00420 00421 00424 00426 00429 00432 00434 00437
R5       00001 00000005 00382   00100 00101 00281 00282 00283 00287 00456 00465 00488 00489 00490 00491 00492 00493 00494
                                00495 00496 00497 00498 00499 00500 00501 00502 00503
R6       00001 00000006 00383   00280 00280 00281 00318 00318 00319
R7       00001 00000007 00384   00084 00085 00085 00086
R8       00001 00000008 00385   00311 00312 00313 00314 00324 00352 00412 00422 00430 00438
R9       00001 00000009 00386   00065 00066
SECAL    00004 000004A2 00522   00202
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

SORTK    00002 0000002E 00696  00693
SPACEK   00002 0000002A 00656  00403 00651
SPACEND  00002 000002D2 00326  00275
SPACTRK  00002 00000386 00412  00406 00407 00408 00409 00410
SPACUNIT 00004 00000366 00403  00324 00352
SUBAO1   00002 00000A4C 01426  00777 00791
SUBAO2   00002 00000B1A 01498  00816 00826
SUBAO3   00002 00000BE8 01570  00847 00857
SUBBREAK 00002 0000084A 01157  00735
SUBCHARS 00002 0000087D 01186  00908
SUBCONT  00002 000007CB 01091  00641
SUBDSNLN 00002 00000CDF 01671  01042
SUBEND   00002 00000799 01070  00620
SUBFORMT 00002 00000CB6 01642  01021
SUBHEAD  00002 00000942 01307  00950
SUBLEV   00002 00000764 01049  00599
SUBLIMIT 00002 0000097E 01354  00756
SUBLINES 00002 000008CF 01233  00929
SUBLKEY  00004 000000E0 01374  01363
SUBLOPER 00004 000000E8 01397  01384
SUBLVALU 00004 000000F0 01419  01407
SUBPRINT 00002 00000900 01260  00878
SUBPRTIT 00004 000000C4 01300  01289
SUBPRTKY 00004 000000BC 01280  01269
SUBSORT  00004 00000090 01150  01139
SUBSORTS 00002 0000082E 01130  00705
SUBTOTAL 00002 0000094C 01325  00980
SUB1KEY  00004 000000F8 01446  01435
SUB1OPER 00004 00000100 01469  01456
SUB1VALU 00004 00000108 01491  01479
SUB2KEY  00004 00000110 01518  01507
SUB2OPER 00004 00000118 01541  01528
SUB2VALU 00004 00000120 01563  01551
SUB3KEY  00004 00000128 01590  01579
SUB3OPER 00004 00000130 01613  01600
SUB3VALU 00004 00000138 01635  01623
TABFULL  00001 000001A6 01853  00478
TABOVFLW 00002 000004A6 00532  00471
TABOVSEC 00002 000004F0 00534  00472
TOTALK   00002 00000042 00971  00968
TOTALN   00004 000000D8 01347  01334
UCBDEVT  00004 000001C4 01868  00109
UPDEND   00002 00000208 00236  00234
USEDEND  00002 00000324 00354  00339 00346
USEDEND1 00004 0000034A 00365  00361
USEDNVSM 00002 000002F8 00340  00337
USEDOK   00004 00000314 00350  00332
USEDOK0  00004 00000320 00353  00335 00342 00344
VADMSG   00004 0000001C 01809  00476
VOLID    00006 000001B9 01865  00108 00263
VOLS     00004 00000008 00577  00566
VTCCURAD 00004 00000208 01882  00099 00101 00448
VTCCURLN 00004 0000020C 01883  00092 00098 00451
VTCGETMN 00004 00000210 01884  00455 01885
VTCGETMS 00001 00008000 01886  00445 00449
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

VTCGETMX 00001 00000032 01885  00456
VTFACTON 00008 0000003B 02000  00128 00297 00298 00303 00304
VTFALLOC 00004 00000004 01969  00325 00338 00355 00360 00364
VTFBLKSZ 00002 00000030 01986  00116
VTFCATLG 00001 00000036 01991  00240 00255 00258 00262 00265
VTFCREDT 00003 0000001C 01977  00120
VTFDSN   00001 00000046 02003  00504
VTFDSNL  00002 00000044 02001  00111
VTFDSORG 00003 00000026 01981  00168 00172 00177 00182 00187 00191 00194
VTFDSTYP 00001 0000003A 01996  00129
VTFEXPDT 00003 0000001F 01978  00121
VTFLRECL 00002 0000002E 01985  00115
VTFLSTAC 00003 00000022 01979  00122
VTFMT    00001 00000000 01967  00105 02002
VTFMTL   00001 00000046 02002  00088
VTFNEXT  00004 00000000 01968  00107 00107
VTFNOEPV 00001 00000025 01980  00114
VTFPCT   00002 00000010 01974  00365
VTFPROT  00001 00000033 01988  00215 00217 00219
VTFRACF  00001 00000034 01989  00224 00227
VTFRECFM 00005 00000029 01983  00127 00130
VTFROUND 00001 00000032 01987  00205 00208
VTFSECAL 00001 00000039 01993  00203
VTFSECAM 00002 00000037 01992  00204
VTFUNIT  00004 00000018 01976  00109
VTFUNUSD 00004 0000000C 01973  00357
VTFUPD   00001 00000035 01990  00232 00235
VTFUSED  00004 00000008 01972  00338 00345 00353 00356 00362
VTFVOLUM 00006 00000012 01975  00108
VTOCFORM 00001 00000000 00049  00056 00559 00579 00591 00601 00612 00622 00633 00643 00657 00666 00677 00686 00697 00707
                               00716 00727 00737 00748 00758 00769 00783 00797 00808 00818 00828 00839 00849 00859 00870
                               00880 00889 00900 00910 00921 00931 00942 00952 00961 00972 00982 00993 01002 01013 01023
                               01034 01044 01050 01064 01071 01085 01092 01124 01131 01151 01158 01180 01187 01207 01227
                               01234 01254 01261 01281 01301 01308 01319 01326 01348 01355 01375 01398 01420 01427 01447
                               01470 01492 01499 01519 01542 01564 01571 01591 01614 01636 01643 01665 01672 01694 01707
                               01716 01725 01734
VTOCOM   00001 00000000 01795  00064 00475
XTCYLBD  00001 00000081 02122  00290
XTDSECT  00001 00000000 02114  00287
XTFLAGS  00001 00000000 02115  00288 00290
XTHICC   00002 00000006 02126  00308
XTHIHH   00002 00000008 02127  00299 00311
XTLOWCC  00002 00000002 02124  00309
XTLOWHH  00002 00000004 02125  00295 00312
XTNOEXT  00001 00000000 02116  00288
ZEROES   00004 0000046C 00505  00331 00341
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

=F'0'    00004 00000518 02129  00360
=F'100'  00004 0000051C 02130  00363
=X'0008' 00002 00000520 02131  00189
=C'CYLERR'
         00006 00000522 02132  00297 00303
=CL3'   '
         00003 00000528 02133  00168
=CL3'IS' 00003 0000052B 02134  00172
=CL3'PS' 00003 0000052E 02135  00177
=CL3'DA' 00003 00000531 02136  00182
=CL3'PO' 00003 00000534 02137  00187
=CL3'VS '
         00003 00000537 02138  00191
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT        523
TOTAL RECORDS READ FROM SYSTEM LIBRARY     3417
TOTAL RECORDS PUNCHED                        65
TOTAL RECORDS PRINTED                      1219
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25
VTOCMSG   SD  0001 000000 0000E6
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                      1 *                                                                          00000100
                                      2 *   VTOC ERROR MESSAGE ROUTINE, R1 POINTS TO VTOC COMMON AT ENTRY          00000200
                                      3 *                                                                          00000300
                                      4 VTOCMSG  ENTER 12,0           DO THE STANDARD HOUSEKEEPING                 00000400
000000                                5+VTOCMSG  CSECT                                                             00004220
000000 47F0 F00C      0000C           6+         B     12(0,15)                        BRANCH AROUND ID          00450000
000004 07                             7+         DC    AL1(7)                          LENGTH OF IDENTIFIER      00550000
000005 E5E3D6C3D4E2C7                 8+         DC    CL7'VTOCMSG'                    IDENTIFIER                00750000
00000C 90EC D00C      0000C           9+         STM   14,12,12(13)                    SAVE REGISTERS            03700000
000010 18CF                          10+         LR    12,15         SET FIRST BASE REG                         00004700
000012 0700                          11+         CNOP  0,4                                                        00004800
                            00000    12+         USING VTOCMSG,12                                                 00008600
000014 5811 0000      00000          13+         L     1,0+0(1)       NUMERIC &SAVE IMPLIES A PASSED SAVEAREA   00012600
000018 50D1 0004      00004          14+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE            00012700
00001C 501D 0008      00008          15+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                00012800
000020 182D                          16+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS        00012900
000022 18D1                          17+         LR    13,1           THIS IS MY SAVEAREA                       00013000
000024 9802 2014      00014          18+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                     00013100
000028 18B1                          19          LR    R11,R1         GET THE PARM REGISTER                     00000500
                            00000    20          USING VTOCOM,R11     SET ADDRESSABILITY                          00000600

00002A 9801 B078      00078          22          LM    R0,R1,MSGADDRS GET THE MESSAGE(S) TO SEND                00000800
00002E 1200                          23          LTR   R0,R0          SECOND LEVEL MSG?                           00000900
000030 4780 C060      00060          24          BZ    ERRORM1        NO                                          00001000

000034 D27B B080 1000 00080 00000    26          MVC   MSGTEXT1,0(R1) INSURE MSG IN WORK AREA                     00001200
00003A 4110 B080      00080          27          LA    R1,MSGTEXT1                                                00001300

00003E 48E1 0000      00000          29          LH    R14,0(R1)      LENGTH OF FIRST LEVEL MSG                 00001500
000042 41FE 1000      00000          30          LA    R15,0(R14,R1)  ADDR OF END OF MSG                        00001600
000046 41EE 0001      00001          31          LA    R14,1(R14)     JUMP MSG LENGTH                           00001700
00004A 40E1 0000      00000          32          STH   R14,0(R1)                                                  00001800
00004E 924E F000      00000          33          MVI   0(R15),C'+'    INDICATE SECOND LEVEL MSG EXISTS          00001900

000052 1BEE                          35          SR    R14,R14        CLEAR CHAIN FIELD                         00002100
000054 41F0 0001      00001          36          LA    R15,1          ONE SEGMENT IN 2ND MSG                    00002200
000058 90E0 B184      00184          37          STM   R14,R0,PUTOLD2 CREATE SECOND-LEVEL                         00002300
                                     38 *                             OUTPUT LINE DESCRIPTOR ('OLD')              00002400
00005C 4100 B184      00184          39          LA    R0,PUTOLD2                                                 00002500

000060 18E0                          41 ERRORM1  LR    R14,R0         NEXT 'OLD' ADDR OR ZERO                   00002700
000062 41F0 0001      00001          42          LA    R15,1          ONE SEGMENT                               00002800
000066 1801                          43          LR    R0,R1          MSG ADDR                                  00002900
000068 90E0 B178      00178          44          STM   R14,R0,PUTOLD1 FIRST LEVEL 'OLD'                           00003000

00006C 4110 B04C      0004C          46          LA    R1,PARMLIST                                                00003200
                            00000    47          USING IOPL,R1                                                    00003300

000070 D203 1004 B03C 00004 0003C    49          MVC   IOPLECT,ADDRECT                                            00003500
000076 D203 1000 B038 00000 00038    50          MVC   IOPLUPT,ADDRUPT                                            00003600

00007C 4100 B06C      0006C          52          LA    R0,ATTNECB                                                 00003800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                      ASM 0201 14.37 04/05/25

000080 5000 1008      00008          53          ST    R0,IOPLECB                                                 00003900
000084 9200 B06C      0006C          54          MVI   ATTNECB,0                                                  00004000



000088 D703 B05C B05C 0005C 0005C    56          XC    PARMLIST+16(4),PARMLIST+16                                 00004200
                                     57          PUTLINE PARM=PARMLIST+16,MF=(E,(1)),                            X00004300
                                                       OUTPUT=(PUTOLD1,TERM,MULTLVL,INFOR)                        00004400
00008E 41E0 B05C      0005C          58+         LA    14,PARMLIST+16          LOAD PARM ADDR                   06500000
000092 50E0 100C      0000C          59+         ST    14,12(0,1)              STORE PARM ADDR IN PARM LIST     06550000
000096 9206 E000      00000          60+         MVI   0(14),B'00000110'                SET CONTROL FIELD       09450000
00009A 9200 E001      00001          61+         MVI   1(14),B'00000000'       SET CONTROL FIELD                09500000
00009E 4100 B178      00178          62+         LA    0,PUTOLD1               LOAD ADDR OF OUTPUT              09650000
0000A2 5000 E004      00004          63+         ST    0,4(0,14)               STORE ADDR OF OUTPUT             09700000
0000A6 58F0 0010      00010          64+         L      15,16(0,0)          LOAD CVT POINTER                    12754002
0000AA 9180 F1BC      001BC          65+         TM     444(15),B'10000000'   IS PUTLINE LOADED ?               12766002
0000AE 47E0 C0BC      000BC          66+         BNO    IKJ@0003               NO - BRANCH TO LINK               12770002
0000B2 58F0 F1BC      001BC          67+         L      15,444(0,15)             YES - BALR TO PUTLINE           12774002
0000B6 05EF                          68+         BALR   14,15                                                    12778002
0000B8 47F0 C0D2      000D2          69+         B      IKJ$0003                                                 12782002
0000BC                               70+IKJ@0003 DS    0H                                                        30000000
0000BC                               71+         CNOP  0,4                                                       04900000
0000BC 45F0 C0D0      000D0          72+         BAL   15,*+20            BRANCH AROUND CONSTANTS                04950000
0000C0 000000C8                      73+         DC    A(*+8)             ADDR. OF PARM. LIST                    05050000
0000C4 00000000                      74+         DC    A(0)                DCB ADDRESS PARAMETER                 06650000
0000C8 C9D2D1D7E4E3D340              75+         DC    CL8'IKJPUTL'        EP PARAMETER                          06750000
0000D0 0A06                          76+         SVC   6                   ISSUE LINK SVC                        48000000
0000D2                               77+IKJ$0003    DS    0H                                                     12790002



                                     79          LEAVE EQ                                                        00004600
0000D2 182D                          80+         LR    2,13                                                      00000400
0000D4 58DD 0004      00004          81+         L     13,4(13)                                                  00000500
0000D8 90F1 D010      00010          82+         STM   15,1,16(13)  STORE RETURN REGS                           00000800
0000DC 98EC D00C      0000C          83+         LM    14,12,12(13)                      RESTORE THE REGISTERS  00650000
0000E0 92FF D00C      0000C          84+         MVI   12(13),X'FF'                      SET RETURN INDICATION  01600000
0000E4 07FE                          85+         BR    14                                RETURN                 02000000
                           00000     86+R0       EQU   0        *USED BY O.S.                                    00000100
                           00001     87+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST       00000200
                           00002     88+R2       EQU   2                                                         00000300
                           00003     89+R3       EQU   3                                                         00000400
                           00004     90+R4       EQU   4                                                         00000500
                           00005     91+R5       EQU   5                                                         00000600
                           00006     92+R6       EQU   6                                                         00000700
                           00007     93+R7       EQU   7                                                         00000880
                           00008     94+R8       EQU   8                                                         00000900
                           00009     95+R9       EQU   9                                                         00001000
                           0000A     96+R10      EQU   10                                                        00001100
                           0000B     97+R11      EQU   11                                                        00001200
                           0000C     98+R12      EQU   12                                                        00001300
                           0000D     99+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS               00001400
                           0000E    100+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                  00001500
                           0000F    101+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE     00001600
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   103          IKJIOPL                                                          00004800
000000                             104+IOPL     DSECT                                                            08000056
                                   105+*********************************************************************** 10000056
                                   106+*    THE I/O SERVICE ROUTINE PARAMETER LIST (IOPL) IS A LIST OF       * 12000056
                                   107+*    FULLWORD ADDRESSES PASSED BY THE INVOKER OF ANY I/O SERVICE      * 14000056
                                   108+*    ROUTINE TO THE APPROPRIATE SERVICE ROUTINE VIA REGISTER ONE.     * 16000056
                                   109+*********************************************************************** 18000056

000000                             111+IOPLUPT  DS    A        PTR TO UPT                                       22000056
000004                             112+IOPLECT  DS    A        PTR TO ECT                                       24000056
000008                             113+IOPLECB  DS    A        PTR TO USER'S ECB                                26000056
00000C                             114+IOPLIOPB DS    A        PTR TO THE I/O SERVICE RTN PARM BLOCK            28000000
                                   115+**/                                                                      30000056


                                   117          VTOCOM                                                           00005000
                                   118+*                                                                         00000300
                                   119+*        THIS IS THE VTOC COMMAND COMMON AREA                             00000400
                                   120+*                                                                         00000500
000000                             121+VTOCOM   DSECT                                                            00000700
                                   122+*                                                                         00001200
                                   123+*        WORKING STORAGE AREAS FOR THE VARIOUS ROUTINES                   00001300
                                   124+*                                                                         00001400
000000                             125+VTCWMSG  DS    A              WORKING STORAGE FOR THE MSG  ROUTINE       00001500
000004                             126+VTCWEXIT DS    A              WORKING STORAGE FOR THE EXIT ROUTINE       00001600
000008                             127+VTCWEXCP DS    A              WORKING STORAGE FOR THE EXCP ROUTINE       00001700
00000C                             128+VTCWCHEK DS    A              WORKING STORAGE FOR THE CHEK ROUTINE       00001800
000010                             129+VTCWFORM DS    A              WORKING STORAGE FOR THE FORM ROUTINE       00001900
000014                             130+VTCWPRNT DS    A              WORKING STORAGE FOR THE PRNT ROUTINE       00002000
000018                             131+VTCWSORT DS    A              WORKING STORAGE FOR THE SORT ROUTINE       00002100
                                   132+*                                                                         00002200
                                   133+*        ADDRESSES OF THE ROUTINES                                        00002300
                                   134+*                                                                         00002400
00001C 00000000                    135+VADMSG   DC    V(VTOCMSG)     ADDRESS OF THE MESSAGE ROUTINE             00002500
000020 00000000                    136+VADEXIT  DC    V(VTOCEXIT)    ADDRESS OF THE EXIT ROUTINE                00002600
000024 00000000                    137+VADEXCP  DC    V(VTOCEXIT)    ADDRESS OF THE EXCP ROUTINE                00002700
000028 00000000                    138+VADCHEK  DC    V(VTOCEXIT)    ADDRESS OF THE CHECK ROUTINE               00002800
00002C 00000000                    139+VADFORM  DC    V(VTOCEXIT)    ADDRESS OF THE FORMAT ROUTINE              00002900
000030 00000000                    140+VADPRNT  DC    V(VTOCEXIT)    ADDRESS OF THE PRINT ROUTINE               00003000
000034 00000000                    141+VADSORT  DC    V(VTOCEXIT)    ADDRESS OF THE SORT ROUTINE                00003100
                                   142+*                                                                         00003200
                                   143+*        TSO COMMAND PROCESSOR AND PARSE DATA                             00003300
                                   144+*                                                                         00003400
000038                             145+ADDRUPT  DS    A              USER PROFILE TABLE                         00003500
00003C                             146+ADDRECT  DS    A              ENVIRONMENT CONTROL TABLE                  00003600
000040                             147+ADDRPSCB DS    A              PROTECTED STEP CONTROL BLOCK               00003700
000044                             148+ADDRCBUF DS    A              COMMAND BUFFER                             00003800

000048                             150+ADDRANSR DS    A              PARSE ANSWER OR PDL ADDRESS                00004000

00004C                             152+PARMLIST DS    8A             INTERNAL PARM AREA ( MSG )                 00004200
00006C                             153+ATTNECB  DS    F              ECB FOR ATTENTIONS                         00004300
000070                             154+DOUBLE   DS    D                                                         00004400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000078                              156+MSGADDRS DS    2A             ADDRESSES OF MESSAGES FOR VTOCMSG         00004600
000080                              157+MSGTEXT1 DS    XL124                                                    00004700
0000FC                              158+MSGTEXT2 DS    XL124                                                    00004800



000178                              160+PUTOLD1  DS    3F                                                       00005000
000184                              161+PUTOLD2  DS    3F                                                       00005100
                                    162+*                                                                       00005200
                                    163+*        PARAMETER LIST FOR THE EXIT ROUTINE                            00005300
                                    164+*                                                                       00005400
000190                              165+EXITLIST DS    0F                                                       00005500
000190                              166+EXITAREA DS    A       WORKAREA LOCATION                                00005600
000194                              167+DSCBADDR DS    A       ADDRESS OF THE DSCB                              00005700
000198                              168+FORMATAD DS    A       ADDRESS OF THE FORMATTED DSCB                    00005800
00019C                              169+CPPLADDR DS    A       ADDRESS OF THE CPPL                              00005900
0001A0                              170+ACTIONAD DS    A       ADDRESS OF THE RECOMMENDED OR REQUESTED ACTION   00006000
                                    171+*                                                                       00006100
                                    172+*        INTER ROUTINE FLAGS                                            00006200
                                    173+*                                                                       00006300
0001A4                              174+VTCEFUNC DS    X              VTOCEXCP FUNCTION FLAG                    00006400
0001A5                              175+VTCFMTCK DS    X              FORMAT IS CALLED BY CHECK RTN             00006500
                             00080  176+VTCFMTCD EQU   X'80'          FORMAT WAS CALLED BY CHECK                00006600
                             00008  177+VTCFMTCC EQU   X'08'          FORMAT WAS CALLED BY CHECK THIS CALL      00006700
                                    178+*                                                                       00006800
0001A6                              179+TABFULL  DS    X             FLAG TABLES FULL, STOP INPUT               00006900
0001A7                              180+LOCAT    DS    X              FLAG TO PERFORM CATALOG LOCATE            00007000
0001A8                              181+VTCEPRNT DS    X               PRINT END AND CLEANUP FLAG               00007100
0001AA                              182+DSNLEN   DS    H              LENGTH OF THE DSNAME (NON-BLANKS)         00007200
0001AC                              183+ATABTITL DS    A              ADDRESS OF TABLE OF TITLES, LENGTHS       00007300
                                    184+*                                                                       00007400
                                    185+*                                                                       00007500
                                    186+*                                                                       00007600
                                    187+*        WORKING STORAGE FOR VOLUME UCB SEARCH                          00007700
                                    188+*                                                                       00007800
0001B0                              189+ADDR     DS    CL3     UCB ADDRESS IN CHARACTERS                        00007900
0001B3                              190+VOLSER   DS    CL6     VOLUME SERIAL NUMBER FROM PARSE                  00008000
0001B9                              191+VOLID    DS    CL6     CURRENT VOLUME SERIAL NUMBER TO PROCESS          00008100
0001BF                              192+FLAG     DS    X       UCB SEARCH FLAG                                  00008200
0001C0                              193+LASTADR  DS    F       LAST UCB ADDRESS FOUND ( NO DUP'S )              00008300
0001C4                              194+UCBDEVT  DS    CL4     PRINTABLE FORM OF DEVICE TYPE            RPRIN1 00008310
                                    195+*                                                                       00008400
                                    196+*                                                                       00008500
                                    197+*                                                                       00008600
0001C8                              198+SORTTAB  DS    16F                                                      00008700
                                    199+*                                                                       00008800
                                    200+* EACH ENTRY CONTAINS A KEY OFFSET (2 BYTES) AND A KEY LENGTH (2 BYTES) 00008900
                                    201+* THIS TABLE IS BUILT AT PARSE TIME ACCORDING TO THE SORT PARAMETERS    00009000
                                    202+* SPECIFIED. THE 1ST PARM IS THE HIGH KEY AND SO ON.                   00009100
                                    203+*                                                                       00009200
                                    204+*                                                                       00009300
                                    205+*                                                                       00009400
                                    206+*        ADDRESSES OF GETMAIN FOR FORMATTED DATA                        00009500
                                    207+*                                                                       00009600
000208                              208+VTCCURAD DS    A             CURRENT AVAILABLE ADDRESS                  00009700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00020C                             209+VTCCURLN DS    A             CURRENT AVAILABLE LENGTH                  00009800
000210                             210+VTCGETMN DS    50A           ADDRESSES OF BLOCKS                       00009900
                            00032  211+VTCGETMX EQU  (*-VTCGETMN)/4  NUMBER OF BLOCKS  MAXIMUM               00010000
                            08000  212+VTCGETMS EQU   32768          GETMAIN SIZE                            00010100
                                   213+*                                                                     00010200
                                   214+*        HASH SORT TABLE, POINTERS TO FIRST ENTRIES                   00010300
                                   215+*                                                                     00010400
0002D8                             216+VTCSORTH DS    256A           POINT TO FORMATED ENTRIES               00010500
                            006D8  217+VTCSORTE EQU   *              END OF LIST                             00010600
                                   218+*                                                                     00010700
                                   219+*        PRINT ENTRIES - PAGE AND LINE COUNTERS                       00010800
                                   220+*                                                                     00010900
0006D8                             221+LINECT   DS    H              LINE COUNT                              00011000
0006DA                             222+LINEMAX  DS    H              MAXIMUM LINES PER PAGE                  00011100
0006DC                             223+PAGECT   DS    H              PAGE COUNT                              00011200
0006DE                             224+LINELEN  DS    H              LENGTH OF THE PRINT LINE                00011300
                                   225+*                                                                     00011400
                                   226+*                                                                     00011500
                                   227+*          VARIOUS ITEMS                                              00011600
                                   228+*                                                                     00011700
0006E0                             229+FMT4     DS    XL44           SPACE FOR DSCB NAME                     00011800
                            0070C  230+IECSDSL4 EQU   *                 FORMAT 4 DSCB                        16000000
                            0070C  231+IECSDSF4 EQU   IECSDSL4                                               16050000
00070C                             232+DS4IDFMT DS    CL1                FORMAT IDENTIFIER                    16100000
00070D                             233+DS4HPCHR DS    XL5                HIGHEST ADDRESS OF A FORMAT 1 DSCB   16150000
000712                             234+DS4DSREC DS    XL2                NUMBER OF AVAILABLE DSCB'S           16200000
000714                             235+DS4HCCHH DS    XL4                CCHH OF NEXT AVAILABLE ALTERNATE TRK 16250000
000718                             236+DS4NOATK DS    XL2                NUMBER OF REMAINING ALTERNATE TRACKS 16300000
00071A                             237+DS4VTOCI DS    XL1                VTOC INDICATORS                      16350000
                            00080  238+DS4DOSBT EQU   X'80'              DOS BIT                              16400000
                            00010  239+DS4DSTKP EQU   X'10'              DOS STACKED PACK                     16450000
                            00008  240+DS4DOCVT EQU   X'08'              DOS CONVERTED VTOC                   16500000
                            00004  241+DS4DIRF  EQU   X'04'              DIRF BIT                             16550000
                            00002  242+DS4DICVT EQU   X'02'              DIRF RECLAIMED                       16600000
                            00001  243+DS4IVTOC EQU   X'01'              VOLUME USES AN INDEXED VTOC     @01A 16650000
00071B                             244+DS4NOEXT DS    XL1                NUMBER OF EXTENTS IN THE VTOC        16700000
00071C                             245+         DS    XL2                RESERVED                             16750000
00071E                             246+DS4DEVCT DS    0XL14              DEVICE CONSTANTS                     16800000
00071E                             247+DS4DEVSZ DS    XL4                DEVICE SIZE                          16850000
000722                             248+DS4DEVTK DS    XL2                DEVICE TRACK LENGTH                  16900000
000724                             249+DS4DEVOV DS    0XL2               KEYED RECORD OVERHEAD                16950000
000724                             250+DS4DEVI  DS    XL1                   NON-LAST KEYED RECORD OVERHEAD    17000000
000725                             251+DS4DEVL  DS    XL1                   LAST KEYED RECORD OVERHEAD        17050000
000726                             252+DS4DEVK  DS    XL1                NON-KEYED RECORD OVERHEAD            17100000
                                   253+*                                 DIFFERENTIAL                         17150000
000727                             254+DS4DEVFG DS    XL1                FLAG BYTE                            17200000
000728                             255+DS4DEVTL DS    XL2                DEVICE TOLERANCE                     17250000
00072A                             256+DS4DEVDT DS    XL1                NUMBER OF DSCB'S PER TRACK           17300000
00072B                             257+DS4DEVDB DS    XL1                NUMBER OF DIRECTORY BLOCKS PER TRACK 17350000
00072C                             258+DS4AMTIM DS    XL8                VSAM TIME STAMP                      17400000
000734                             259+DS4AMCAT DS    0XL3               VSAM CATALOG INDICATOR               17450000
000734                             260+DS4VSIND DS    XL1                VSAM INDICATORS                      17500000
000735                             261+DS4VSCRA DS    XL2                RELATIVE TRACK LOCATION OF THE CRA   17550000
000737                             262+DS4R2TIM DS    XL8                VSAM VOLUME/CATALOG MATCH            17600000
                                   263+*                                 TIME STAMP                           17650000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

00073F                              264+         DS    XL5                 RESERVED                                17700000
000744                              265+DS4F6PTR DS    XL5                 POINTER TO FIRST FORMAT 6 DSCB          17750000
000749                              266+DS4VTOCE DS    XL10                VTOC EXTENT DESCRIPTION                 17800000
000753                              267+         DS    XL25                RESERVED                                17850000
                            0076C   268+DS4END   EQU   *                                                         17900000
000770                              269+         DS    0D                                                          00012000
000770                              270+FMT3     DS    0XL148         SPACE FOR FORMAT3 DSCB                       00012100
                            00770   271+IECSDSL3 EQU   *                 FORMAT 3 DSCB                           15250000
                            00770   272+IECSDSF3 EQU   IECSDSL3                                                   15300000
000770                              273+         DS    XL4                 KEY IDENTIFIER                          15350000
000774                              274+DS3EXTNT DS    XL40                FOUR EXTENT DESCRIPTIONS                15400000
                                    275+*        FIRST BYTE               EXTENT TYPE INDICATOR                   15450000
                                    276+*        SECOND BYTE              EXTENT SEQUENCE NUMBER                  15500000
                                    277+*        THIRD - SIXTH BYTES      LOWER LIMIT                             15550000
                                    278+*        SEVENTH - TENTH BYTES    UPPER LIMIT                             15600000
00079C                              279+DS3FMTID DS    CL1                 FORMAT IDENTIFIER                       15650000
00079D                              280+DS3ADEXT DS    XL90                NINE ADDITIONAL EXTENT DESCRIPTIONS     15700000
0007F7                              281+DS3PTRDS DS    XL5                 RESERVED                                15750000
                            007FC   282+DS3END   EQU   *                                                         15800000
000800                              283+         DS    0D                                                          00012300
                                    284          END                                                               00005100
```

POS.ID	REL.ID	FLAGS	ADDRESS
0001	0001	0C	0000C0

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ADDRECT  00004 0000003C 00146  00049
ADDRUPT  00004 00000038 00145  00050
ATTNECB  00004 0000006C 00153  00052 00054
ERRORM1  00002 00000060 00041  00024
IECSDSL3 00001 00000770 00271  00272
IECSDSL4 00001 0000070C 00230  00231
IKJ$0003 00002 000000D2 00077  00069
IKJ@0003 00002 000000BC 00070  00066
IOPL     00001 00000000 00104  00047
IOPLECB  00004 00000008 00113  00053
IOPLECT  00004 00000004 00112  00049
IOPLUPT  00004 00000000 00111  00050
MSGADDRS 00004 00000078 00156  00022
MSGTEXT1 00124 00000080 00157  00026 00027
PARMLIST 00004 0000004C 00152  00046 00056 00056 00058
PUTOLD1  00004 00000178 00160  00044 00062
PUTOLD2  00004 00000184 00161  00037 00039
R0       00001 00000000 00086  00022 00023 00023 00037 00039 00041 00043 00044 00052 00053
R1       00001 00000001 00087  00019 00022 00026 00027 00029 00030 00032 00043 00046 00047
R11      00001 0000000B 00097  00019 00020
R14      00001 0000000E 00100  00029 00030 00031 00031 00032 00035 00035 00037 00041 00044
R15      00001 0000000F 00101  00030 00033 00036 00042
VTCGETMN 00004 00000210 00210  00211
VTOCMSG  00001 00000000 00005  00012
VTOCOM   00001 00000000 00121  00020
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT         51
TOTAL RECORDS READ FROM SYSTEM LIBRARY     2541
TOTAL RECORDS PUNCHED                         8
TOTAL RECORDS PRINTED                       343
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25

VTOCPRNT  SD  0001 000000 000E31
PCLMAIN   SD  0002 000E38 0007F6
```

```
LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    2 ***********************************************************************  00000200
                                    3 *                                                                     *  00000300
                                    4 *                                                                     *  00000400
                                    5 * TITLE -      VTOC COMMAND PRINT ROUTINE                             *  00000500
                                    6 *                                                                     *  00000600
                                    7 * FUNCTION -   PRINT THE DATA PASSED TO IT.  IT WILL USE THE DDNAME   *  00000700
                                    8 *              SYSOUT IF IT IS ALLOCATED, AND WILL USE THE VTOCMSG    *  00000800
                                    9 *              ROUTINE IF NOT.  IT CAN ALSO PUT OUT THE DATA TO       *  00000900
                                   10 *              AN OUTPUT DATA SET.  TOTALS ARE COMPUTED HERE.         *  00001000
                                   11 *                                                                     *  00001100
                                   12 * OPERATION -  FOR UNSORTED DATA, GET THE CURRENT ENTRY, ADD TO THE   *  00001200
                                   13 *              TOTALS, AND OUTPUT IT.  IF THE DATA IS SORTED, THE     *  00001300
                                   14 *              ACTION IS MORE COMPLEX, BECAUSE ALL THE DATA SETS      *  00001400
                                   15 *              ARE TO BE OUTPUT.  THE TOTALS AND BREAKS MAY BE        *  00001500
                                   16 *              NEEDED AT ANY POINT.                                   *  00001600
                                   17 *                                                                     *  00001700
                                   18 * INPUT -      VTOC COMMON AREA ( VTOCOM )                            *  00001800
                                   19 *              POINTED TO BY REGISTER 1                               *  00001900
                                   20 *              USE PARSE DATA, CURRENT FORMATTED DSCB, SORTED LIST    *  00002000
                                   21 *                                                                     *  00002100
                                   22 * OUTPUT -     TO SYSOUT, A LIST OF THE REQUESTED DATA SETS AND       *  00002200
                                   23 *              THEIR ATTRIBUTES, WITH TOTALS AND BREAKS AS NEEDED.    *  00002300
                                   24 *              ALSO TO THE OUTPUT DATA SET, IF NEEDED.  IF SYSOUT     *  00002400
                                   25 *              IS NOT ALLOCATED, VTOCMSG IS USED FOR OUTPUT.          *  00002500
                                   26 *                                                                     *  00002600
                                   27 * ATTRIBUTES - REENTRANT, REUSEABLE, REFRESHABLE.                    *  00002700
                                   28 *                                                                     *  00002800
                                   29 *                                                                     *  00002900
                                   30 *         PROGRAMMED BY R. L. MILLER  (415) 485-6241                  *  00003000
                                   31 *                                                                     *  00003100
                                   32 * 9/26/84 - MODIFIED BY A. BRUCE LELAND AT HITACHI TO CORRECT   ABL-EXT 00003102
                                   33 *           LIM(EX GT 2) TO MEAN EXTENTS (NOT EXPDT).          ABL-EXT 00003104
                                   34 *                                                                     *  00003106
                                   35 *06/13/95 - MODIFIED BY A. BRUCE LELAND TO CORRECT THE EXPDT    ABL-EX  00003108
                                   36 *           PROCESSING.  EXPDT WAS BEING TREATED AS THE END     ABL-EX  00003110
                                   37 *           OF THE PARSE LIST INCORRECTLY IN PRINT(NEW (EXPDT.. ABL-EX  00003112
                                   38 *                                                                     *  00003114
                                   39 * 12/19/97- MODIFIED BY JOHN KALINICH AT USA LSSC TO ADD YEAR   Y2K   *  00003201
                                   40 *           2000 SUPPORT FOR DATES.                             Y2K   *  00003301
                                   41 *                                                                     *  00003400
                                   42 ***********************************************************************  00003500
                                   43 *                                                                        00003600
                                   44 *        MACRO FOR DEFINING FAKE PDE FOR A DEFAULT LIST                  00003700
                                   45 *                                                                        00003800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    47 VTOCPRNT ENTER 12,20          DO THE HOUSEKEEPING                        00004000
000000                              48+VTOCPRNT CSECT                                                           00004220
000000 47F0 F00E      0000E         49+         B     14(0,15)                        BRANCH AROUND ID         00450000
000004 08                           50+         DC    AL1(8)                          LENGTH OF IDENTIFIER     00550000
000005 E5E3D6C3D7D9D5E3             51+         DC    CL8'VTOCPRNT'                   IDENTIFIER               00750000
00000D 00
00000E 90EC D00C      0000C         52+         STM   14,12,12(13)                    SAVE REGISTERS           03700000
000012 18CF                         53+         LR    12,15         SET FIRST BASE REG                         00004700
000014                              54+         CNOP  0,4                                                        00004800
                            00000   55+         USING VTOCPRNT,12                                                00008600
000014 5811 0014      00014         56+         L     1,20+0(1)      NUMERIC &SAVE IMPLIES A PASSED SAVEAREA   00012600
000018 50D1 0004      00004         57+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE            00012700
00001C 501D 0008      00008         58+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                00012800
000020 182D                         59+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS        00012900
000022 18D1                         60+         LR    13,1           THIS IS MY SAVEAREA                       00013000
000024 9802 2014      00014         61+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                     00013100
000028 18B1                         62          LR    R11,R1         SAVE ADDR OF VTOCOM                       00004100
                            00000   63          USING VTOCOM,R11     SET ITS ADDRESSABILITY                    00004200
00002A 5890 B048      00048         64          L     R9,ADDRANSR    POINT TO THE PARSE ANSWER                 00004300
                            00000   65          USING PDL,R9         SET ITS ADDRESSABILITY                    00004400
                            00000   66          USING PRNTWORK,R13   SET ADDRESSABILITY FOR LOCAL WORK AREA    00004500


                                    68 *                                                                         00004700
                                    69 *        CHECK FOR THE PRINT CLEAN - CLOSE AND FREEMAIN                   00004800
                                    70 *                                                                         00004900
00002E 9500 B1A8      001A8         71          CLI   VTCEPRNT,0     IS IT TIME                                00005000
000032 4770 C198      00198         72          BNE   PRNTCLEN       YES, GO DO IT                             00005100
                                    73 *                                                                         00005200
                                    74 *        CHECK FOR THE FIRST TIME THROUGH                                 00005300
                                    75 *        IF SO, SET UP THE DCB'S AND OPEN THEM                            00005400
                                    76 *                                                                         00005500
000036 9500 D185      00185         77          CLI   FIRSTIM,0      IS THIS THE FIRST TIME?                   00005600
00003A 4770 C042      00042         78          BNE   CHKSORT        NO, KEEP ON TRUCKIN'                      00005700
00003E 47F0 C740      00740         79          B     PRTINIT    INITIALIZE FOR PRINTING                       00005800
                                    80 *                                                                         00005900
                                    81 *        CHECK TO SEE IF THE DATA IS SORTED                               00006000
                                    82 *                                                                         00006100
000042 9502 902F      0002F         83 CHKSORT  CLI   SORTK+1,2      IS THIS NOSORT?                           00006200
000046 4770 C0A2      000A2         84          BNE   SORTED         NO, THE ENTRIES ARE SORTED                00006300
                                    85 *                                                                         00006400
                                    86 *        NOSORT WAS SPECIFIED.  ONLY THE CURRENT ENTRY IS AVAILABLE       00006500
                                    87 *                                                                         00006600
00004A 5830 B198      00198         88          L     R3,FORMATAD    POINT TO THE ENTRY                        00006700
                            00000   89          USING VTFMT,R3       FORMATTED DSCB ADDRESSABILITY             00006800
00004E 1233                         90          LTR   R3,R3          IS IT THERE?                              00006900
000050 4780 C08E      0008E         91          BZ    CHEKTOT        NO, SEE IF A TOTAL HAS BEEN OUTPUT        00007000
000054 D703 B198 B198 00198 00198    92          XC    FORMATAD,FORMATAD  CLEAR THE ADDRESS FOR LATER           00007100
                                    93 *                                                                         00007200
                                    94 *        ADD TO THE TOTALS                                                00007300
                                    95 *                                                                         00007400
00005A 4580 C208      00208         96          BAL   R8,ADDTOT      GO DO IT                                  00007500
                                    97 *                                                                         00007600
                                    98 *        SEE IF THE OUTPUT DATA SET IS WANTED                             00007700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    99 *                                                                          00007800
00005E 9110 D154      00154         100          TM    OUTDCB+48,X'10'  IS THE DCB OPEN?                        00007900
000062 47E0 C06A      0006A         101          BNO   NOOUTPT        NO, SKIP ALONG                             00008000
000066 4580 C572      00572         102          BAL   R8,OUTPUT      YES, GO DO IT                              00008100
                                   103 *                                                                          00008200
                                   104 *        SEE IF THERE'S PRINTING TO DO                                     00008300
                                   105 *                                                                          00008400
00006A 9502 903B      0003B         106 NOOUTPT  CLI   PRINTK+1,2     WAS NOPRINT SPECIFIED?                     00008500
00006E 4780 C076      00076         107          BE    VTRET          YES, WE'RE DONE FOR NOW                    00008600
000072 4580 C2D8      002D8         108          BAL   R8,PRINT       NO, PRINT OUT THE ENTRY                    00008700
                                   109 *                                                                          00008800
                                   110 *        RETURN FROM WHENCE WE CAME                                        00008900
                                   111 *                                                                          00009000
                                   112 VTRET    LEAVE EQ,RC=0        EXEUNT                                     00009100
000076 182D                        113+VTRET    LR    2,13                                                       00000400
000078 58DD 0004      00004         114+         L     13,4(13)                                                   00000500
00007C 41F0 0000      00000         115+         LA    15,0           LOAD THE RETURN CODE                        00000700
000080 90F1 D010      00010         116+         STM   15,1,16(13)  STORE RETURN REGS                             00000800
000084 98EC D00C      0000C         117+         LM    14,12,12(13)                     RESTORE THE REGISTERS     00650000
000088 92FF D00C      0000C         118+         MVI   12(13),X'FF'                     SET RETURN INDICATION     01600000
00008C 07FE                         119+         BR    14                               RETURN                    02000000
                            00000   120+R0       EQU   0        *USED BY O.S.                                     00000100
                            00001   121+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST        00000200
                            00002   122+R2       EQU   2                                                          00000300
                            00003   123+R3       EQU   3                                                          00000400
                            00004   124+R4       EQU   4                                                          00000500
                            00005   125+R5       EQU   5                                                          00000600
                            00006   126+R6       EQU   6                                                          00000700
                            00007   127+R7       EQU   7                                                          00000880
                            00008   128+R8       EQU   8                                                          00000900
                            00009   129+R9       EQU   9                                                          00001000
                            0000A   130+R10      EQU   10                                                         00001100
                            0000B   131+R11      EQU   11                                                         00001200
                            0000C   132+R12      EQU   12                                                         00001300
                            0000D   133+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS                00001400
                            0000E   134+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                   00001500
                            0000F   135+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE      00001600
                                   136 *                                                                          00009200
                                   137 *        NOSORT, CHECK FOR OUTPUTTING THE TOTALS                           00009300
                                   138 *                                                                          00009400
00008E 9180 D184      00184         139 CHEKTOT  TM    ENDTOTAL,ENTOTOUT  WAS THE TOTAL OUTPUT BEFORE?           00009500
000092 4710 C076      00076         140          BO    VTRET          YES, JUST RETURN                           00009600
000096 4580 C22E      0022E         141          BAL   R8,PRNTOT      NO, OUTPUT THE TOTAL                       00009700
00009A 9680 D184      00184         142          OI    ENDTOTAL,ENTOTOUT  REMEMBER THE TOTAL IS OUT              00009800
00009E 47F0 C076      00076         143          B     VTRET          THEN RETURN                                00009900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   145 *                                                                    00010100
                                   146 *        THE DATA IS SORTED, SO THE LISTS MUST BE EMPTIED.           00010200
                                   147 *        CHECK EACH ITEM FOR A TOTAL AND FOR A BREAK                 00010300
                                   148 *        OUTPUT TO PRINT AND/OR THE OUTPUT DATA SET                  00010400
                                   149 *                                                                    00010500
                                   150 *                                                                    00010600
                                   151 *        FIRST GET THE TOTAL AND BREAK COUNTS FOR COMPARES           00010700
                                   152 *                                                                    00010800
0000A2 4110 90D8      000D8        153 SORTED   LA    R1,TOTALN      POINT TO THE TOTAL PDL               00010900
0000A6 4580 C59E      0059E        154          BAL   R8,PDLNUM      CONVERT IT TO A NUMBER               00011000
0000AA 12FF                        155          LTR   R15,R15        IS IT ZERO?                          00011100
0000AC 4770 C0B4      000B4        156          BNZ   SETTNUM        NO, IT'S GOOD                        00011200
0000B0 9610 D184      00184        157          OI    ENDTOTAL,ENDTONLY  YES, TOTALS AT THE END ONLY      00011300
0000B4 06F0                        158 SETTNUM  BCTR  R15,0          CUT IT DOWN ONE                      00011400
0000B6 40F0 D0C2      000C2        159          STH   R15,NUMTOTAL   SET THE TOTAL COUNT                  00011500
0000BA 4110 909C      0009C        160          LA    R1,BREAK       POINT TO THE BREAK PDL               00011600
0000BE 4580 C59E      0059E        161          BAL   R8,PDLNUM      CONVERT IT TO A NUMBER               00011700
0000C2 12FF                        162          LTR   R15,R15        IS IT ZERO?                          00011800
0000C4 4770 C0CC      000CC        163          BNZ   SETBNUM        NO, IT'S GOOD                        00011900
0000C8 9608 D184      00184        164          OI    ENDTOTAL,NOBREAK   YES, BREAK  AT THE END ONLY      00012000
0000CC 06F0                        165 SETBNUM  BCTR  R15,0          CUT IT DOWN ONE                      00012100
0000CE 40F0 D0C0      000C0        166          STH   R15,NUMBREAK   SET THE BREAK COUNT                  00012200
                                   167 *                                                                    00012300
                                   168 *        START GOING THROUGH THE LISTS, PROCESS THE ENTRIES          00012400
                                   169 *                                                                    00012500
0000D2 4140 B2D8      002D8        170          LA    R4,VTCSORTH    POINT TO THE LISTS                   00012600
0000D6 4150 B6D8      006D8        171          LA    R5,VTCSORTE    POINT TO THE END OF THE LISTS        00012700
0000DA 5050 D06C      0006C        172          ST    R5,ADDREND     SAVE THE ADDRESS                     00012800
0000DE 5834 0000      00000        173 NEWLIST  L     R3,0(R4)       GET THE FIRST ENTRY FROM THIS LIST   00012900
0000E2 1233                        174          LTR   R3,R3          ANYTHING ON THIS LIST?               00013000
0000E4 4780 C16C      0016C        175          BZ    NEXTLIST       NO, GET ANOTHER LIST                 00013100
                                   176 *                                                                    00013200
                                   177 *        THIS IS AN ENTRY, DO THE TOTALS, PRINT, AND OUTPUT          00013300
                                   178 *        CHECK FOR TOTALS AND BREAKS FIRST                           00013400
                                   179 *                                                                    00013500
0000E8 9502 903B      0003B        180 GOTENTRY CLI   PRINTK+1,2     WAS NOPRINT SET?                     00013600
0000EC 4780 C154      00154        181          BE    CHKOUTPT       YES, SKIP INTERIM TOTALS             00013700
0000F0 9200 D187      00187        182          MVI   TOTLAST,0      SET UP FLAG FOR TOTAL AS LAST ACTION 00013800
                                   183 *        NOTE - EXTENSION - OUTPUT INTERIM TOTALS WITH THE KEY       00013900
0000F4 9110 D184      00184        184          TM    ENDTOTAL,ENDTONLY  END TOTAL ONLY?                  00014000
0000F8 4710 C110      00110        185          BO    CHKBREAK       YES, SEE ABOUT BREAKS                00014100
0000FC 4820 D0C2      000C2        186          LH    R2,NUMTOTAL    GET THE LENGTH TO COMPARE            00014200
000100 5810 D0BC      000BC        187          L     R1,LASTKEY     GET THE LAST ENTRY                   00014300
000104 4420 CB00      00B00        188          EX    R2,COMPKEY     SEE IF THIS IS THE SAME              00014400
000108 4780 C110      00110        189          BE    CHKBREAK       YES, KEEP COUNTING                   00014500
                                   190 *                                                                    00014600
                                   191 *        THIS ONE IS DIFFERENT, PRINT THE TOTALS FIRST               00014700
                                   192 *                                                                    00014800
00010C 4580 C22E      0022E        193          BAL   R8,PRNTOT      PRINT THE TOTALS                     00014900
                                   194 *                                                                    00015000
                                   195 *        CHECK FOR A BREAK                                           00015100
                                   196 *                                                                    00015200
000110 9108 D184      00184        197 CHKBREAK TM    ENDTOTAL,NOBREAK   NO BREAKS THIS TIME?             00015300
000114 4710 C13A      0013A        198          BO    SKPBREAK       YES, SKIP PAST BREAKS                00015400
000118 4820 D0C0      000C0        199          LH    R2,NUMBREAK    GET THE LENGTH TO COMPARE            00015500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

00011C 5810 D0BC      000BC         200          L     R1,LASTKEY     GET THE LAST ENTRY                        00015600
000120 4420 CB00      00B00         201          EX    R2,COMPKEY     SEE IF THIS IS THE SAME                   00015700
000124 4780 C13A      0013A         202          BE    SKPBREAK       YES, KEEP COUNTING                        00015800
                                    203 *                                                                        00015900
                                    204 *        THIS ONE IS DIFFERENT, GET A NEW PAGE                           00016000
                                    205 *                                                                        00016100
000128 D201 B6D8 B6DA 006D8 006DA   206          MVC   LINECT,LINEMAX BE SURE THE NEXT ITEM GETS A NEW PAGE     00016200
00012E 9200 D187      00187         207          MVI   TOTLAST,0      DON'T SKIP A LINE AFTER TOTAL             00016300
000132 4110 3046      00046         208          LA    R1,VTFDSN     POINT TO THE DSNAME                        00016400
000136 5010 D0BC      000BC         209          ST    R1,LASTKEY    SAVE THE ADDRESS FOR BREAK COMPARES        00016500
                                    210 *                                                                        00016600
                                    211 *        PRINT THE ITEM                                                  00016700
                                    212 *                                                                        00016800
00013A 9500 D187      00187         213 SKPBREAK CLI   TOTLAST,0      WAS A TOTAL NOT FOLLOWED BY A BREAK?      00016900
00013E 4780 C150      00150         214          BE    SKPBREA2       NO, CONTINUE NORMALLY                     00017000
000142 D213 D5AC CCA4 005AC 00CA4   215          MVC   MSGBL,MSGBLC   YES, SET UP A BLANK MESSAGE               00017100
000148 4110 D5AC      005AC         216          LA    R1,MSGBL       POINT TO IT                               00017200
00014C 4580 C60C      0060C         217          BAL   R8,PRNTLINE    THEN PUTPUT IT                            00017300
000150 4580 C2D8      002D8         218 SKPBREA2 BAL   R8,PRINT       FINAL FORMAT AND PRINT                    00017400
                                    219 *                                                                        00017500
                                    220 *        CHECK FOR DATA SET OUTPUT                                       00017600
                                    221 *                                                                        00017700
000154 9110 D154      00154         222 CHKOUTPT TM    OUTDCB+48,X'10'     IS IT OPEN AND READY                  00017800
000158 47E0 C160      00160         223          BNO   GOTOT          NO, GO DO THE TOTALS                      00017900
00015C 4580 C572      00572         224          BAL   R8,OUTPUT      YES, PUT OUT THE DATA SET ENTRY           00018000
                                    225 *                                                                        00018100
                                    226 *        ADD UP THE TOTALS                                               00018200
                                    227 *                                                                        00018300
000160 4580 C208      00208         228 GOTOT    BAL   R8,ADDTOT      SUM THEM                                  00018400
                                    229 *                                                                        00018500
                                    230 *        GET THE NEXT ENTRY                                              00018600
                                    231 *                                                                        00018700
000164 BF3F 3000      00000         232          ICM   R3,B'1111',VTFNEXT  FOLLOW THE CHAIN                     00018800
000168 4770 C0E8      000E8         233          BNZ   GOTENTRY       SOMETHING'S THERE, USE IT                 00018900
                                    234 *                                                                        00019000
                                    235 *        END OF THIS LIST, TRY THE NEXT LIST                             00019100
                                    236 *                                                                        00019200
00016C 4140 400C      0000C         237 NEXTLIST LA    R4,12(0,R4)    MOVE OVER ONE                             00019300
000170 5940 D06C      0006C         238          C     R4,ADDREND     WAS THAT THE LAST LIST?                   00019400
000174 4740 C0DE      000DE         239          BL    NEWLIST        NO, KEEP TRYING                           00019500
                                    240 *                                                                        00019600
                                    241 *        END OF THE LISTS, OUTPUT THE FINAL TOTAL AND RETURN             00019700
                                    242 *                                                                        00019800
000178 4580 C22E      0022E         243          BAL   R8,PRNTOT      LIST THE TOTAL                            00019900
                                    244 *                                                                        00020000
                                    245 *        CLEAR OUT THE PRINT LISTS                                       00020100
                                    246 *                                                                        00020200
00017C D7FF B2D8 B2D8 002D8 002D8   247          XC    VTCSORTH+000(256),VTCSORTH  CLEAR 64 ENTRIES             00020300
000182 D7FF B3D8 B3D8 003D8 003D8   248          XC    VTCSORTH+256(256),VTCSORTH+256 CLEAR 64 ENTRIES          00020400
000188 D7FF B4D8 B4D8 004D8 004D8   249          XC    VTCSORTH+512(256),VTCSORTH+512 CLEAR 64 ENTRIES          00020500
00018E D7FF B5D8 B5D8 005D8 005D8   250          XC    VTCSORTH+768(256),VTCSORTH+768 CLEAR 64 ENTRIES          00020600
000194 47F0 C076      00076         251          B     VTRET          THEN GET OUT OF HERE                      00020700
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   253 *                                                                    00020900
                                   254 *        PRINT CLEANUP ROUTINE - CLOSE DCB'S FIRST                   00021000
                                   255 *                                                                    00021100
000198 9110 D0F4      000F4        256 PRNTCLEN TM    SYSOUT+48,X'10'  IS SYSOUT OPEN?                      00021200
00019C 47E0 C1B6      001B6        257          BNO   PRNTCLO        NO, CHECK THE OUTDCB                  00021300
                                   258          CLOSE (SYSOUT),MF=(E,OPENLIST)  DO THE CLOSE               00021400
0001A0 4110 D074      00074        259+         LA    1,OPENLIST                        LOAD PARAMETER REG 1  01900002
0001A4 43E1 0000      00000        260+         IC    14,0(1,0)                         SAVE OPTION BYTE      01140000
0001A8 4100 D0C4      000C4        261+         LA    0,SYSOUT                          PICK UP DCB ADDRESS   01180000
0001AC 5001 0000      00000        262+         ST    0,0(1,0)                          STORE INTO LIST       01200000
0001B0 42E1 0000      00000        263+         STC   14,0(1,0)                         RESTORE OPTION BYTE   01220000
0001B4 0A14                        264+         SVC   20                                ISSUE CLOSE SVC       01640000
0001B6 9110 D154      00154        265 PRNTCLO  TM    OUTDCB+48,X'10'  IS OUTDCB OPEN?                      00021500
0001BA 47E0 C1D4      001D4        266          BNO   PRNTFREE       NO, SKIP DOWN TO THE FREEMAINS         00021600
                                   267          CLOSE (OUTDCB),MF=(E,OPENLIST)  DO THE CLOSE               00021700
0001BE 4110 D074      00074        268+         LA    1,OPENLIST                        LOAD PARAMETER REG 1  01900002
0001C2 43E1 0000      00000        269+         IC    14,0(1,0)                         SAVE OPTION BYTE      01140000
0001C6 4100 D124      00124        270+         LA    0,OUTDCB                          PICK UP DCB ADDRESS   01180000
0001CA 5001 0000      00000        271+         ST    0,0(1,0)                          STORE INTO LIST       01200000
0001CE 42E1 0000      00000        272+         STC   14,0(1,0)                         RESTORE OPTION BYTE   01220000
0001D2 0A14                        273+         SVC   20                                ISSUE CLOSE SVC       01640000
                                   274 *                                                                    00021800
                                   275 *        FREE UP THE STORAGE                                         00021900
                                   276 *                                                                    00022000
0001D4 4120 B210      00210        277 PRNTFREE LA    R2,VTCGETMN    POINT TO THE TABLE                   00022100
0001D8 4150 0032      00032        278          LA    R5,VTCGETMX    GET THE NUMBER OF ENTRIES IN THE TABLE 00022200
0001DC BF3F 2000      00000        279 PRNTFRL  ICM   R3,B'1111',0(R2)  GET THE STORAGE ADDRESS              00022300
0001E0 4780 C076      00076        280          BZ    VTRET          IF ZERO, WE'RE DONE                   00022400
                                   281          FREEMAIN R,LV=VTCGETMS,A=(R3)  FREE IT                     00022500
                                   282+*      OS/VS2 RELEASE 3 VERSION  -- 10/25/74                         00001603
0001E4                             283+         CNOP  0,4                                                  00144002
0001E4 47F0 C1EC      001EC        284+         B     *+8                               BRANCH AROUND LENGTH  00145002
0001E8 00008000                    285+         DC    A(VTCGETMS)                       LENGTH                00147802
0001EC 5800 C1E8      001E8        286+         L     0,*-4                             LOAD SP AND LV        00148002
0001F0 4110 3000      00000        287+         LA    1,0(0,R3)                         LOAD AREA ADDRESS     00164002
0001F4 0A0A                        288+         SVC   10                                ISSUE FREEMAIN SVC    00311202
0001F6 D703 2000 2000 00000 00000  289          XC    0(4,R2),0(R2)  CLEAR THE ADDRESS                     00022600
0001FC 4122 0004      00004        290          LA    R2,4(R2)       GET THE NEXT BLOCK ADDRESS            00022700
000200 4650 C1DC      001DC        291          BCT   R5,PRNTFRL     AND LOOP UNTIL DONE                   00022800
000204 47F0 C076      00076        292          B     VTRET          THEN RETURN                           00022900
                                   293 *                                                                    00023000
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   295 *                                                                    00023200
                                   296 *        ROUTINES USED ABOVE                                         00023300
                                   297 *              ADDTOT - ADD TO THE CURRENT TOTALS                    00023400
                                   298 *              PRNTOT - PRINT OUT THE TOTALS AND CLEAR THEM          00023500
                                   299 *              PRINT  - PRINT OUT AN ENTRY                           00023600
                                   300 *              OUTPUT - OUTPUT THE DATA SET ENTRY                    00023700
                                   301 *              PDLNUM - GET A NUMBER FROM A PDL ENTRY                00023800
                                   302 *              PRNTLINE - INTERNAL ROUTINE TO COUNT LINES, OUTPUT HEAD 00023900
                                   303 *                                                                    00024000
000208 5810 D048      00048        304 ADDTOT   L     R1,TOTDS       NUMBER OF DATA SETS                   00024100
00020C 4111 0001      00001        305          LA    R1,1(R1)       ADD ONE                               00024200
000210 5010 D048      00048        306          ST    R1,TOTDS       STORE IT BACK                         00024300
000214 5810 D04C      0004C        307          L     R1,TOTALLOC    TOTAL ALLOCATION                      00024400
000218 5A10 3004      00004        308          A     R1,VTFALLOC    ADD IN THIS DATA SET                  00024500
00021C 5010 D04C      0004C        309          ST    R1,TOTALLOC    STORE IT BACK                         00024600
000220 5810 D050      00050        310          L     R1,TOTUSED     TOTAL USED SPACE                      00024700
000224 5A10 3008      00008        311          A     R1,VTFUSED     ADD IN THIS DATA SET                  00024800
000228 5010 D050      00050        312          ST    R1,TOTUSED     STORE IT BACK                         00024900
00022C 07F8                        313          BR    R8             RETURN                                00025000
                                   314 *                                                                    00025100
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   316 *                                                                    00025300
                                   317 *        PRINT THE TOTALS                                            00025400
                                   318 *              FIRST FORMAT THEM, THEN PUT THE LINE OUT TO SYSOUT    00025500
                                   319 *              OR USE VTOCMSG TO LIST IT                             00025600
                                   320 *                                                                    00025700
00022E 5080 D068      00068        321 PRNTOT   ST    R8,PRNTTOT8   SAVE THE RETURN ADDRESS                 00025800
000232 D24B D1A2 CC58 001A2 00C58  322          MVC   MSGWORK(MSGTLEN),MSGTOTC  INIT THE MSG               00025900
                                   323          CONV  MSGWORK+4+11,TOTDS,5  CONVERT NO OF DATA SETS        00026000
000238 5810 D048      00048        324+         L     R1,TOTDS       GET THE DATA TO CONVERT               00001900
00023C 4E10 B070      00070        325+         CVD   R1,DOUBLE      CONVERT TO PACKED DECIMAL             00002000
000240 D20F D192 CB1C 00192 00B1C  326+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                  00002700
000246 DE0F D192 B070 00192 00070  327+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                 00002800
00024C D204 D1B1 D19D 001B1 0019D  328+         MVC   MSGWORK+4+11(5),CHARS+16-5 MOVE IN THE NUMBER        00003600
000252 D50A D192 CB4D 00192 00B4D  329+         CLC   CHARS(16-5),BLANKS     WAS THERE AN OVERFLOW?        00003700
000258 4780 C262      00262        330+         BE    *+10           NO, EVERYTHING WAS OK                 00003800
00025C D204 D1B1 CB5D 001B1 00B5D  331+         MVC   MSGWORK+4+11(5),STARS BAD NEWS, NOTE IT              00003900
                                   332          CONV  MSGWORK+4+28,TOTALLOC,8  CONVERT ALLOCATION          00026100
000262 5810 D04C      0004C        333+         L     R1,TOTALLOC    GET THE DATA TO CONVERT               00001900
000266 4E10 B070      00070        334+         CVD   R1,DOUBLE      CONVERT TO PACKED DECIMAL             00002000
00026A D20F D192 CB1C 00192 00B1C  335+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                  00002700
000270 DE0F D192 B070 00192 00070  336+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                 00002800
000276 D207 D1C2 D19A 001C2 0019A  337+         MVC   MSGWORK+4+28(8),CHARS+16-8 MOVE IN THE NUMBER        00003600
00027C D507 D192 CB4D 00192 00B4D  338+         CLC   CHARS(16-8),BLANKS     WAS THERE AN OVERFLOW?        00003700
000282 4780 C28C      0028C        339+         BE    *+10           NO, EVERYTHING WAS OK                 00003800
000286 D207 D1C2 CB5D 001C2 00B5D  340+         MVC   MSGWORK+4+28(8),STARS BAD NEWS, NOTE IT              00003900
                                   341          CONV  MSGWORK+4+51,TOTUSED,8   CONVERT USED SPACE          00026200
00028C 5810 D050      00050        342+         L     R1,TOTUSED     GET THE DATA TO CONVERT               00001900
000290 4E10 B070      00070        343+         CVD   R1,DOUBLE      CONVERT TO PACKED DECIMAL             00002000
000294 D20F D192 CB1C 00192 00B1C  344+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                  00002700
00029A DE0F D192 B070 00192 00070  345+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                 00002800
0002A0 D207 D1D9 D19A 001D9 0019A  346+         MVC   MSGWORK+4+51(8),CHARS+16-8 MOVE IN THE NUMBER        00003600
0002A6 D507 D192 CB4D 00192 00B4D  347+         CLC   CHARS(16-8),BLANKS     WAS THERE AN OVERFLOW?        00003700
0002AC 4780 C2B6      002B6        348+         BE    *+10           NO, EVERYTHING WAS OK                 00003800
0002B0 D207 D1D9 CB5D 001D9 00B5D  349+         MVC   MSGWORK+4+51(8),STARS BAD NEWS, NOTE IT              00003900
0002B6 D205 D1CB D188 001CB 00188  350          MVC   MSGWORK+4+37(6),SPACTYPE MOVE IN THE UNITS           00026300
0002BC D205 D1E2 D188 001E2 00188  351          MVC   MSGWORK+4+60(6),SPACTYPE MOVE IN THE UNITS           00026400
                                   352 *                                                                    00026500
                                   353 *        NOW OUTPUT THE MESSAGE                                      00026600
                                   354 *                                                                    00026700
0002C2 92F0 D1A6      001A6        355          MVI   MSGWORK+4,C'0' ADD A CARRIAGE CONTROL                00026800
0002C6 4110 D1A2      001A2        356          LA    R1,MSGWORK     POINT TO THE TOTAL LINE               00026900
0002CA 4580 C60C      0060C        357          BAL   R8,PRNTLINE    PUT OUT THE TOTAL LINE                00027000
0002CE 9201 D187      00187        358          MVI   TOTLAST,1      NOTE THAT A TOTAL WAS THE LAST ITEM   00027100
0002D2 5880 D068      00068        359          L     R8,PRNTTOT8    GET THE RETURN ADDRESS                00027200
0002D6 07F8                        360          BR    R8             THEN RETURN                           00027300
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  362 *                                                                    00027500
                                  363 *        PRINT OUT THE FORMATTED DSCB                                00027600
                                  364 *              FIRST FORMAT IT                                       00027700
                                  365 *                                                                    00027800
0002D8 5080 D064      00064       366 PRINT    ST    R8,PRINTR8     SAVE REGISTER 8 FOR RETURNING        00027900
0002DC 9240 D2A6      002A6       367          MVI   WORKLINE+4,C' ' BLANK OUT THE LINE                   00028000
0002E0 D2F9 D2A7 D2A6 002A7 002A6 368          MVC   WORKLINE+5(250),WORKLINE+4 SO INDIVIUAL FIELDS DON'T 00028100
0002E6 5820 D774      00774       369          L     R2,VTPRNTLS   GET THE PRINT ITEM LIST                 00028200
0002EA 4110 D2A6      002A6       370          LA    R1,WORKLINE+4  POINT TO THE WORK  LINE               00028300
0002EE 1B66                       371 PRTLOOP  SR    R6,R6          GET THE RESERVED WORD NUMBER          00028400
0002F0 4362 0000      00000       372          IC    R6,0(R2)       FROM THE TOP BYTE                     00028500
0002F4 4C60 CAF4      00AF4       373          MH    R6,H12         MULTIPLY BY 12 FOR THE TABLE ENTRIES  00028600
0002F8 4166 CCE0      00CE0       374          LA    R6,TABTITL(R6) THEN RELOCATE THE MESS                00028700
0002FC 1B77                       375          SR    R7,R7          CLEAR A REGISTER                      00028800
0002FE 4376 0000      00000       376          IC    R7,0(R6)       GET THE EXECUTE LENGTH                00028900
000302 4151 0001      00001       377          LA    R5,1(R1)       SAVE A PLACE TO MOVE FIELD INTO       00029000
000306 4111 7001      00001       378          LA    R1,1(R1,R7)    MOVE THE POINTER OVER                 00029100
00030A 4100 D2A6      002A6       379          LA    R0,WORKLINE+4  POINT TO THE BEGINNING AGAIN          00029200
00030E 1B10                       380          SR    R1,R0          AND FIND THE CURRENT LENGTH           00029300
000310 4910 B6DE      006DE       381          CH    R1,LINELEN     IS IT TOO LONG?                       00029400
000314 47B0 C34C      0034C       382          BNL   PRTEND         YES, WE'RE DONE                       00029500
000318 1A10                       383          AR    R1,R0          NO, KEEP GOING                        00029600
                                  384 *                                                                    00029700
                                  385 *        MOVE IN OR CONVERT THIS ITEM                                00029800
                                  386 *                                                                    00029900
00031A 1BEE                       387          SR    R14,R14       CLEAR A REG FOR LENGTH OF RTN NO      00030000
00031C 43E6 0001      00001       388          IC    R14,1(R6)     GET THE LENGTH OR ROUTINE             00030100
000320 54E0 CAE4      00AE4       389          N     R14,F127      CLEAR THE TOP BIT                     00030200
000324 1BFF                       390          SR    R15,R15       CLEAR A REG FOR VTFMT                 00030300
000326 43F6 0002      00002       391          IC    R15,2(R6)       DISPLACEMENT                        00030400
00032A 1AF3                       392          AR    R15,R3        RELOCATE IT                           00030500
                                  393 *                                                                    00030600
                                  394 *        DECIDE WHERE TO PUT IT                                      00030700
                                  395 *                                                                    00030800
00032C 9180 6001      00001       396          TM    1(R6),X'80'   IS IT IN CHARS                        00030900
000330 47E0 C360      00360       397          BNO   PRTRTN        NO, USE THE SPECIAL ROUTINE           00031000
000334 1B7E                       398          SR    R7,R14        GET THE DIFFERENCE IN LENGTHS         00031100
000336 8870 0001      00001       399          SRL   R7,1          GET HALF THE DIFFERENCE               00031200
00033A 1A57                       400          AR    R5,R7         PUT THE DATA HERE                     00031300
00033C 44E0 C35A      0035A       401          EX    R14,PRTMOVE   MOVE IN THE CHARACTERS                00031400
000340 4122 0001      00001       402 PRTINC   LA    R2,1(R2)            GET THE NEXT CHAIN POINTER        00031500
000344 9500 2000      00000       403          CLI   0(R2),0       ARE WE DONE?                          00031600
000348 4770 C2EE      002EE       404          BNE   PRTLOOP        GO GET MORE ITEMS                    00031700
00034C 4110 D2A2      002A2       405 PRTEND   LA    R1,WORKLINE   POINT TO THIS LINE                    00031800
000350 4580 C60C      0060C       406          BAL   R8,PRNTLINE   THEN GO PRINT IT                      00031900
000354 5880 D064      00064       407          L     R8,PRINTR8     GET THE RETURN ADDRESS                00032000
000358 07F8                       408          BR    R8             RETURN                                00032100
00035A D200 5000 F000 00000 00000 409 PRTMOVE  MVC   0(0,R5),0(R15)  EXECUTED MOVE                       00032200
                                  410 *                                                                    00032300
                                  411 *        VARIOUS ROUTINES TO FORMAT BEFORE MOVING IN THE DATA        00032400
                                  412 *                                                                    00032500
000360 12EE                       413 PRTRTN   LTR   R14,R14       BE SURE THE OFFSET IS OK              00032600
000362 4720 C376      00376       414          BP    PRTRTN1        IT SEEMS ALL RIGHT                   00032700
                                  415          ABEND 701,DUMP       CRASH AND BURN                       00032800
000366                            416+         DS    0H                                                   00400002
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000366 4110 02BD      002BD         417+         LA    1,701                           LOAD PARAMETER REG 1   01900002
00036A 4100 0080      00080         418+         LA    0,128(0,0)         PICK UP DUMP/STEP/DUMPOPTS     YM1995 01800002
00036E 8900 0018      00018         419+         SLL   0,24(0)            SHIFT TO HIGH ORDER                   01850002
000372 1610                         420+         OR    1,0                OR IN WITH COMPCODE                   01900002
000374 0A0D                         421+         SVC   13                 LINK TO ABEND ROUTINE                 02050002
000376 47FE C376      00376         422 PRTRTN1  B     *(R14)        GO DO YOUR THING                          00032900
00037A 47F0 C39A      0039A         423          B     PRDATES        4  CDATE, EXPDT                          00033000
00037E 47F0 C3F4      003F4         424          B     PRLSTUS        8  LSTUS                                 00033100
000382 47F0 C40A      0040A         425          B     PRALLOC       12  ALLOC, USED                            00033200
000386 47F0 C446      00446         426          B     PRUNUSED      16  ALLOC - USED                           00033300
00038A 47F0 C484      00484         427          B     PRPCT         20  100 * USED / ALLOC                    00033400
00038E 47F0 C4F6      004F6         428          B     PREXT         24  EXT                                    00033500
000392 47F0 C526      00526         429          B     PRBLREC       28  BLKSZ LRECL                           00033600
000396 47F0 C554      00554         430          B     PRDSN         32  DSNAME                                 00033700
                                    431 *                                                                       00033800
                                    432 *                                                                       00033900
                                    433 *        CDATE AND EXPDT                                                00034000
                                    434 *                                                                       00034100
00039A 1BEE                         435 PRDATES  SR    R14,R14       CLEAR REG FOR YEAR                        00034200
00039C 43EF 0000      00000         436          IC    R14,0(R15)    GET THE YEAR                              00034300
                            00000   437          USING DUMMD,R5      ALLOW CONV TO USE SYMBOL                  00034400
                                    438          CONVY2K DUMMA,(R14),2 CONVERT YEAR                     Y2K DEC97 00034501
0003A0 4EE0 B070      00070         439+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL             00002500
0003A4 D20F D192 CB1C 00192 00B1C   440+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                     00002700
0003AA DE0F D192 B070 00192 00070   441+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                    00002800
0003B0 D201 5000 D1A0 00000 001A0   442+         MVC   DUMMA(2),CHARS+16-2      MOVE IN THE NUMBER             00003600
0003B6 D50D D192 CB4D 00192 00B4D   443+         CLC   CHARS(16-2),BLANKS     WAS THERE AN OVERFLOW?           00003700
                                    444+*        BE    *+10           NO, EVERYTHING WAS OK                     00003800
0003BC 47F0 C3C6      003C6         445+         B     *+10           ALLOW YY > 99 FOR YEAR 2000     Y2K DEC97 00003900
0003C0 D201 5000 CB5D 00000 00B5D   446+         MVC   DUMMA(2),STARS     BAD NEWS, NOTE IT                  00004000
0003C6 BFE3 F001      00001         447          ICM   R14,B'0011',1(R15)  GET THE DAY                        00034700
                                    448          CONV  DUMMA+2,(R14),3,EDMASK0,COMP0  CONVERT THE DAY          00034800
0003CA 4EE0 B070      00070         449+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL             00002500
0003CE D20F D192 CB2C 00192 00B2C   450+         MVC   CHARS,EDMASK0  PUT IN THE EDIT MASK                     00002700
0003D4 DE0F D192 B070 00192 00070   451+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                    00002800
0003DA D202 5002 D19F 00002 0019F   452+         MVC   DUMMA+2(3),CHARS+16-3    MOVE IN THE NUMBER             00003600
0003E0 D50C D192 CB3D 00192 00B3D   453+         CLC   CHARS(16-3),COMP0      WAS THERE AN OVERFLOW?           00003700
0003E6 4780 C3F0      003F0         454+         BE    *+10           NO, EVERYTHING WAS OK                     00003800
0003EA D202 5002 CB5D 00002 00B5D   455+         MVC   DUMMA+2(3),STARS   BAD NEWS, NOTE IT                   00003900
0003F0 47F0 C340      00340         456          B     PRTINC        GO GET MORE PRINT ITEMS                   00034900
                                    457 *                                                                       00035000
                                    458 *        LAST USE DATE                                                  00035100
                                    459 *                                                                       00035200
0003F4 D20F D192 CB1C 00192 00B1C   460 PRLSTUS  MVC   CHARS,EDMASK   SET UP THE EDIT MASK                     00035300
0003FA DE05 D192 F000 00192 00000   461          ED    CHARS(6),0(R15)  CONVERT TO CHARACTERS                  00035400
000400 D204 5000 D193 00000 00193   462          MVC   0(5,R5),CHARS+1  THEN MOVE THEM IN                      00035500
000406 47F0 C340      00340         463          B     PRTINC        GO GET MORE PRINT ITEMS                   00035600
                                    464 *                                                                       00035700
                                    465 *        ALLOCATION AND USED                                            00035800
                                    466 *                                                                       00035900
00040A BFEF F000      00000         467 PRALLOC  ICM   R14,B'1111',0(R15)  GET THE AMOUNT                      00036000
00040E 4740 C43C      0043C         468          BM    PRUNKN6       IF NEGATIVE, IT'S NOT KNOWN               00036100
                                    469          CONV  DUMMA,(R14),6 CONVERT THE NUMBER                        00036200
000412 4EE0 B070      00070         470+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL             00002500
000416 D20F D192 CB1C 00192 00B1C   471+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                     00002700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

00041C DE0F D192 B070 00192 00070   472+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                    00002800
000422 D205 5000 D19C 00000 0019C   473+         MVC   DUMMA(6),CHARS+16-6      MOVE IN THE NUMBER              00003600
000428 D509 D192 CB4D 00192 00B4D   474+         CLC   CHARS(16-6),BLANKS     WAS THERE AN OVERFLOW?            00003700
00042E 4780 C438      00438         475+         BE    *+10            NO, EVERYTHING WAS OK                    00003800
000432 D205 5000 CB5D 00000 00B5D   476+         MVC   DUMMA(6),STARS     BAD NEWS, NOTE IT                    00003900
000438 47F0 C340      00340         477          B     PRTINC        GO GET MORE PRINT ITEMS                    00036300
00043C D205 5000 CB4D 00000 00B4D   478 PRUNKN6  MVC   0(6,R5),BLANKS  UNKNOWN AMOUNT, LEAVE IT BLANK           00036400
000442 47F0 C340      00340         479          B     PRTINC        GO GET MORE PRINT ITEMS                    00036500
                                    480 *                                                                      00036600
                                    481 *        UNUSED SPACE                                                  00036700
                                    482 *                                                                      00036800
000446 BFEF 3008      00008         483 PRUNUSED ICM   R14,B'1111',VTFUSED  GET THE   USED SPACE               00036900
00044A 4740 C43C      0043C         484          BM    PRUNKN6       IF NOT KNOWN, SKIP ALONG                   00037000
00044E 58E0 3004      00004         485          L     R14,VTFALLOC  GET THE ALLOCATED SPACE                    00037100
000452 5BE0 3008      00008         486          S     R14,VTFUSED   MINUS THE USED SPACE GIVES UNUSED          00037200
000456 4780 C340      00340         487          BZ    PRTINC        IF NO UNUSED SPACE, LEAVE BLANK            00037300
                                    488          CONV  DUMMA,(R14),6 CONVERT FOR PRINTING                       00037400
00045A 4EE0 B070      00070         489+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL              00002500
00045E D20F D192 CB1C 00192 00B1C   490+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                      00002700
000464 DE0F D192 B070 00192 00070   491+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                    00002800
00046A D205 5000 D19C 00000 0019C   492+         MVC   DUMMA(6),CHARS+16-6      MOVE IN THE NUMBER              00003600
000470 D509 D192 CB4D 00192 00B4D   493+         CLC   CHARS(16-6),BLANKS     WAS THERE AN OVERFLOW?            00003700
000476 4780 C480      00480         494+         BE    *+10            NO, EVERYTHING WAS OK                    00003800
00047A D205 5000 CB5D 00000 00B5D   495+         MVC   DUMMA(6),STARS     BAD NEWS, NOTE IT                    00003900
000480 47F0 C340      00340         496          B     PRTINC        GO GET MORE PRINT ITEMS                    00037500
                                    497 *                                                                      00037600
                                    498 *        PCT - PERCENTAGE USED                                         00037700
                                    499 *                                                                      00037800
000484 1B66                         500 PRPCT    SR    R6,R6         CLEAR THE TOP PART OF THE NUMBER           00037900
000486 BF7F 3008      00008         501          ICM   R7,B'1111',VTFUSED   GET THE AMOUNT OF USED SPACE        00038000
00048A 4740 C4EC      004EC         502          BM    PRUNKN3       IF NOT KNOWN, LEAVE BLANK                  00038100
00048E D503 3004 CADC 00004 00ADC   503          CLC   VTFALLOC,ZERO IS THE ALLOCATION ZERO?                    00038200
000494 4770 C4AC      004AC         504          BNE   PRPCTM        NO, DO THE STANDARD STUFF                  00038300
000498 D503 3008 CADC 00008 00ADC   505          CLC   VTFUSED,ZERO  IS THE USED SPACE ZERO?                    00038400
00049E 4780 C4EC      004EC         506          BE    PRUNKN3       YES, JUST USE BLANKS                       00038500
0004A2 D202 5000 CE28 00000 00E28   507 PRPCTERR MVC   0(3,R5),=C'ERR'  NO, IT'S AN ERROR                       00038600
0004A8 47F0 C340      00340         508          B     PRTINC        THEN GO TRY FOR MORE                       00038700
0004AC 5C60 CAE0      00AE0         509 PRPCTM   M     R6,F100       MULTIPLY BY 100 FOR PERCENT                00038800
0004B0 5D60 3004      00004         510          D     R6,VTFALLOC   DIVIDE BY ALLOC TO GET THE PERCENT         00038900
0004B4 1277                         511          LTR   R7,R7         IS IT LESS THAN ZERO?                      00039000
0004B6 4740 C4A2      004A2         512          BM    PRPCTERR      YES, FLAG THE ERROR                        00039100
0004BA 5970 CAE0      00AE0         513          C     R7,F100       ALSO CHECK FOR OVER 100 PERCENT            00039200
0004BE 4720 C4A2      004A2         514          BH    PRPCTERR      THAT'S ALSO AN ERROR                       00039300
                                    515          CONV  DUMMA,(R7),3  CONVERT FOR PRINTING                       00039400
0004C2 4E70 B070      00070         516+         CVD   R7,DOUBLE         CONVERT TO PACKED DECIMAL              00002500
0004C6 D20F D192 CB1C 00192 00B1C   517+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                      00002700
0004CC DE0F D192 B070 00192 00070   518+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                    00002800
0004D2 D202 5000 D19F 00000 0019F   519+         MVC   DUMMA(3),CHARS+16-3      MOVE IN THE NUMBER              00003600
0004D8 D50C D192 CB4D 00192 00B4D   520+         CLC   CHARS(16-3),BLANKS     WAS THERE AN OVERFLOW?            00003700
0004DE 4780 C4E8      004E8         521+         BE    *+10            NO, EVERYTHING WAS OK                    00003800
0004E2 D202 5000 CB5D 00000 00B5D   522+         MVC   DUMMA(3),STARS     BAD NEWS, NOTE IT                    00003900
0004E8 47F0 C340      00340         523          B     PRTINC        GO GET MORE PRINT ITEMS                    00039500
0004EC D202 5000 CB4D 00000 00B4D   524 PRUNKN3  MVC   0(3,R5),BLANKS BLANK THE UNKNOWN                         00039600
0004F2 47F0 C340      00340         525          B     PRTINC        GO GET MORE PRINT ITEMS                    00039700
                                    526 *                                                                      00039800
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   527 *        EXTENTS                                                                 00039900
                                   528 *                                                                                00040000
0004F6 1BEE                        529 PREXT    SR    R14,R14       CLEAR REG FOR YEAR                                00040100
0004F8 43EF 0000      00000        530          IC    R14,0(R15)    GET THE YEAR                                      00040200
                                   531          CONV  DUMMA,(R14),2 CONVERT THE EXTENTS                               00040300
0004FC 4EE0 B070      00070        532+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL                     00002500
000500 D20F D192 CB1C 00192 00B1C  533+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                             00002700
000506 DE0F D192 B070 00192 00070  534+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                            00002800
00050C D201 5000 D1A0 00000 001A0  535+         MVC   DUMMA(2),CHARS+16-2      MOVE IN THE NUMBER                     00003600
000512 D50D D192 CB4D 00192 00B4D  536+         CLC   CHARS(16-2),BLANKS     WAS THERE AN OVERFLOW?                   00003700
000518 4780 C522      00522        537+         BE    *+10            NO, EVERYTHING WAS OK                           00003800
00051C D201 5000 CB5D 00000 00B5D  538+         MVC   DUMMA(2),STARS     BAD NEWS, NOTE IT                            00003900
000522 47F0 C340      00340        539          B     PRTINC        GO GET MORE PRINT ITEMS                           00040400
                                   540 *                                                                                00040500
                                   541 *        LRECL AND BLKSZ                                                         00040600
                                   542 *                                                                                00040700
000526 48EF 0000      00000        543 PRBLREC  LH    R14,0(R15)    GET THE DATA ( HALFWORD )                         00040800
                                   544          CONV  DUMMA,(R14),5  CONVERT THE DATA                                 00040900
00052A 4EE0 B070      00070        545+         CVD   R14,DOUBLE        CONVERT TO PACKED DECIMAL                     00002500
00052E D20F D192 CB1C 00192 00B1C  546+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                             00002700
000534 DE0F D192 B070 00192 00070  547+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                            00002800
00053A D204 5000 D19D 00000 0019D  548+         MVC   DUMMA(5),CHARS+16-5      MOVE IN THE NUMBER                     00003600
000540 D50A D192 CB4D 00192 00B4D  549+         CLC   CHARS(16-5),BLANKS     WAS THERE AN OVERFLOW?                   00003700
000546 4780 C550      00550        550+         BE    *+10            NO, EVERYTHING WAS OK                           00003800
00054A D204 5000 CB5D 00000 00B5D  551+         MVC   DUMMA(5),STARS     BAD NEWS, NOTE IT                            00003900
000550 47F0 C340      00340        552          B     PRTINC        GO GET MORE PRINT ITEMS                           00041000
                                   553 *                                                                                00041100
                                   554 *        DATA SET NAME                                                           00041200
                                   555 *                                                                                00041300
000554 48E0 3044      00044        556 PRDSN    LH    R14,VTFDSNL   GET THE DSNAME LENGTH                             00041400
000558 49E0 D18E      0018E        557          CH    R14,DSNLENGT  CHACK FOR MAX LENGTH                              00041500
00055C 4740 C564      00564        558          BL    PRDMOVE       THIS DSN IS SHORT ENOUGH                          00041600
000560 48E0 D18E      0018E        559          LH    R14,DSNLENGT  CUT IT DOWN                                       00041700
000564 06E0                        560 PRDMOVE  BCTR  R14,0         COUNT DOWN ONE FOR THE EX                         00041800
000566 44E0 C35A      0035A        561          EX    R14,PRTMOVE   MOVE IN THE DSNAME                                00041900
00056A 4A10 D190      00190        562          AH    R1,DSNLENOF   CORRECT THE LINE POINTER                          00042000
00056E 47F0 C340      00340        563          B     PRTINC        GO GET MORE PRINT ITEMS                           00042100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    565 *                                                                          00042300
                                    566 *        OUTPUT THE FORMATTED DSCB AS IT IS                                00042400
                                    567 *                                                                          00042500
                                    568 OUTPUT   CLEAR OUTWORK       CLEAR THE OUTPUT REC                          00042600
000572 9240 D5C0      005C0         569+OUTPUT   MVI   OUTWORK,X'40'     SET THE FIRST POSITION                   00000900
000576 D2FE D5C1 D5C0 005C1 005C0   570+         MVC   OUTWORK+1(L'OUTWORK-1),OUTWORK FILL THE ENTIRE FIELD       00001400
00057C 4820 3044      00044         571          LH    R2,VTFDSNL     GET THE LENGTH OF THE DSNAME                00042700
000580 4122 0045      00045         572          LA    R2,VTFMTL-1(R2)  GET THE FULL LENGTH MINUS ONE              00042800
000584 4420 C598      00598         573          EX    R2,OUTMOVE    MOVE IN THE ACTUAL RECORD                     00042900
                                    574          PUT   OUTDCB,OUTWORK    OUTPUT THE RECORD                          00043000
000588 4110 D124      00124         575+         LA    1,OUTDCB                          LOAD PARAMETER REG 1     01900002
00058C 4100 D5C0      005C0         576+         LA    0,OUTWORK                         LOAD PARAMETER REG 0     02500002
000590 58F0 1030      00030         577+         L     15,48(0,1)               LOAD PUT ROUTINE ADDR             00550000
000594 05EF                         578+         BALR  14,15                    LINK TO PUT ROUTINE               00600000
000596 07F8                         579          BR    R8             RETURN                                     00043100
000598 D200 D5C0 3000 005C0 00000   580 OUTMOVE  MVC   OUTWORK(0),0(R3)  EXECUTED MOVE                            00043200
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                   582 *                                                                   00043400
                                   583 *        PDLNUM - CONVERT FROM CHARACTERS ( EBCDIC ) TO AN INTEGER   00043500
                                   584 *              BINARY FORM, PASSED BACK VIA REGISTER 15              00043600
                                   585 *              A PARSE PDE IS THE INPUT AS SHOWN IN THE SAMPLE BELOW 00043700
                                   586 *                      LA    R1,PDL     POINT TO THE PARSE DECRIPTION 00043800
                                   587 *                      BAL   R8,PDLNUM  GO CONVERT TO NUMERICS      00043900
                                   588 *              THE ROUTINE WILL TERMINATE IF IT FINDS NON-NUMERICS   00044000
                                   589 *                 ANY CHARACTERS OTHER THEN 0-9, +, -                00044100
                                   590 *              REGISTERS 1, 2, 5, 6, AND 7 ARE USED                  00044200
                                   591 *                                                                   00044300
00059E 9018 D07C      0007C        592 PDLNUM   STM   R1,R8,PDLNSAVE SAVE THE REGISTERS                   00044400
0005A2 4821 0004      00004        593          LH    R2,4(R1)       GET THE STRING ADDRESS                00044500
0005A6 5811 0000      00000        594          L     R1,0(R1)       GET THE STRING ADDRESS                00044600
0005AA 9200 D186      00186        595          MVI   PDLMINUS,0     CLEAR THE NEGATIVE NUMBER FLAG        00044700
0005AE 1B55                        596          SR    R5,R5          CLEAR THE CHARACTER COUNTER           00044800
0005B0 1BFF                        597          SR    R15,R15        CLEAR THE ANSWER                      00044900
0005B2 4165 1000      00000        598 PDLLOOP  LA    R6,0(R5,R1)    POINT TO THIS DIGIT                   00045000
0005B6 4155 0001      00001        599          LA    R5,1(R5)       GET TO THE NEXT DIGIT                 00045100
0005BA 1952                        600          CR    R5,R2          IS THIS THE END OF THE STRING?        00045200
0005BC 4720 C5F8      005F8        601          BH    PDLFINI        YES, EXIT                             00045300
0005C0 1B77                        602          SR    R7,R7          CLEAR A WORK REGISTER                 00045400
0005C2 4376 0000      00000        603          IC    R7,0(R6)       GET THE CHARACTER                     00045500
0005C6 4B70 C60A      0060A        604          SH    R7,PDLH240     SUBTRACT THE CHARACTER C'0'           00045600
0005CA 4740 C5D8      005D8        605          BM    PDLSP          IF NEGATIVE, CHECK SPECIAL CHARACTERS 00045700
0005CE 4CF0 C608      00608        606          MH    R15,PDLH10     IT'S A DIGIT, MULTIPLY PRIOR NUM BY TEN 00045800
0005D2 1AF7                        607          AR    R15,R7         ADD ON THE NEW DIGIT                  00045900
0005D4 47F0 C5B2      005B2        608          B     PDLLOOP        AND LOOP FOR MORE                     00046000
                                   609 *                                                                   00046100
                                   610 *        CHECK FOR SPECIAL CHARACTERS                               00046200
                                   611 *                                                                   00046300
0005D8 9540 6000      00000        612 PDLSP    CLI   0(R6),C' '     IS IT A BLANK?                        00046400
0005DC 4780 C5B2      005B2        613          BE    PDLLOOP        THEN IT'S OK                          00046500
0005E0 954E 6000      00000        614          CLI   0(R6),C'+'     IS IT A PLUS?                         00046600
0005E4 4780 C5B2      005B2        615          BE    PDLLOOP        THAT'S ALSO OK                        00046700
0005E8 9560 6000      00000        616          CLI   0(R6),C'-'     IS IT A MINUS?                        00046800
0005EC 4770 C5F8      005F8        617          BNE   PDLFINI        NO, JUST QUIT                         00046900
0005F0 9201 D186      00186        618          MVI   PDLMINUS,1     YES, NOTE IT                          00047000
0005F4 47F0 C5B2      005B2        619          B     PDLLOOP        AND LOOK FOR MORE                     00047100
                                   620 *                                                                   00047200
                                   621 *        QUIT, AFTER SETTING R15 TO NEGATIVE IF NEEDED              00047300
                                   622 *                                                                   00047400
0005F8 9501 D186      00186        623 PDLFINI  CLI   PDLMINUS,1     WAS A MINUS SIGN FOUND?               00047500
0005FC 4770 C602      00602        624          BNE   PDLLEAVE       NO, EXIT                              00047600
000600 11FF                        625          LNR   R15,R15        YES, MAKE IT NEGATIVE                 00047700
000602 9818 D07C      0007C        626 PDLLEAVE LM    R1,R8,PDLNSAVE RESTORE THE REGISTERS                 00047800
000606 07F8                        627          BR    R8             RETURN                                00047900
000608 000A                        628 PDLH10   DC    H'10'                                                00048000
00060A 00F0                        629 PDLH240  DC    H'240'                                               00048100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    631 *                                                                    00048300
                                    632 *        PRNTLINE - GET EACH LINE FOR SYSOUT, THEN COUNT THE LINES   00048400
                                    633 *              OUTPUT HEADERS AND TITLE LINES AS NECESSARY           00048500
                                    634 *                                                                    00048600
00060C 9018 D09C      0009C         635 PRNTLINE STM   R1,R8,PRTLSAVE SAVE THE REGISTERS                    00048700
000610 9110 D0F4      000F4         636          TM    SYSOUT+48,X'10' IS SYSOUT OPEN FOR BUSINESS?          00048800
000614 47E0 C6EA      006EA         637          BNO   PRNTTERM       NO, IT'S NOT OPEN, USE VTOCMSG          00048900
000618 9502 9041      00041         638          CLI   HEADK+1,2     NOHEADING REQUEST?                      00049000
00061C 4780 C6BE      006BE         639          BE    PRNTLIN       YES, JUST OUTPUT THE DATA LINE          00049100
                                    640 *                                                                    00049200
                                    641 *        DO THE LINE COUNTING                                        00049300
                                    642 *                                                                    00049400
000620 4820 B6D8      006D8         643          LH    R2,LINECT      GET THE LINE COUNT                     00049500
000624 95F1 1004      00004         644          CLI   4(R1),C'1'     IS IT REQUESTING A NEW PAGE?           00049600
000628 4780 C658      00658         645          BE    PRNTPAGE       YES, DO IT                             00049700
00062C 9560 1000      00000         646          CLI   0(R1),C'-'     SKIP 3 LINES                           00049800
000630 4780 C640      00640         647          BE    PRNTSKP3       YES, TRY IT                            00049900
000634 95F0 1000      00000         648          CLI   0(R1),C'0'     SKIP 2 LINES?                          00050000
000638 4780 C644      00644         649          BE    PRNTSKP2       YES, DO IT                             00050100
00063C 47F0 C648      00648         650          B     PRNTSKP1       JUST SKIP ONE                          00050200
000640 4122 0001      00001         651 PRNTSKP3 LA    R2,1(R2)       ADD ONE TO THE LINE COUNT              00050300
000644 4122 0001      00001         652 PRNTSKP2 LA    R2,1(R2)       ADD ONE TO THE LINE COUNT              00050400
000648 4122 0001      00001         653 PRNTSKP1 LA    R2,1(R2)       ADD ONE TO THE LINE COUNT              00050500
00064C 4020 B6D8      006D8         654          STH   R2,LINECT      SAVE THE LINE COUNT                    00050600
000650 4920 B6DA      006DA         655          CH    R2,LINEMAX     DOES THIS OVERFLOW  HE PAGE?           00050700
000654 4740 C6BE      006BE         656          BL    PRNTLIN        NO, JUST PUT OUT THIS LINE             00050800
                                    657 *                                                                    00050900
                                    658 *        PRINT OUT THE PAGE HEADER AND ITEM TITLES                   00051000
                                    659 *                                                                    00051100
000658 4860 B6DC      006DC         660 PRNTPAGE LH    R6,PAGECT      GET THE PAGE COUNT                     00051200
00065C 4166 0001      00001         661          LA    R6,1(R6)       ADD ONE TO IT                          00051300
000660 4060 B6DC      006DC         662          STH   R6,PAGECT      THEN STORE IT BACK                     00051400
000664 5870 D070      00070         663          L     R7,PAGEADDR    GET THE PLACE TO PUT THE PAGE          00051500
                            00000   664          USING DUMMD,R7       DUMMY DSECT                            00051600
                                    665          CONV  DUMMA,(R6),5   GET THE CHARACTERS                     00051700
000668 4E60 B070      00070         666+         CVD   R6,DOUBLE         CONVERT TO PACKED DECIMAL           00002500
00066C D20F D192 CB1C 00192 00B1C   667+         MVC   CHARS,EDMASK   PUT IN THE EDIT MASK                   00002700
000672 DE0F D192 B070 00192 00070   668+         ED    CHARS,DOUBLE   CONVERT TO CHARACTERS                 00002800
000678 D204 7000 D19D 00000 0019D   669+         MVC   DUMMA(5),CHARS+16-5      MOVE IN THE NUMBER           00003600
00067E D50A D192 CB4D 00192 00B4D   670+         CLC   CHARS(16-5),BLANKS     WAS THERE AN OVERFLOW?         00003700
000684 4780 C68E      0068E         671+         BE    *+10           NO, EVERYTHING WAS OK                  00003800
000688 D204 7000 CB5D 00000 00B5D   672+         MVC   DUMMA(5),STARS     BAD NEWS, NOTE IT                  00003900
                                    673          DROP  R7                                                    00051800
00068E 5010 D060      00060         674          ST    R1,PRNTLSAV    SAVE THE INPUT REG1                    00051900
                                    675          PUT   SYSOUT,PRNTHEAD  OUTPUT THE HEADER                    00052000
000692 4110 D0C4      000C4         676+         LA    1,SYSOUT                          LOAD PARAMETER REG 1 01900002
000696 4100 D3A8      003A8         677+         LA    0,PRNTHEAD                        LOAD PARAMETER REG 0 02500002
00069A 58F0 1030      00030         678+         L     15,48(0,1)                LOAD PUT ROUTINE ADDR        00550000
00069E 05EF                         679+         BALR  14,15                     LINK TO PUT ROUTINE          00600000
                                    680          PUT   SYSOUT,PRNTTITL  OUTPUT THE ITEM TITLES               00052100
0006A0 4110 D0C4      000C4         681+         LA    1,SYSOUT                          LOAD PARAMETER REG 1 01900002
0006A4 4100 D4AC      004AC         682+         LA    0,PRNTTITL                        LOAD PARAMETER REG 0 02500002
0006A8 58F0 1030      00030         683+         L     15,48(0,1)                LOAD PUT ROUTINE ADDR        00550000
0006AC 05EF                         684+         BALR  14,15                     LINK TO PUT ROUTINE          00600000
0006AE 5810 D060      00060         685          L     R1,PRNTLSAV    GET THE ORIGINAL LINE                  00052200
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0006B2 92F0 1004      00004         686          MVI   4(R1),C'0'     ALWAYS SKIP THE FIRST LINE AFTER NEW PAGE 00052300
0006B6 4170 0005      00005         687          LA    R7,5           SET THE LINE COUNT                        00052400
0006BA 4070 B6D8      006D8         688          STH   R7,LINECT      SAVE IT FOR LATER                         00052500
                                    689 PRNTLIN  CLEAR OUTWORK       CLEAR A PRINT RECORD                       00052600
0006BE 9240 D5C0      005C0         690+PRNTLIN  MVI   OUTWORK,X'40'     SET THE FIRST POSITION                 00000900
0006C2 D2FE D5C1 D5C0 005C1 005C0   691+         MVC   OUTWORK+1(L'OUTWORK-1),OUTWORK FILL THE ENTIRE FIELD     00001400
0006C8 4861 0000      00000         692          LH    R6,0(R1)       GET THE RECORD LENGTH                      00052700
0006CC 4B60 CAEE      00AEE         693          SH    R6,H5          MINUS 4 FOR PREFIX, 1 FOR EX               00052800
0006D0 4131 0004      00004         694          LA    R3,4(R1)       POINT TO THE TEXT                          00052900
0006D4 4460 C598      00598         695          EX    R6,OUTMOVE     THEN MOVE IN THE LINE                      00053000
                                    696          PUT   SYSOUT,OUTWORK      AND FINALLY PRINT IT                    00053100
0006D8 4110 D0C4      000C4         697+         LA    1,SYSOUT                          LOAD PARAMETER REG 1   01900002
0006DC 4100 D5C0      005C0         698+         LA    0,OUTWORK                         LOAD PARAMETER REG 0   02500002
0006E0 58F0 1030      00030         699+         L     15,48(0,1)                LOAD PUT ROUTINE ADDR          00550000
0006E4 05EF                         700+         BALR  14,15                     LINK TO PUT ROUTINE            00600000
0006E6 47F0 C73A      0073A         701          B     PRNTLRET       THEN RETURN                                00053200
                                    702 *                                                                         00053300
                                    703 *        SIMPLER CHECKING FOR VTOCMSG OUTPUT                              00053400
                                    704 *                                                                         00053500
0006EA 4820 B6D8      006D8         705 PRNTTERM LH    R2,LINECT      GET THE LINE COUNT                         00053600
0006EE 4122 0001      00001         706          LA    R2,1(R2)       IGNORE CARRIAGE CONTROL                    00053700
0006F2 4020 B6D8      006D8         707          STH   R2,LINECT      SAVE IT BACK                               00053800
0006F6 1861                         708          LR    R6,R1          SAVE THE ORIGINAL REG 1                    00053900
0006F8 9240 1004      00004         709          MVI   4(R1),C' '    BLANK THE CARRIAGE CONTROL                  00054000
0006FC 9502 9041      00041         710          CLI   HEADK+1,2     NOHEADING REQUEST?                          00054100
000700 4780 C726      00726         711          BE    PRNTTLIN       YES, JUST OUTPUT THE DATA LINE             00054200
000704 4920 B6DA      006DA         712          CH    R2,LINEMAX     NEED A NEW TITLE?                          00054300
000708 4740 C726      00726         713          BL    PRNTTLIN       NO, KEEP GOING                             00054400
                                    714          VTOCMSG PRNTTITH     YES, PUT IT OUT                            00054500
00070C 4110 D4A8      004A8         715+         LA    R1,PRNTTITH    POINT TO THE FIRST MESSAGE                 00000300
000710 1B00                         716+         SR    R0,R0          NO SECOND LEVEL MESSAGE                    00000700
000712 9001 B078      00078         717+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                 00000800
                                    718+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                      00000900
000716 4110 B000      00000         719+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                   00000300
00071A 58F0 B01C      0001C         720+         L     R15,VADMSG     POINT TO THE ROUTINE                       00000400
00071E 05EF                         721+         BALR  R14,R15        THEN CALL IT                               00000900
000720 D201 B6D8 CAEC 006D8 00AEC   722          MVC   LINECT,H2      RESET THE LINE COUNT                       00054600
                                    723 PRNTTLIN VTOCMSG 0(R6)        OUTPUT THE PASSED LINE                     00054700
000726 4116 0000      00000         724+PRNTTLIN LA    R1,0(R6)       POINT TO THE FIRST MESSAGE                 00000300
00072A 1B00                         725+         SR    R0,R0          NO SECOND LEVEL MESSAGE                    00000700
00072C 9001 B078      00078         726+         STM   R0,R1,MSGADDRS SAVE THE MESSAGE ADDRESSES                 00000800
                                    727+*        THEN JUST CALL THE MESSAGE ISSUING ROUTINE                      00000900
000730 4110 B000      00000         728+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                   00000300
000734 58F0 B01C      0001C         729+         L     R15,VADMSG     POINT TO THE ROUTINE                       00000400
000738 05EF                         730+         BALR  R14,R15        THEN CALL IT                               00000900
00073A 9818 D09C      0009C         731 PRNTLRET LM    R1,R8,PRTLSAVE RESTORE THE REGISTERS                    00054800
00073E 07F8                         732          BR    R8             THEN RETURN                                00054900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000740 920A D185      00185         734 PRTINIT  MVI   FIRSTIM,10    FLAG THE INITIALIZATION AS DONE            00055100
000744 4110 CCE0      00CE0         735          LA    R1,TABTITL    POINT TO THE BUG TABLE                     00055200
000748 5010 B1AC      001AC         736          ST    R1,ATABTITL   LET CHECK KNOW WHERE IT IS                 00055300
                                    737 *                                                                        00055400
                                    738 *        SET UP THE CHARACTERS FOR TYPE OF SPACE ALLOC.                  00055500
                                    739 *                                                                        00055600
00074C 4820 902A      0002A         740          LH    R2,SPACEK      GET THE SPACE TYPE KEYWORD                00055700
000750 8B20 0003      00003         741          SLA   R2,3            MULTIPLY BY 8                            00055800
000754 4122 CB6D      00B6D         742          LA    R2,TABSPACE(R2)  RELOCATE IT                              00055900
000758 D205 D188 2000 00188 00000   743          MVC   SPACTYPE,0(R2) SAVE THE CHARACTERS                       00056000
00075E 9502 903B      0003B         744          CLI   PRINTK+1,2     IS THIS NOPRINT?                          00056100
000762 4780 C7E6      007E6         745          BE    NOOPEN         YES, SKIP THE OPEN                        00056200
000766 D25F D0C4 CB98 000C4 00B98   746          MVC   SYSOUT(SYSOUTL),SYSOUTC  INITIALIZE THE DCB              00056300
00076C 9280 D074      00074         747          MVI   OPENLIST,X'80' TERMINATE THE LIST                        00056400
000770 4110 D6C4      006C4         748          LA    R1,JFCB       POINT TO THE JFCB                          00056500
000774 5010 D6C0      006C0         749          ST    R1,DCBEXIT    AND PUT THE ADDR IN THE DCB EXIT           00056600
000778 9287 D6C0      006C0         750          MVI   DCBEXIT,X'87' NOTE IT AS A JFCB EXIT                     00056700
00077C 4110 D6C0      006C0         751          LA    R1,DCBEXIT    POINT TO THE EXIT LIST                     00056800
000780 4120 D0C4      000C4         752          LA    R2,SYSOUT     AND TO THE DCB FOR ADDRESSABILITY          00056900
                            00000   753          USING IHADCB,R2     TELL THE ASSEMBLER ABOUT IT                00057000
000784 BE17 2025      00025         754          STCM  R1,B'0111',DCBEXLSA  STUFF IT INTO THE DCB               00057100
000788 9180 90AA      000AA         755          TM    CHARSPL+6,X'80'  CHARS PER LINE ENTERED?                 00057200
00078C 4780 C7B4      007B4         756          BZ    RDJFCB        NO, CONTINUE ALONG                         00057300
000790 4110 90A4      000A4         757          LA    R1,CHARSPL    YES, POINT TO THE PDL                      00057400
000794 4580 C59E      0059E         758          BAL   R8,PDLNUM     CONVERT TO A NUMBER                        00057500
000798 40F0 2052      00052         759          STH   R15,DCBLRECL  SAVE THE NEW LRECL                         00057600
00079C 40F0 B6DE      006DE         760          STH   R15,LINELEN   ALSO THE LINE LENGTH                       00057700
0007A0 9180 90B2      000B2         761          TM    BLKSZSET+6,X'80'  BLOCKSIZE ENTERED?                     00057800
0007A4 4780 C7B0      007B0         762          BZ    BLKEQREC      NO, BLOCKSIZE EQUALS LRECL                 00057900
0007A8 4110 90AC      000AC         763          LA    R1,BLKSZSET      POINT TO THE PDL                        00058000
0007AC 4580 C59E      0059E         764          BAL   R8,PDLNUM     GET THE NUMBER                             00058100
0007B0 40F0 205A      0005A         765 BLKEQREC STH   R15,DCBPRECL  STUFF IT AWAY                              00058200
                                    766          DROP  R2            FINISHED WITH THE DCB                      00058300
                                    767 RDJFCB   RDJFCB ((R2)),MF=(E,OPENLIST)  SEE IF IT'S THERE               00058400
0007B4 4110 D074      00074         768+RDJFCB   LA    1,OPENLIST                        LOAD PARAMETER REG 1  01900002
0007B8 43E1 0000      00000         769+         IC    14,0(1,0)                         SAVE OPTION BYTE      03440000
0007BC 5021 0000      00000         770+         ST    R2,0(1,0)                         STORE INTO LIST       03620000
0007C0 42E1 0000      00000         771+         STC   14,0(1,0)                         RESTORE OPTION BYTE   03520001
0007C4 0A40                         772+         SVC   64                                ISSUE RDJFCB SVC      00200000
0007C6 12FF                         773          LTR   R15,R15       WAS IT THERE?                              00058500
0007C8 4770 C7E6      007E6         774          BNZ   NOOPEN        NO, SKIP ALONG                             00058600
                                    775          OPEN  ((R2),OUTPUT),MF=(E,OPENLIST)  OPEN THE PRINT DCB        00058700
0007CC 4110 D074      00074         776+         LA    1,OPENLIST                        LOAD PARAMETER REG 1  01900002
0007D0 94F0 1000      00000         777+         NI    0(1),X'F0'                        CLEAR OPTION 1 BITS   03780001
0007D4 960F 1000      00000         778+         OI    0(1),15                           INSERT OPTION BITS    03720000
0007D8 43E1 0000      00000         779+         IC    14,0(1,0)                         SAVE OPTION BYTE      03440000
0007DC 5021 0000      00000         780+         ST    R2,0(1,0)                         STORE INTO LIST       03620000
0007E0 42E1 0000      00000         781+         STC   14,0(1,0)                         RESTORE OPTION BYTE   03520001
0007E4 0A13                         782+         SVC   19                                ISSUE OPEN SVC        04000000
                                    783 *                                                                        00058800
                                    784 *        INITIALIZE PRINT VARIABLES                                      00058900
                                    785 *                                                                        00059000
                                    786 *        SET LINES/PAGE AND LINESIZE                                     00059100
                                    787 *                                                                        00059200
0007E6 D201 B6DA CAE8 006DA 00AE8   788 NOOPEN   MVC   LINEMAX,DEFLMAX  SET THE DEFAULT NUMBER OF LINES/PAGE    00059300
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0007EC 9180 90BA      000BA         789          TM    LINESPP+6,X'80'     LINES PER PAGE ENTERED?                00059400
0007F0 4780 C800      00800         790          BZ    DEFLINPP     NO, SKIP ON                               00059500
0007F4 4110 90B4      000B4         791          LA    R1,LINESPP    YES, POINT TO THE PDL                    00059600
0007F8 4580 C59E      0059E         792          BAL   R8,PDLNUM     CONVERT TO A NUMBER                      00059700
0007FC 40F0 B6DA      006DA         793          STH   R15,LINEMAX   AND SAVE IT                              00059800
000800 D201 B6D8 B6DA 006D8 006DA   794 DEFLINPP MVC   LINECT,LINEMAX SET UP TO PAGE ON THE FIRST WRITE         00059900
000806 9180 90AA      000AA         795          TM    CHARSPL+6,X'80'     CHARS PER LINE ENTERED?                00060000
00080A 4710 C846      00846         796          BO    LENSET        YES, USE IT                              00060100
00080E D201 B6DE CAEA 006DE 00AEA   797          MVC   LINELEN,DEFLEN SET UP A DEFAULT LENGTH                  00060200
000814 9110 D0F4      000F4         798          TM    SYSOUT+48,X'10' DO WE USE SYSOUT?                        00060300
000818 4710 C846      00846         799          BO    LENSET         YES, USE WHAT WE'VE GOT                   00060400
                                    800 *        GET THE TERMINAL LINE SIZE TO SEE IF IT MAKES SENSE           00060500
                                    801          GTSIZE                                                        00060600
00081C 1B11                         802+         SR    1,1                      PREPARE PARM                   68000020
00081E 4100 000B      0000B         803+         LA    0,11                     LOAD ENTRY CODE                70000020
000822 8900 0018      00018         804+         SLL   0,24                     PUT ENTRY CODE IN LEFT MOST    72000020
000826 0A5E                         805+         SVC   94                       ISSUE SVC                      74000020
000828 1211                         806          LTR   R1,R1          SEE IF IT'S GOOD                         00060700
00082A 4780 C846      00846         807          BZ    LENSET         NO, JUST A ZERO, KEEP THE DEFAULTS       00060800
00082E 0610                         808          BCTR  R1,0           CUT IT DOWN ONE TO AVOID A MESS          00060900
000830 4010 B6DE      006DE         809          STH   R1,LINELEN     SAVE THIS LENGTH                         00061000
000834 1200                         810          LTR   R0,R0          FOR DISPLAYS, IT'S SCREEN SIZE           00061100
000836 4780 C846      00846         811          BZ    LENSET         KEEP WHAT WE'VE GOT                      00061200
00083A 9180 90BA      000BA         812          TM    LINESPP+6,X'80'  WAS LINES PER PAGE ENTERED?           00061300
00083E 4710 C846      00846         813          BO    LENSET           YES, DON'T OVERRIDE IT                 00061400
000842 4000 B6DA      006DA         814          STH   R0,LINEMAX     AND SAVE THE NEW PAGE LOCATION           00061500
000846                              815 LENSET   DS    0H                                                     00061600
                                    816 *                                                                     00061700
                                    817 *        SET UP THE PAGE COUNTER                                      00061800
                                    818 *                                                                     00061900
000846 4810 B6DE      006DE         819 PAGEAD   LH    R1,LINELEN     GET THE LENGTH OF THE LINE                00062000
00084A 4B10 CAF2      00AF2         820          SH    R1,H10         MINUS TEN CHARACTERS                      00062100
00084E 4111 D3A8      003A8         821          LA    R1,PRNTHEAD(R1) THEN RELOCATE IT                         00062200
                                    822          CLEAR PRNTHEAD       CLEAR THE LINE FIRST                      00062300
000852 9240 D3A8      003A8         823+         MVI   PRNTHEAD,X'40'    SET THE FIRST POSITION                 00000900
000856 D2FE D3A9 D3A8 003A9 003A8   824+         MVC   PRNTHEAD+1(L'PRNTHEAD-1),PRNTHEAD FILL THE ENTIRE FIELD  00001400
00085C D203 1000 CB18 00000 00B18   825          MVC   0(4,R1),CPAGE  MOVE IN THE CHARACTERS PAGE              00062400
000862 4111 0005      00005         826          LA    R1,5(R1)       MOVE OVER 5 MORE                          00062500
000866 5010 D070      00070         827          ST    R1,PAGEADDR    THIS IS THE PLACE                         00062600
                                    828 *                                                                     00062700
                                    829 *        BUILD THE PRINT HEADER LINE                                  00062800
                                    830 *                                                                     00062900
00086A 9180 90D6      000D6         831          TM    HEADING+6,X'80' IS A USER HEADING PRESENT               00063000
00086E 4710 C8A0      008A0         832          BO    USERHEAD       YES, USE IT                               00063100
000872 D213 D3A8 CCB8 003A8 00CB8   833          MVC   PRNTHEAD(L'DEFHEAD),DEFHEAD  NO, GET A DEFAULT          00063200
                                    834 *                                                                     00063300
                                    835 *        ADD THE COMMAND BUFFER TO THE HEADING                        00063400
                                    836 *                                                                     00063500
000878 4810 B6DE      006DE         837          LH    R1,LINELEN    GET THE LINE LENGTHE                      00063600
00087C 4B10 CAF8      00AF8         838          SH    R1,H32        MINUS SPACES FOR PAGE, START OF HDR       00063700
000880 47D0 C8AE      008AE         839          BNP   OUTOPEN       IF IT'S SHORT, SKIP ON                    00063800
000884 58E0 B044      00044         840          L     R14,ADDRCBUF  POINT TO THE COMMAND BUFFER               00063900
000888 491E 0000      00000         841          CH    R1,0(R14)     COMPARE LENGTHS                           00064000
00088C 4740 C894      00894         842          BL    CBUFBIG       THE COMMAND BUFFER TOO BIG                00064100
000890 481E 0000      00000         843          LH    R1,0(R14)     GET THE COMMAND BUFFER SIZE               00064200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000894 4B10 CAEE      00AEE         844 CBUFBIG  SH    R1,H5          MINUS 1 FOR EX, 4 FOR CBUF PREFIX          00064300
000898 4410 CB0C      00B0C         845          EX    R1,MOVEHED     MOVE THE CBUF TO THE DEFAULT HEADER        00064400
00089C 47F0 C8AE      008AE         846          B     OUTOPEN         GO SET UP THE PAGE COUNTER                00064500
0008A0 4810 90D4      000D4         847 USERHEAD LH    R1,HEADING+4    GET THE LENGTH                            00064600
0008A4 0610                         848          BCTR  R1,0            MINUS ONE FOR THE EX                      00064700
0008A6 5820 90D0      000D0         849          L     R2,HEADING      POINT TO THE USER HEAD                    00064800
0008AA 4410 CB06      00B06         850          EX    R1,MOVEHEAD     THEN MOVE IT IN                           00064900
0008AE                              851 OUTOPEN  DS    0H                                                        00065000
                                    852 *                                                                        00065100
                                    853 *        SET UP THE WORK LINE                                            00065200
                                    854 *                                                                        00065300
0008AE 4810 B6DE      006DE         855          LH    R1,LINELEN     GET THE LINE LENGTH                       00065400
0008B2 4111 0004      00004         856          LA    R1,4(R1)       ADD FOUR FOR THE PREFIX                   00065500
0008B6 4010 D2A2      002A2         857          STH   R1,WORKLINE    OUTPUT TEXT                               00065600
0008BA 4010 D4A8      004A8         858          STH   R1,PRNTTITH     ITEM TITLES                              00065700
                                    859 *        GET THE PRINT SPECIFICATION                                     00065800
                                    860 *                                                                        00065900
0008BE 4110 CCCC      00CCC         861          LA    R1,DEFPRNT                                                00066000
0008C2 5010 D774      00774         862          ST    R1,VTPRNTLS    SAVE THE PRINT ITEM LIST ADDRESS           00066100
0008C6 9180 90C2      000C2         863          TM    SUBPRTKY+6,X'80'  WERE ANY ITEMS SET UP                   00066200
0008CA 4780 C992      00992         864          BE    PRTITSET       NO, THE DEFAULT LIST IS OK                 00066300
                                    865 *                                                                        00066400
                                    866 *        GET THE ADD, REPLACE, DELETE, AND NEW ITEMS                     00066500
                                    867 *        AND BUILD THE NEW LIST                                          00066600
                                    868 *                                                                        00066700
                                    869 *        FIRST CONVERT THE ENTERED TEXT INTO NUMERIC KEYS                00066800
                                    870 *                                                                        00066900
0008CE 4140 90C4      000C4         871          LA    R4,SUBPRTIT    POINT TO THE ITEMS                        00067000
0008D2 4150 D7A0      007A0         872          LA    R5,VTPRNTEN    POINT TO THE OUTPUT KEYS                  00067100
0008D6 4100 D7C8      007C8         873          LA    R0,VTPRNTEX    POINT TO THE END OF THE LIST              00067200
0008DA 4580 CA6E      00A6E         874 ENTKEY   BAL   R8,GETKEY      GET A KEY                                 00067300
0008DE 42F5 0000      00000         875          STC   R15,0(R5)      SAVE IT                                   00067400
0008E2 4155 0001      00001         876          LA    R5,1(R5)       GET TO THE NEXT ONE                       00067500
0008E6 1905                         877          CR    R0,R5          CHECK FOR THE END                         00067600
0008E8 47D0 C8F4      008F4         878          BNH   ENTKEND        IF THAT'S ALL                             00067700
0008EC BF47 4009      00009         879          ICM   R4,7,9(R4)     GET THE CHAIN POINTER                     00067800
0008F0 4770 C8DA      008DA         880          BNZ   ENTKEY         AND KEEP GOING IF THERE'S MORE            00067900
0008F4                              881 ENTKEND  DS    0H             THE KEYS ARE ENTERED INTO THE LIST        00068000
                                    882 *                                                                        00068100
                                    883 *        MERGE THE ENTERED ITEMS AND THE DEFAULT LIST INTO A NEW LIST    00068200
                                    884 *                                                                        00068300
0008F4 4160 D778      00778         885          LA    R6,VTPRNTL     POINT TO THE NEW LIST                     00068400
0008F8 5060 D774      00774         886          ST    R6,VTPRNTLS    SAVE IT'S ADDRESS                         00068500
0008FC 4140 D7A0      007A0         887          LA    R4,VTPRNTEN    POINT TO THE ENTERED ITEMS                00068600
000900 4120 CCCC      00CCC         888          LA    R2,DEFPRNT     POINT TO THE DEFAULT LIST                 00068700
000904 1832                         889          LR    R3,R2          POINT TO THE BEGINNING - NO DEFAULT IF NEW 00068800
000906 5810 90BC      000BC         890          L     R1,SUBPRTKY    POINT TO THE KEYWORD                      00068900
00090A 95D5 1000      00000         891          CLI   0(R1),C'N'     IS THIS A NEW LIST?                       00069000
00090E 4780 C98A      0098A         892          BE    PRTINEW        YES, SKIP PAST DEFAULT COPY               00069100
000912 4130 CCE0      00CE0         893          LA    R3,DEFPRNTE    POINT TO THE END OF THE DEFAULT LIST      00069200
                                    894 *                                                                        00069300
                                    895 *        ADD, REPLACE, DELETE - COPY THE DEFAULT LIST                    00069400
                                    896 *                                                                        00069500
000916 1923                         897 PRTICOPY CR    R2,R3          IS THIS THE END OF THE DEFAULT LIST?      00069600
000918 47B0 C992      00992         898          BNL   PRTITSET       YES, END OF PROCESSING FOR PRINT ITEMS    00069700
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    899 *                                                                   00069800
                                    900 *        CHECK FOR ENTERED ITEMS THAT ARE ALSO                      00069900
                                    901 *              IN THE DEFAULT LIST.                                 00070000
                                    902 *                                                                   00070100
00091C D500 2000 4000 00000 00000   903 PRTICDLP CLC   0(1,R2),0(R4) IS THIS THE SAME ITEM                  00070200
000922 4780 C948      00948         904          BE    PRTIFND       YES, SEE WHAT TO DO                    00070300
000926 4144 0001      00001         905          LA    R4,1(R4)      NO, GET TO THE NEXT ITEM               00070400
00092A 9500 4000      00000         906          CLI   0(R4),0       WAS THIS THE LAST ENTERED ITEM?        00070500
00092E 4770 C91C      0091C         907          BNE   PRTICDLP      NO, KEEP LOOKING                       00070600
000932 4140 D7A0      007A0         908          LA    R4,VTPRNTEN   POINT BACK TO THE TOP OF THE LIST      00070700
                                    909 *                                                                   00070800
                                    910 *        ADD THIS ITEM TO THE NEW LIST                              00070900
                                    911 *                                                                   00071000
000936 D200 6000 2000 00000 00000   912 PRTICSKP MVC   0(1,R6),0(R2) MOVE IN THE NEW KEY                    00071100
00093C 4166 0001      00001         913          LA    R6,1(R6)      POINT PAST IT                          00071200
000940 4122 0001      00001         914 PRTICDEL LA    R2,1(R2)      GO DOWN THE DEFAULT LIST               00071300
000944 47F0 C916      00916         915          B     PRTICOPY      THEN KEEP ON CHECKING                  00071400
                                    916 *                                                                   00071500
                                    917 *        AN ITEM WAS ENTERED AND WAS IN THE DEFAULT LIST            00071600
                                    918 *        FOR DELETE, JUST DELETE ITEMS                              00071700
                                    919 *        FOR ADD AND REPLACE, DELETE ALL BUT THE FIRST ITEM         00071800
                                    920 *              TO AVOID DUPLICATES                                  00071900
                                    921 *              IF IT IS THE FIRST ITEM, INSERT THE ENTERED LIST     00072000
                                    922 *                                                                   00072100
000948 4100 D7A0      007A0         923 PRTIFND  LA    R0,VTPRNTEN   POINT TO THE FIRST ITEM                00072200
00094C 1904                         924          CR    R0,R4         COMPARE WITH THE ITEM FOUND            00072300
00094E 4720 C940      00940         925          BH    PRTICDEL      NOT THE FIRST ITEM, DELETE IT          00072400
000952 95C4 1000      00000         926          CLI   0(R1),C'D'    IS THIS DELETE TIME?                   00072500
000956 4780 C940      00940         927          BE    PRTICDEL      THEN JUST DELETE IT                    00072600
00095A 95D9 1000      00000         928          CLI   0(R1),C'R'    IS THIS A REPLACE?                     00072700
00095E 4780 C96C      0096C         929          BE    PRTIREPA      YES, IGNORE THIS DEFAULT ITEM          00072800
                                    930 *                                                                   00072900
                                    931 *        ADD THE DEFAULT ITEM FIRST                                 00073000
                                    932 *                                                                   00073100
000962 D200 6000 2000 00000 00000   933 PRTIASKP MVC   0(1,R6),0(R2) MOVE IN THE NEW KEY                    00073200
000968 4166 0001      00001         934          LA    R6,1(R6)      POINT PAST IT                          00073300
                                    935 *                                                                   00073400
                                    936 *        MOVE THE ITEMS IN FROM THE ADD OR REPLACE LIST             00073500
                                    937 *                                                                   00073600
00096C 4122 0001      00001         938 PRTIREPA LA    R2,1(R2)      GET PAST THE DEFAULT LIST ITEM         00073700
000970 4144 0001      00001         939 PRTIREP  LA    R4,1(R4)      GET PAST THE FIRST ENTRY               00073800
000974 9500 4000      00000         940 PRTINEXT CLI   0(R4),0       IS THIS THE LAST ITEM?                 00073900
000978 4780 C916      00916         941          BE    PRTICOPY      YES, SEE ABOUT MORE DEFAULTS           00074000
                                    942 *                                                                   00074100
                                    943 *        ADD AN ENTERED ITEM TO THE LIST                            00074200
                                    944 *                                                                   00074300
00097C D200 6000 4000 00000 00000   945 PRTINSKP MVC   0(1,R6),0(R4) MOVE IN THE NEW KEY                    00074400
000982 4166 0001      00001         946          LA    R6,1(R6)      POINT PAST IT                          00074500
000986 47F0 C970      00970         947          B     PRTIREP       GO GET MORE ENTERED ITEMS              00074600
                                    948 *                                                                   00074700
                                    949 *        NEW LIST, JUST USE IT AS ENTERED                           00074800
                                    950 *                                                                   00074900
00098A 4110 D7A0      007A0         951 PRTINEW  LA    R1,VTPRNTEN   POINT TO THE ENTERED LIST              00075000
00098E 5010 D774      00774         952          ST    R1,VTPRNTLS   THEN SAVE ITS ADDRESS FOR LATER        00075100
000992                              953 PRTITSET DS    0H                                                   00075200
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    954 *                                                                          00075300
                                    955 *        BUILD THE TITLE LINE FOR THE DSNAME FIELDS                        00075400
                                    956 *                                                                          00075500
                                    957          CLEAR PRNTTITL        BLANK OUT THE TITLE LINE                    00075600
000992 9240 D4AC      004AC         958+         MVI   PRNTTITL,X'40'    SET THE FIRST POSITION                    00000900
000996 D2FE D4AD D4AC 004AD 004AC   959+         MVC   PRNTTITL+1(L'PRNTTITL-1),PRNTTITL FILL THE ENTIRE FIELD     00001400
00099C D28A D4AD D4AC 004AD 004AC   960          MVC   PRNTTITL+1(139),PRNTTITL  SO THE WHOLE THING IS GOOD        00075700
0009A2 5820 D774      00774         961          L     R2,VTPRNTLS   GET THE PRINT ITEM LIST                       00075800
0009A6 4110 D4AC      004AC         962          LA    R1,PRNTTITL    POINT TO THE TITLE LINE                     00075900
0009AA 1B66                         963 TITLOOP  SR    R6,R6          GET THE RESERVED WORD NUMBER                00076000
0009AC 4362 0000      00000         964          IC    R6,0(R2)       FROM THE TOP BYTE                           00076100
0009B0 4C60 CAF4      00AF4         965          MH    R6,H12         MULTIPLY BY 12 FOR THE TABLE ENTRIES        00076200
0009B4 4166 CCE0      00CE0         966          LA    R6,TABTITL(R6) THEN RELOCATE THE MESS                      00076300
0009B8 1B77                         967          SR    R7,R7          CLEAR A REGISTER                            00076400
0009BA 4376 0000      00000         968          IC    R7,0(R6)       GET THE EXECUTE LENGTH                      00076500
0009BE 4470 CAFA      00AFA         969          EX    R7,MOVETIT     MOVE IN THE TITLE                           00076600
0009C2 4111 7001      00001         970          LA    R1,1(R1,R7)    MOVE THE POINTER OVER                       00076700
0009C6 951A 2000      00000         971          CLI   0(R2),DSNAME  IS THIS THE DSNAME KEY                        00076800
0009CA 4780 C9EE      009EE         972          BE    TITDSN        YES, SPECIAL PROCESSING                       00076900
0009CE 4100 D4AC      004AC         973          LA    R0,PRNTTITL    POINT TO THE BEGINNING AGAIN                00077000
0009D2 1B10                         974          SR    R1,R0          AND FIND THE CURRENT LENGTH                 00077100
0009D4 4910 B6DE      006DE         975          CH    R1,LINELEN     IS IT TOO LONG?                             00077200
0009D8 47B0 CA22      00A22         976          BNL   TITOVER        YES, PULL BACK                              00077300
0009DC 1A10                         977          AR    R1,R0          NO, KEEP GOING                              00077400
0009DE 4122 0001      00001         978 TITINC   LA    R2,1(R2)            GET THE NEXT CHAIN POINTER            00077500
0009E2 9500 2000      00000         979          CLI   0(R2),0       ARE WE DONE?                                00077600
0009E6 4770 C9AA      009AA         980          BNE   TITLOOP        GO GET MORE TITLES                          00077700
0009EA 47F0 CA2E      00A2E         981          B     TITEND         ALL DONE                                    00077800
0009EE 1861                         982 TITDSN   LR    R6,R1         SAVE THE ADDRESS POINTER                    00077900
0009F0 4110 914C      0014C         983          LA    R1,DSNPLN     POINT TO THE PDL FOR DSN LENGTH             00078000
0009F4 4580 C59E      0059E         984          BAL   R8,PDLNUM     GO TRANSLATE IT                             00078100
0009F8 12FF                         985          LTR   R15,R15       WAS IT THERE?                               00078200
0009FA 4720 CA02      00A02         986          BP    TITDSN2       YES, USE IT                                 00078300
0009FE 41F0 002C      0002C         987          LA    R15,44        NO, SET THE DEFAULT                         00078400
000A02 40F0 D18E      0018E         988 TITDSN2  STH   R15,DSNLENGT  SAVE THE LENGTH                             00078500
000A06 4BF0 CAF0      00AF0         989          SH    R15,H9        SUBTRACT THE 9 CHARS MOVED ALREADY          00078600
                                    990 *              MINUS ONE FOR EX, PLUS ONE FOR SPACE                      00078700
000A0A 9240 6000      00000         991          MVI   0(R6),C' '    GET AN INITIAL BLANK                        00078800
000A0E 44F0 CB12      00B12         992          EX    R15,DSNBLMOV  MOVE IN THE BLANKS                          00078900
000A12 411F 6001      00001         993          LA    R1,1(R15,R6)  RESET THE POINTER ( INCLUDE A SPACE )       00079000
000A16 41FF 0001      00001         994          LA    R15,1(R15)    ADD ON THE SPACE CHARACTER                  00079100
000A1A 40F0 D190      00190         995          STH   R15,DSNLENOF  SAVE THE OFFSET                             00079200
000A1E 47F0 C9DE      009DE         996          B     TITINC        ALLOW DSNAME TO OVERFLOW THE LINE           00079300
                                    997 *                                                                          00079400
                                    998 *        TITLE RAN OFF THE END, CUT IT OFF                                 00079500
                                    999 *                                                                          00079600
000A22 1B17                        1000 TITOVER  SR    R1,R7          SUBTRACT PAST THIS FIELD                    00079700
000A24 1A10                        1001          AR    R1,R0          RELOCATE IT                                 00079800
000A26 0610                        1002          BCTR  R1,0           THEN GET THE LAST CHARACTER                 00079900
000A28 D208 1000 CB4D 00000 00B4D  1003          MVC   0(9,R1),BLANKS THEN BLANK IT OUT                          00080000
000A2E 9110 D0F4      000F4        1004 TITEND   TM    SYSOUT+48,X'10' IS THE DCB OPEN                           00080100
000A32 47E0 CA3A      00A3A        1005          BNO   CKOUTPT       NO, TERMINAL OUTPUT, NO CC                  00080200
000A36 92F0 D4AC      004AC        1006          MVI   PRNTTITL,C'0'  ALWAYS SKIP A LINE FOR IT                  00080300
000A3A 9501 9045      00045        1007 CKOUTPT  CLI   OUTPUTK+1,1    OUTPUT THIS RUN?                            00080400
000A3E 4770 C076      00076        1008          BNE   VTRET          YES, SKIP THE OPEN, JUST RETURN             00080500
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000A42 D25F D124 CBF8 00124 00BF8  1009          MVC   OUTDCB(OUTDCBL),OUTDCBC  INITIALIZE THE DCB              00080600
000A48 9280 D074      00074        1010          MVI   OPENLIST,X'80' TERMINATE THE LIST                         00080700
                                   1011          OPEN  (OUTDCB,OUTPUT),MF=(E,OPENLIST)  OPEN THE DATA SET DCB   00080800
000A4C 4110 D074      00074        1012+         LA    1,OPENLIST                        LOAD PARAMETER REG 1   01900002
000A50 94F0 1000      00000        1013+         NI    0(1),X'F0'                        CLEAR OPTION 1 BITS    03780001
000A54 960F 1000      00000        1014+         OI    0(1),15                           INSERT OPTION BITS     03720000
000A58 43E1 0000      00000        1015+         IC    14,0(1,0)                         SAVE OPTION BYTE       03440000
000A5C 4100 D124      00124        1016+         LA    0,OUTDCB                          PICK UP DCB ADDRESS    03480000
000A60 5001 0000      00000        1017+         ST    0,0(1,0)                          STORE INTO LIST        03500000
000A64 42E1 0000      00000        1018+         STC   14,0(1,0)                         RESTORE OPTION BYTE    03520001
000A68 0A13                        1019+         SVC   19                                ISSUE OPEN SVC         04000000
000A6A 47F0 C076      00076        1020          B     VTRET          RETURN, INITIALIZATION IS DONE            00080900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                  1022 *                                                                    00081100
                                  1023 *        ROUTINE TO CONVERT A TEXT DSCB ITEM                         00081200
                                  1024 *        INTO ITS KEY NUMBER                                         00081300
                                  1025 *        INPUT IS REG 4 - IKJIDENT PTR                               00081400
                                  1026 *        OUTPUT IS REG 15 - KEY NUMBER                               00081500
                                  1027 *        ENTRY VIA BAL   R8,GETKEY                                   00081600
                                  1028 *                                                                    00081700
000A6E 5810 B1AC      001AC       1029 GETKEY   L     R1,ATABTITL     POINT TO THE TABLE                  00081800
000A72 4111 000C      0000C       1030          LA    R1,12(R1)     POINT TO THE FIRST ENTRY                00081900
000A76 41F0 0001      00001       1031          LA    R15,1           SET UP THE KEY NUMBER COUNTER         00082000
000A7A 5864 0000      00000       1032          L     R6,0(R4)      POINT TO THE ENTERED TEXT             00082100
                                  1033 ***      SR    R3,R3         CLEAR R6                         ABL-EX  00082110
000A7E BF33 4004      00004       1034          ICM   R3,3,4(R4)    GET THE LENGTH OF THE ENTERED TEXT    00082200
000A82 47D0 CAD0      00AD0       1035          BNP   GETKNOTF      NOT FOUND IF ZERO                     00082300
000A86 0630                       1036          BCTR  R3,0          MINUS ONE FOR THE EX                  00082400
000A88 4121 0004      00004       1037 GETKLOOP LA    R2,4(R1)      POINT TO THE COMPARISON TEXT          00082500
000A8C 9540 2000      00000       1038          CLI   0(R2),C' '    IS IT HERE?                           00082600
000A90 4770 CAA4      00AA4       1039          BNE   GETKSTD       YES, THIS IS IT                       00082700
000A94 4122 0001      00001       1040          LA    R2,1(R2)      NO, MOVE OVER ONE MORE                00082800
000A98 9540 2000      00000       1041          CLI   0(R2),C' '    IS IT HERE?                           00082900
000A9C 4770 CAA4      00AA4       1042          BNE   GETKSTD       YES, THIS IS IT                       00083000
000AA0 4122 0001      00001       1043          LA    R2,1(R2)      NO, MOVE OVER ONE MORE                00083100
000AA4 4430 CAD4      00AD4       1044 GETKSTD  EX    R3,GETKCOMP   COMPARE THE KEY TEXT                  00083200
000AA8 4770 CAC0      00AC0       1045          BNE   GETNFND       NOT HERE, BRANCH                 ABL-EXT 00083210
000AAC D502 CE2B 6000 00E2B 00000 1046          CLC   =C'EX ',0(R6) EX (FOR EXTENTS)?                ABL-EXT 00083215
                                  1047 *        CH    R3,=H'1'      EX (FOR EXTENTS)?                ABL-EX  00083317
000AB2 4770 CAD2      00AD2       1048          BNE   GETKFND       I FOUND IT                       ABL-EXT 00083220
000AB6 D502 CE2E 2000 00E2E 00000 1049          CLC   =C'EXP',0(R2) EXP (FOR EXPDT)?                 ABL-EXT 00083225
000ABC 4770 CAD2      00AD2       1050          BNE   GETKFND       I FOUND IT                       ABL-EXT 00083230

000AC0                            1052 GETNFND  DS    0H                                               ABL-EXT 00083240
                                  1053 *        BE    GETKFND       I FOUND IT                      ?ABL-EXT 00083300
000AC0 4111 000C      0000C       1054          LA    R1,12(R1)     GET TO THE NEXT KEY                   00083400
000AC4 41FF 0001      00001       1055          LA    R15,1(R15)    INCREMENT THE KEY COUNTER             00083500
000AC8 49F0 CADA      00ADA       1056          CH    R15,H26       CHECK FOR THE END OF THE TABLE        00083600
000ACC 47D0 CA88      00A88       1057          BNH   GETKLOOP      NOT YET, KEEP LOOKING                 00083700
                                  1058 *                                                                    00083800
                                  1059 *        KEY WAS NOT FOUND, SEND BACK A ZERO                         00083900
                                  1060 *                                                                    00084000
000AD0 1BFF                       1061 GETKNOTF SR    R15,R15       SET UP THE ZERO AND RETURN            00084100
000AD2 07F8                       1062 GETKFND  BR    R8            JUST RETURN                           00084200
000AD4 D500 6000 2000 00000 00000 1063 GETKCOMP CLC   0(0,R6),0(R2) EXECUTED TEXT COMPARE                 00084300
000ADA 001A                       1064 H26      DC    H'26'                                               00084400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   1066 *                                                                          00084600
                                   1067 *        PROGRAM CONSTANTS                                                 00084700
                                   1068 *                                                                          00084800
000ADC 00000000                    1069 ZERO     DC    F'0'                                                      00084900
000AE0 00000064                    1070 F100     DC    F'100'                                                    00085000
000AE4 0000007F                    1071 F127     DC    F'127'                                                    00085100
000AE8 003C                        1072 DEFLMAX  DC    H'60'          DEFAULT LINES PER PAGE                     00085200
000AEA 0084                        1073 DEFLEN   DC    H'132'         DEFAULT CHARS PER LINE                     00085300
000AEC 0002                        1074 H2       DC    H'2'                                                      00085400
000AEE 0005                        1075 H5       DC    H'5'                                                      00085500
000AF0 0009                        1076 H9       DC    H'9'                                                      00085600
000AF2 000A                        1077 H10      DC    H'10'                                                     00085700
000AF4 000C                        1078 H12      DC    H'12'                                                     00085800
000AF6 0012                        1079 H18      DC    H'18'                                                     00085900
000AF8 0020                        1080 H32      DC    H'32'                                                     00086000
000AFA D200 1000 6003 00000 00003  1081 MOVETIT  MVC   0(0,R1),3(R6)  MOVE IN THE TITLE                          00086100
000B00 D500 1000 3046 00000 00046  1082 COMPKEY  CLC   0(0,R1),VTFDSN  EXECUTED COMPARE                          00086200
000B06 D200 D3A8 2000 003A8 00000  1083 MOVEHEAD MVC   PRNTHEAD(0),0(R2)                                         00086300
000B0C D200 D3BD E004 003BD 00004  1084 MOVEHED  MVC   PRNTHEAD+21(0),4(R14)  MOVE CMD BUF TO DEFAULT HEADER     00086400
000B12 D200 6001 6000 00001 00000  1085 DSNBLMOV MVC   1(0,R6),0(R6)  BLANK OUT THE DSN SPACE IN THE TITLE       00086500
000B18 D7C1C7C5                    1086 CPAGE    DC    C'PAGE'                                                   00086600
000B1C 4020202020202020            1087 EDMASK   DC    XL16'40202020202020202020202020202120'                    00086700
000B2C F020202020202020            1088 EDMASK0  DC    XL16'F0202020202020202020202020202120'                    00086800
000B3C F0                          1089 SKIP     DC    C'0'                                                      00086900
000B3D F0F0F0F0F0F0F0F0             1090 COMP0    DC    CL16'0000000000000000'                                    00087000
000B4D 4040404040404040            1091 BLANKS   DC    CL16'                '                                    00087100
000B5D 5C5C5C5C5C5C5C5C            1092 STARS    DC    CL16'****************'                                  00087200
000B6D E3D9D2E240404040            1093 TABSPACE DC    CL8'TRKS'                                                 00087300
000B75 E3D9D2E240404040            1094          DC    CL8'TRKS'                                                 00087400
000B7D E3D9D2E240404040            1095          DC    CL8'TRKS'                                                 00087500
000B85 E3D9D2E240404040            1096          DC    CL8'TRKS'                                                 00087600
000B8D E3D9D2E240404040            1097          DC    CL8'TRKS'                                                 00087700
                                   1098 *                                                                          00087800
                                   1099          PRINT NOGEN                                                     00087900
                                   1100 SYSOUTC  DCB   DSORG=PS,DDNAME=VTOCOUT,MACRF=PM,                        X00088000
                                                       RECFM=FBA,LRECL=150,BLKSIZE=1500                             00088100
                                   1154 OUTDCBC  DCB   DSORG=PS,DDNAME=OUTPUT,MACRF=PM,                         X00088200
                                                       RECFM=FB,LRECL=100,BLKSIZE=6000                              00088300
                                   1208 *                                                                          00088400
                                   1209 *        PROGRAM MESSAGES                                                  00088500
                                   1210 *                                                                          00088600


                                   1213 MSGTOTC  MSG   '  TOTALS -  NNNN DATA SETS, MMMMMMMM UUUUUU ALLOC, LLLLX00088900
                                                       LLLL UUUUUU USED '                                           00089000
                            0004C  1215 MSGTLEN  EQU   *-MSGTOTC                                                   00089100
                                   1216 MSGBLC   MSG   '                '                                           00089200
                                   1218 *                                                                          00089300
000CB8 F140E5E3D6C340C3            1219 DEFHEAD  DC    CL20'1 VTOC COMMAND  V-77'                                00089400
                                   1220 *                                                                          00089500
                                   1221 *        DEFAULT PRINT LIST                                                00089600
                                   1222 *                                                                          00089700
000CCC 06                          1223 DEFPRNT  DC    AL1(ALLOC)                                                00089800
000CCD 07                          1224          DC    AL1(UNUSED)                                               00089900
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

000CCE 08                          1225          DC    AL1(PCT)                                                  00090000
000CCF 09                          1226          DC    AL1(EXT)                                                  00090100
000CD0 0A                          1227          DC    AL1(DSORG)                                                00090200
000CD1 0B                          1228          DC    AL1(RECFM)                                                00090300
000CD2 0D                          1229          DC    AL1(LRECL)                                                00090400
000CD3 0C                          1230          DC    AL1(BLKSZ)                                                00090500
000CD4 03                          1231          DC    AL1(CDATE)                                                00090600
000CD5 04                          1232          DC    AL1(LSTUS)                                                00090700
000CD6 02                          1233          DC    AL1(VOLUME)                                               00090800
000CD7 1A                          1234          DC    AL1(DSNAME)                                               00090900
000CD8 05                          1235          DC    AL1(EXPDT)                                                00091000
000CD9 11                          1236          DC    AL1(SECQ)                                                 00091100
000CDA 10                          1237          DC    AL1(SECT)                                                 00091200
000CDB 13                          1238          DC    AL1(ROUND)                                                00091300
000CDC 0E                          1239          DC    AL1(PASS)                                                 00091400
000CDD 01                          1240          DC    AL1(ACTION)                                               00091500
000CDE 14                          1241          DC    AL1(TYPE)                                                 00091600
000CDF 00                          1242          DC    AL1(0)        END OF THE LIST                             00091700
                           00CE0   1243 DEFPRNTE EQU   *                                                         00091800
                           00014   1244 DEFPRNTL EQU   *-DEFPRNT                                                 00091900
                                   1245 *                                                                        00092000
                                   1246 *        TABLE OF PRINT ITEM LENGTHS AND TITLES                          00092100
                                   1247 *                                                                        00092200
                                   1248 *        ENTRIES IN THE TABLE FOR EACH FORMATTED ITEM -                  00092300
                                   1249 *        FIRST BYTE IS FIELD LENGTH FOR OUTPUT ( MINUS ONE FOR EX )      00092400
                                   1250 *        SECOND BYTE - X'80' BIT INDICATES A CHARACTER FIELD             00092500
                                   1251 *                            THEN BITS 0-7 GIVE VTFMT LENGTH             00092600
                                   1252 *                        OTHERWISE IT'S A KEY TO WHICH ROUTINE TO USE    00092700
                                   1253 *        THIRD BYTE - OFFSET IN FORMATTED DSCB, VTFMT                    00092800
                                   1254 *        4-12 TH BYTES, THE TITLE FOR THE FIELD                          00092900
                                   1255 *                                                                        00093000
                                   1256 *                                                                        00093100
000CE0 0000000000000000            1257 TABTITL  DC    XL12'00'  DUMMY ENTRY FOR 0 ADDRESSING                  00093200
000CEC 08873B40C1C3E3C9            1258          DC    AL1(8),AL1(128+7),AL1(VTFACTON-VTFMT),CL9' ACTION  '  1  00093300
000CF8 06851240E5D6D3E4            1259          DC    AL1(6),AL1(128+5),AL1(VTFVOLUM-VTFMT),CL9' VOLUME  '  2  00093400
000D04 05041C40C3C4C1E3            1260          DC    AL1(5),AL1(000+4),AL1(VTFCREDT-VTFMT),CL9' CDATE   '  3  00093500
000D10 05042240D9C5C6C4            1261          DC    AL1(5),AL1(000+4),AL1(VTFLSTAC-VTFMT),CL9' REFDT   '  4  00093600
000D1C 05041F40C5E7D7C4            1262          DC    AL1(5),AL1(000+4),AL1(VTFEXPDT-VTFMT),CL9' EXPDT   '  5  00093700
000D28 060C044040C1D3D3            1263          DC    AL1(6),AL1(00+12),AL1(VTFALLOC-VTFMT),CL9'  ALLOC  '  6  00093800
000D34 06100440E4D5E4E2            1264          DC    AL1(6),AL1(00+16),AL1(VTFALLOC-VTFMT),CL9' UNUSED  '  7  00093900
000D40 03140440D7C3E340            1265          DC    AL1(3),AL1(00+20),AL1(VTFALLOC-VTFMT),CL9' PCT     '  8  00094000
000D4C 02182540C5E74040            1266          DC    AL1(2),AL1(00+24),AL1(VTFNOEPV-VTFMT),CL9' EX      '  9  00094100
000D58 03822640C4E2D640            1267          DC    AL1(3),AL1(128+2),AL1(VTFDSORG-VTFMT),CL9' DSO     ' 10  00094200
000D64 03832940D9C6D440            1268          DC    AL1(3),AL1(128+3),AL1(VTFRECFM-VTFMT),CL9' RFM     ' 11  00094300
000D70 051C3040C2D3D2E2            1269          DC    AL1(5),AL1(00+28),AL1(VTFBLKSZ-VTFMT),CL9' BLKSZ   ' 12  00094400
000D7C 051C2E40D3D9C5C3            1270          DC    AL1(5),AL1(00+28),AL1(VTFLRECL-VTFMT),CL9' LRECL   ' 13  00094500
000D88 04803340D7C1E2E2            1271          DC    AL1(4),AL1(128+0),AL01(VTFPROT-VTFMT),CL9' PASS    ' 14  00094600
000D94 03803640C3C1E340            1272          DC    AL1(3),AL1(128+0),AL1(VTFCATLG-VTFMT),CL9' CAT     ' 15  00094700
000DA0 04803940E2C5C3E3            1273          DC    AL1(4),AL1(128+0),AL1(VTFSECAL-VTFMT),CL9' SECT    ' 16  00094800
000DAC 051C374040E2C5C3            1274          DC    AL1(5),AL1(00+28),AL1(VTFSECAM-VTFMT),CL9'  SECQ   ' 17  00094900
000DB8 04831840E4D5C9E3            1275          DC    AL1(4),AL1(128+3),AL1(VTFUNIT-VTFMT),CL9' UNIT    '  18  00095000
000DC4 05803240D9D6E4D5            1276          DC    AL1(5),AL1(128+0),AL1(VTFROUND-VTFMT),CL9' ROUND   ' 19  00095100
000DD0 04803A40E3E8D7C5            1277          DC    AL1(4),AL1(128+0),AL1(VTFDSTYP-VTFMT),CL9' TYPE    ' 20  00095200
000DDC 060C08404040E4E2            1278          DC    AL1(6),AL1(00+12),AL01(VTFUSED-VTFMT),CL9'   USED  ' 21  00095300
000DE8 082012404040C3C3            1279          DC    AL1(8),AL1(00+32),AL1(VTFVOLUM-VTFMT),CL9'   CCHH  ' 22  00095400
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                   1280 * 2 LINES BELOW                                                  TANSKY  00095500
000DF4 03803540E4D7C440            1281          DC    AL1(3),AL1(128+0),AL1(VTFUPD-VTFMT),CL9' UPD     '   23  00095610
000E00 04803440D9C1C3C6            1282          DC    AL1(4),AL1(128+0),AL1(VTFRACF-VTFMT),CL9' RACF    '  24  00095750
000E0C 06801240C4E4D4D4            1283          DC    AL1(6),AL1(128+0),AL1(VTFVOLUM-VTFMT),CL9' DUMMY5  ' 25  00095800
000E18 08204640C4E2D5C1            1284          DC    AL1(8),AL1(00+32),AL001(VTFDSN-VTFMT),CL9' DSNAME  ' 26  00095900
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                  1286 *                                                                    00096100
                                  1287 *                                                                    00096200
                                  1288 *        P A R S E   C O N T R O L   L I S T                         00096300
                                  1289 *                                                                    00096400
                                  1290 *                                                                    00096500
                                  1291          PRINT OFF                                                   00096600
                                  1293          PUSH  PRINT                                                 00000100
                                  1294          PRINT NOGEN                                                 00000200
                                  2480          POP   PRINT                                                 00017600
                                  2507          PRINT ON                                                    00096800
                                  2508 *                                                                    00096900
                                  2509 *        DYNAMIC WORK AREA                                           00097000
                                  2510 *                                                                    00097100


000000                            2512 PRNTWORK DSECT                                                       00097300
000000                            2513          DS    18A            PRINT ROUTINE SAVE AREA                00097400
000048                            2514 TOTDS    DS    F              TOTAL COUNTER                          00097500
00004C                            2515 TOTALLOC DS    F              TOTAL ALLOCATION                       00097600
000050                            2516 TOTUSED  DS    F              TOTAL USED                             00097700
000054                            2517 FTOTDS   DS    F              FINAL TOTAL DATA SETS                  00097800
000058                            2518 FTOTALLC DS    F              FINAL TOTAL ALLOC                      00097900
00005C                            2519 FTOTUSED DS    F              FINAL TOTAL USED                       00098000
000060                            2520 PRNTLSAV DS    A                                                     00098100
000064                            2521 PRINTR8  DS    A                                                     00098200
000068                            2522 PRNTTOT8 DS    A                                                     00098300
00006C                            2523 ADDREND  DS    A                                                     00098400
000070                            2524 PAGEADDR DS    A                                                     00098500
000074                            2525 OPENLIST DS    2A             PARM LIST FOR OPEN                     00098600
00007C                            2526 PDLNSAVE DS    8A             REGISTER SAVE AREA FOR PDLNUM RTN      00098700
00009C                            2527 PRTLSAVE DS    8A             REGISTER SAVE AREA FOR PRNTLINE RTN    00098800
0000BC                            2528 LASTKEY  DS    A              ADDRESS OF LAST KEY FOR SUBTOTALS, BREAKS 00098900
0000C0                            2529 NUMBREAK DS    H              CHARACTERS TO COMPARE FOR BREAK        00099000
0000C2                            2530 NUMTOTAL DS    H              CHARACTERS TO COMPARE FOR SUBTOTALS    00099100
                                  2531          PRINT NOGEN                                                 00099200
                                  2532 SYSOUT   DCB   DSORG=PS,DDNAME=VTOCOUT,MACRF=PM,                    X00099300
                                                      RECFM=FBA,LRECL=150,BLKSIZE=1500                      00099400
                            00060 2586 SYSOUTL  EQU   *-SYSOUT                                              00099500
                                  2587 OUTDCB   DCB   DSORG=PS,DDNAME=OUTPUT,MACRF=PM,                     X00099600
                                                      RECFM=FB,LRECL=100,BLKSIZE=6000                       00099700
                            00060 2641 OUTDCBL  EQU   *-OUTDCB                                              00099800
000184                            2642 ENDTOTAL DS    X              PROGRAM SWITCHES                       00099900
                            00080 2643 ENTOTOUT EQU   X'80'          THE FINAL TOTALS HAVE BEEN OUTPUT      00100000
                            00010 2644 ENDTONLY EQU   X'10'          NO SUBTOTALS, END TOTALS ONLY          00100100
                            00008 2645 NOBREAK  EQU   X'08'          NO BREAKS                              00100200
000185                            2646 FIRSTIM  DS    X              INITIALIZATION FOR THIS ROUTINE        00100300
000186 00                         2647 PDLMINUS DC    X'00'                                                 00100400
000187                            2648 TOTLAST  DS    X                                                     00100500
000188                            2649 SPACTYPE DS    CL6          CHARACTERS FOR SPACE UNITS               00100600
00018E                            2650 DSNLENGT DS    H                                                     00100700
000190                            2651 DSNLENOF DS    H                                                     00100800
000192                            2652 CHARS    DS    CL16           CONVERSION TO CHARACTERS               00100900
0001A2                            2653 MSGWORK  DS    CL256          AREA FOR BUILDING MESSAGES             00101000
0002A2                            2654 WORKLINE DS    CL256          AREA FOR DATA SET                      00101100
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

0003A4                             2655 PRNTHDRH DS    F                                                        00101200
0003A8                             2656 PRNTHEAD DS    CL256          AREA FOR HEADER                           00101300
0004A8                             2657 PRNTTITH DS    F                                                        00101400
0004AC                             2658 PRNTTITL DS    CL256          AREA FOR ITEM TITLES                      00101500
0005AC                             2659 MSGBL    DS    CL20           AREA FOR BLANK LINE                       00101600
0005C0                             2660 OUTWORK  DS    CL256          WORKING AREA FOR OUTPUT                   00101700
0006C0                             2661 DCBEXIT  DS    F                                                        00101800
0006C4                             2662 JFCB     DS    XL176                                                    00101900

000774                             2664 VTPRNTLS DS    A             PRINT ITEM LIST ADDRESS                    00102100
000778                             2665 VTPRNTL  DS    40C           PRINT ITEM LIST ( IF MODIFIED )            00102200
0007A0                             2666 VTPRNTEN DS    40C                                                      00102300
0007C8                             2667 VTPRNTEX DS    C                                                        00102400

0007D0                             2669          DS    0D                                                       00102600
                            007D0  2670 LENWORK  EQU   *-PRNTWORK                                               00102700
                                   2671 *                                                                       00102800
                                   2672 *        VTOC COMMAND COMMON AREA                                       00102900
                                   2673 *                                                                       00103000
                                   2674          PRINT NOGEN                                                    00103100
                                   2675          VTOCOM                                                         00103200



                                   2843 *                                                                       00103400
                                   2844 *        FORMATTED DSCB                                                 00103500
                                   2845 *                                                                       00103600
                                   2846          VTFMT                                                          00103700



                                   2888          PDEDSNAM                                                       00103900



000000                             2910 DUMMD    DSECT                                                          00104100
000000                             2911 DUMMA    DS    C              DUMMY ENTRY TO USE FOR CONV               00104200
                                   2912          PRINT NOGEN                                                    00104300
                                   2913          DCBD  DSORG=PS,DEVD=DA                                         00104400
                                   3471          END                                                            00104500
000E28 C5D9D9                      3472                =C'ERR'
000E2B C5E740                      3473                =C'EX '
000E2E C5E7D7                      3474                =C'EXP'
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

ACTION   00001 00000001 02481  01240
ADDRANSR 00004 00000048 02708  00064
ADDRCBUF 00004 00000044 02706  00840
ADDREND  00004 0000006C 02523  00172 00238
ADDTOT   00004 00000208 00304  00096 00228
ALLOC    00001 00000006 02486  01223
AL00741  00001 00000F69 01524  01523
AL00751  00001 00000F77 01538  01537
ANDOR1K  00002 00000034 01512  01509
ANDOR2K  00002 00000036 01551  01548
ANDOR3K  00002 00000038 01582  01579
ATABTITL 00004 000001AC 02741  00736 01029
BLANKS   00016 00000B4D 01091  00329 00338 00347 00443 00474 00478 00493 00520 00524 00536 00549 00670 01003
BLKEQREC 00004 000007B0 00765  00762
BLKSZ    00001 0000000C 02492  01230
BLKSZSET 00004 000000AC 01970  00761 00763 01959
BREAK    00004 0000009C 01923  00160 01910
BREAKK   00002 00000030 01470  01467
CATK     00002 0000002C 01420  01417
CBUFBIG  00004 00000894 00844  00842
CDATE    00001 00000003 02483  01231
CHARS    00016 00000192 02652  00326 00327 00328 00329 00335 00336 00337 00338 00344 00345 00346 00347 00440 00441 00442
                               00443 00450 00451 00452 00453 00460 00461 00462 00471 00472 00473 00474 00490 00491 00492
                               00493 00517 00518 00519 00520 00533 00534 00535 00536 00546 00547 00548 00549 00667 00668
                               00669 00670
CHARSK   00002 0000003C 01643  01640
CHARSPL  00004 000000A4 01950  00755 00757 00795 01939
CHEKTOT  00004 0000008E 00139  00091
CHKBREAK 00004 00000110 00197  00185 00189
CHKOUTPT 00004 00000154 00222  00181
CHKSORT  00004 00000042 00083  00078
CKOUTPT  00004 00000A3A 01007  01005
COMPKEY  00006 00000B00 01082  00188 00201
COMP0    00016 00000B3D 01090  00453
CONTAIN  00004 00000084 01867  01849
CONTAINK 00002 00000028 01376  01373
CPAGE    00004 00000B18 01086  00825
DCBBIT0  00001 00000080 02935  03021 03029 03041 03064 03091 03093 03094 03096 03119 03122 03142 03146 03161 03198 03253
                               03284 03323 03327 03340 03440 03442 03452
DCBBIT1  00001 00000040 02936  03022 03030 03043 03065 03066 03075 03091 03093 03095 03096 03124 03142 03144 03146 03164
                               03165 03166 03201 03202 03253 03286 03329 03331 03343 03387 03440 03444 03453
DCBBIT2  00001 00000020 02937  03023 03031 03044 03045 03046 03065 03066 03070 03076 03091 03092 03097 03126 03147 03148
                               03169 03170 03171 03205 03206 03254 03291 03332 03348 03390 03393 03440 03454
DCBBIT3  00001 00000010 02938  03024 03044 03046 03047 03065 03078 03098 03129 03147 03150 03173 03174 03175 03209 03210
                               03254 03293 03296 03298 03334 03349 03390 03394 03440
DCBBIT4  00001 00000008 02939  03032 03079 03099 03130 03152 03157 03158 03178 03179 03213 03214 03216 03217 03255 03301
                               03350 03390 03395
DCBBIT5  00001 00000004 02940  03033 03080 03102 03103 03132 03152 03154 03155 03158 03182 03184 03185 03186 03220 03221
                               03222 03223 03255 03303 03306 03336 03352 03385
DCBBIT6  00001 00000002 02941  03025 03081 03082 03085 03102 03104 03133 03189 03190 03191 03192 03226 03227 03228 03229
                               03256 03309 03354 03396
DCBBIT7  00001 00000001 02942  03026 03081 03083 03085 03106 03137 03194 03195 03232 03233 03235 03236 03312 03338 03355
                               03398
DCBEXIT  00004 000006C0 02661  00749 00750 00751
DCBEXLSA 00003 00000025 03108  00754
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

DCBFDAD  00008 00000005 02962  02965
DCBLRECL 00002 00000052 03422  00759
DCBPRECL 00002 0000005A 03457  00765
DEFHEAD  00020 00000CB8 01219  00833 00833
DEFLEN   00002 00000AEA 01073  00797
DEFLINPP 00006 00000800 00794  00790
DEFLMAX  00002 00000AE8 01072  00788
DEFPRNT  00001 00000CCC 01223  00861 00888 01244
DEFPRNTE 00001 00000CE0 01243  00893
DEND0105 00001 00001125 01865  01848
DEND0107 00001 00001141 01892  01882
DEND0109 00001 00001174 01921  01909
DEND0111 00001 000011A5 01948  01938
DEND0112 00001 000011C6 01968  01958
DEND0114 00001 000011F7 01995  01985
DEND0116 00001 0000121D 02022  02012
DEND0117 00001 00001239 02042  02032
DEND0121 00001 00001275 02089  02077
DEND0123 00001 000012B0 02116  02106
DEND0124 00001 000012FF 02139  02127
DEND0125 00001 00001343 02161  02150
DEND0127 00001 0000137E 02188  02178
DEND0128 00001 000013CD 02211  02199
DEND0129 00001 00001411 02233  02222
DEND0131 00001 0000144C 02260  02250
DEND0132 00001 0000149B 02283  02271
DEND0133 00001 000014DF 02305  02294
DEND0135 00001 0000151A 02332  02322
DEND0136 00001 00001569 02355  02343
DEND0137 00001 000015AD 02377  02366
DEND0139 00001 000015D6 02406  02394
DEND0141 00001 00001603 02435  02423
DENT0105 00001 000010C5 01846  01848
DENT0107 00001 00001128 01880  01882
DENT0109 00001 00001144 01907  01909
DENT0111 00001 00001177 01936  01938
DENT0112 00001 000011A5 01956  01958
DENT0114 00001 000011C9 01983  01985
DENT0116 00001 000011FA 02010  02012
DENT0117 00001 0000121D 02030  02032
DENT0121 00001 00001246 02075  02077
DENT0123 00001 00001278 02104  02106
DENT0124 00001 000012B0 02125  02127
DENT0125 00001 000012FF 02148  02150
DENT0127 00001 00001346 02176  02178
DENT0128 00001 0000137E 02197  02199
DENT0129 00001 000013CD 02220  02222
DENT0131 00001 00001414 02248  02250
DENT0132 00001 0000144C 02269  02271
DENT0133 00001 0000149B 02292  02294
DENT0135 00001 000014E2 02320  02322
DENT0136 00001 0000151A 02341  02343
DENT0137 00001 00001569 02364  02366
DENT0139 00001 000015B0 02392  02394
DENT0141 00001 000015D9 02421  02423
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                          ASM 0201 14.37 04/05/25

DOUBLE   00008 00000070 02712  00325 00327 00334 00336 00343 00345 00439 00441 00449 00451 00470 00472 00489 00491 00516
                               00518 00532 00534 00545 00547 00666 00668
DSNAME   00001 0000001A 02506  00971 01234
DSNBLMOV 00006 00000B12 01085  00992
DSNLENGT 00002 0000018E 02650  00557 00559 00988
DSNLENOF 00002 00000190 02651  00562 00995
DSNLNTYP 00002 00000154 02450  02445
DSNPLN   00004 0000014C 02437  00983 02424
DSNPLNK  00002 00000048 01777  01774
DSORG    00001 0000000A 02490  01227
DUMMA    00001 00000000 02911  00442 00446 00452 00455 00473 00476 00492 00495 00519 00522 00535 00538 00548 00551 00669
                               00672
DUMMD    00001 00000000 02910  00437 00664
EDMASK   00016 00000B1C 01087  00326 00335 00344 00440 00460 00471 00490 00517 00533 00546 00667
EDMASK0  00016 00000B2C 01088  00450
ENDING   00004 00000068 01827  01821
ENDKEY   00002 00000026 01355  01352
ENDTONLY 00001 00000010 02644  00157 00184
ENDTOTAL 00001 00000184 02642  00139 00142 00157 00164 00184 00197
ENTKEND  00002 000008F4 00881  00878
ENTKEY   00004 000008DA 00874  00880
ENTOTOUT 00001 00000080 02643  00139 00142
EXPDT    00001 00000005 02485  01235
EXT      00001 00000009 02489  01226
FIRSTIM  00001 00000185 02646  00077 00734
FORMATAD 00004 00000198 02726  00088 00092 00092
FORMATK  00002 00000046 01756  01753
FORMATSP 00004 00000140 02408  02395
F100     00004 00000AE0 01070  00509 00513
F127     00004 00000AE4 01071  00389
GETKCOMP 00006 00000AD4 01063  01044
GETKEY   00004 00000A6E 01029  00874
GETKFND  00002 00000AD2 01062  01048 01050
GETKLOOP 00004 00000A88 01037  01057
GETKNOTF 00002 00000AD0 01061  01035
GETKSTD  00004 00000AA4 01044  01039 01042
GETNFND  00002 00000AC0 01052  01045
GOTENTRY 00004 000000E8 00180  00233
GOTOT    00004 00000160 00228  00223
HEADING  00004 000000D0 02062  00831 00847 00849 02058
HEADK    00002 00000040 01685  00638 00710 01682
H10      00002 00000AF2 01077  00820
H12      00002 00000AF4 01078  00373 00965
H2       00002 00000AEC 01074  00722
H26      00002 00000ADA 01064  01056
H32      00002 00000AF8 01080  00838
H5       00002 00000AEE 01075  00693 00844
H9       00002 00000AF0 01076  00989
IECSDSL3 00001 00000770 02829  02830
IECSDSL4 00001 0000070C 02788  02789
IHADCB   00001 00000000 02918  00753 03003 03050 03115 03244 03259 03266 03279 03375 03381 03408 03431
IKJ$0053 00001 0000162E 02477  01297
IKJ$0055 00001 00000EB5 01318  01314
IKJ$0105 00001 000010F0 01859  01858
IKJ$0109 00001 00001174 01920  01919
```

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ$0121	00001	00001275	02088	02087
IKJ$0124	00001	000012FF	02138	02137
IKJ$0125	00001	00001343	02160	02159
IKJ$0128	00001	000013CD	02210	02209
IKJ$0129	00001	00001411	02232	02231
IKJ$0132	00001	0000149B	02282	02281
IKJ$0133	00001	000014DF	02304	02303
IKJ$0136	00001	00001569	02354	02353
IKJ$0137	00001	000015AD	02376	02375
IKJ$0139	00001	000015D6	02405	02404
IKJ$0141	00001	00001603	02434	02433
IKJ@0053	00001	00000158	02475	01298
IKJ@0054	00001	0000007D	01327	01299
IKJ@0055	00001	00000E6C	01313	01312
IKJ@0057	00001	00000EC5	01342	01341
IKJ@0059	00001	00000ED8	01363	01362
IKJ@0061	00001	00000EEF	01384	01383
IKJ@0062	00001	00000EFC	01397	01396
IKJ@0063	00001	00000F05	01408	01407
IKJ@0065	00001	00000F13	01428	01427
IKJ@0067	00001	00000F22	01448	01447
IKJ@0068	00001	00000F2F	01458	01457
IKJ@0070	00001	00000F3F	01478	01477
IKJ@0072	00001	00000F51	01499	01498
IKJ@0074	00001	00000F62	01520	01519
IKJ@0075	00001	00000F71	01534	01533
IKJ@0077	00001	00000F86	01559	01558
IKJ@0078	00001	00000F90	01569	01568
IKJ@0080	00001	00000FA1	01590	01589
IKJ@0081	00001	00000FAB	01600	01599
IKJ@0083	00001	00000FBD	01621	01620
IKJ@0084	00001	00000FCB	01631	01630
IKJ@0086	00001	00000FDB	01651	01650
IKJ@0088	00001	00000FED	01672	01671
IKJ@0090	00001	00001001	01693	01692
IKJ@0091	00001	00001011	01703	01702
IKJ@0093	00001	00001022	01723	01722
IKJ@0095	00001	00001035	01744	01743
IKJ@0097	00001	00001046	01764	01763
IKJ@0099	00001	00001059	01785	01784
IKJ@0100	00001	00000258	01812	01793
IKJ@0101	00001	00001090	01803	01802
IKJ@0102	00001	0000028A	01833	01814
IKJ@0103	00001	000010C2	01824	01823
IKJ@0104	00001	000002ED	01872	01835
IKJ@0105	00001	000010E0	01856	01855
IKJ@0106	00001	00000309	01899	01874
IKJ@0107	00001	00001140	01890	01889
IKJ@0108	00001	0000033C	01928	01901
IKJ@0109	00001	00001171	01917	01916
IKJ@0110	00001	0000038E	01975	01930
IKJ@0111	00001	000011A4	01946	01945
IKJ@0112	00001	000011C5	01966	01965
IKJ@0113	00001	000003BF	02002	01977
IKJ@0114	00001	000011F6	01993	01992

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ@0115	00001	00000401	02049	02004
IKJ@0116	00001	0000121C	02020	02019
IKJ@0117	00001	00001238	02040	02039
IKJ@0118	00001	0000040B	02067	02051
IKJ@0120	00001	0000043D	02096	02069
IKJ@0121	00001	00001272	02085	02084
IKJ@0122	00001	0000050B	02168	02098
IKJ@0123	00001	000012AF	02114	02113
IKJ@0124	00001	000012D4	02135	02134
IKJ@0125	00001	0000131C	02158	02157
IKJ@0126	00001	000005D9	02240	02170
IKJ@0127	00001	0000137D	02186	02185
IKJ@0128	00001	000013A2	02207	02206
IKJ@0129	00001	000013EA	02230	02229
IKJ@0130	00001	000006A7	02312	02242
IKJ@0131	00001	0000144B	02258	02257
IKJ@0132	00001	00001470	02279	02278
IKJ@0133	00001	000014B8	02302	02301
IKJ@0134	00001	00000775	02384	02314
IKJ@0135	00001	00001519	02330	02329
IKJ@0136	00001	0000153E	02351	02350
IKJ@0137	00001	00001586	02374	02373
IKJ@0138	00001	0000079E	02413	02386
IKJ@0139	00001	000015D3	02402	02401
IKJ@0140	00001	000007CB	02441	02415
IKJ@0141	00001	000015FF	02431	02430
IKJ@0142	00001	00001612	02447	02446
IKJ@0143	00001	0000161F	02458	02457
IKJ@0144	00001	0000162D	02467	02466
IKJA0105	00001	00001125	01864	01860
IKJ00551	00001	00000EB5	01317	01316
IKJ01051	00001	00001125	01863	01862
JFCB	00176	000006C4	02662	00748
KEND0056	00001	00000EBB	01332	01330
KEND0058	00001	00000ECD	01353	01351
KEND0060	00001	00000EE0	01374	01372
KEND0062	00001	00000EFC	01398	01394
KEND0064	00001	00000F0B	01418	01416
KEND0066	00001	00000F19	01438	01436
KEND0069	00001	00000F35	01468	01466
KEND0071	00001	00000F47	01489	01487
KEND0073	00001	00000F59	01510	01508
KEND0076	00001	00000F7D	01549	01547
KEND0079	00001	00000F98	01580	01578
KEND0082	00001	00000FB3	01611	01609
KEND0085	00001	00000FD1	01641	01639
KEND0087	00001	00000FE3	01662	01660
KEND0089	00001	00000FF5	01683	01681
KEND0092	00001	00001017	01713	01711
KEND0094	00001	0000102A	01734	01732
KEND0096	00001	0000103B	01754	01752
KEND0098	00001	0000104E	01775	01773
KEND0142	00001	00001612	02448	02444
KEYW0056	00001	00000EB5	01328	01330
KEYW0058	00001	00000EC7	01349	01351

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

KEYW0060 00001 00000EDA 01370  01372
KEYW0062 00001 00000EF1 01392  01394
KEYW0064 00001 00000F05 01414  01416
KEYW0066 00001 00000F13 01434  01436
KEYW0069 00001 00000F2F 01464  01466
KEYW0071 00001 00000F41 01485  01487
KEYW0073 00001 00000F53 01506  01508
KEYW0076 00001 00000F77 01545  01547
KEYW0079 00001 00000F92 01576  01578
KEYW0082 00001 00000FAD 01607  01609
KEYW0085 00001 00000FCB 01637  01639
KEYW0087 00001 00000FDD 01658  01660
KEYW0089 00001 00000FEF 01679  01681
KEYW0092 00001 00001011 01709  01711
KEYW0094 00001 00001024 01730  01732
KEYW0096 00001 00001035 01750  01752
KEYW0098 00001 00001048 01771  01773
KEYW0142 00001 00001603 02442  02444
LASTKEY  00004 000000BC 02528  00187 00200 00209
LENSET   00002 00000846 00815  00796 00799 00807 00811 00813
LEVEL    00004 0000004C 01806  01800
LEVKEY   00002 00000024 01334  01331
LIMITK   00002 00000032 01491  01488
LINECT   00002 000006D8 02779  00206 00643 00654 00688 00705 00707 00722 00794
LINELEN  00002 000006DE 02782  00381 00760 00797 00809 00819 00837 00855 00975
LINEMAX  00002 000006DA 02780  00206 00655 00712 00788 00793 00794 00814
LINESK   00002 0000003E 01664  01661
LINESPP  00004 000000B4 01997  00789 00791 00812 01986
LRECL    00001 0000000D 02493  01229
LSTUS    00001 00000004 02484  01232
MOVEHEAD 00006 00000B06 01083  00850
MOVEHED  00006 00000B0C 01084  00845
MOVETIT  00006 00000AFA 01081  00969
MSGADDRS 00004 00000078 02714  00717 00726
MSGBL    00020 000005AC 02659  00215 00216
MSGBLC   00002 00000CA4 01217  00215
MSGTLEN  00001 0000004C 01215  00322
MSGTOTC  00002 00000C58 01214  00322 01215
MSGWORK  00256 000001A2 02653  00322 00328 00331 00337 00340 00346 00349 00350 00351 00355 00356
NAME0057 00001 00000EBB 01338  01340
NAME0059 00001 00000ECD 01359  01361
NAME0061 00001 00000EE0 01380  01382
NAME0063 00001 00000EFC 01404  01406
NAME0065 00001 00000F0B 01424  01426
NAME0067 00001 00000F19 01444  01446
NAME0068 00001 00000F24 01454  01456
NAME0070 00001 00000F35 01474  01476
NAME0072 00001 00000F47 01495  01497
NAME0074 00001 00000F59 01516  01518
NAME0075 00001 00000F69 01530  01532
NAME0077 00001 00000F7D 01555  01557
NAME0078 00001 00000F88 01565  01567
NAME0080 00001 00000F98 01586  01588
NAME0081 00001 00000FA3 01596  01598
NAME0083 00001 00000FB3 01617  01619
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

NAME0084 00001 00000FBF 01627  01629
NAME0086 00001 00000FD1 01647  01649
NAME0088 00001 00000FE3 01668  01670
NAME0090 00001 00000FF5 01689  01691
NAME0091 00001 00001003 01699  01701
NAME0093 00001 00001017 01719  01721
NAME0095 00001 0000102A 01740  01742
NAME0097 00001 0000103B 01760  01762
NAME0099 00001 0000104E 01781  01783
NAME0143 00001 00001612 02454  02456
NAME0144 00001 0000161F 02463  02465
NEND0057 00001 00000EC7 01344  01340
NEND0059 00001 00000EDA 01365  01361
NEND0061 00001 00000EF1 01386  01382
NEND0063 00001 00000F05 01409  01406
NEND0065 00001 00000F13 01429  01426
NEND0067 00001 00000F24 01450  01446
NEND0068 00001 00000F2F 01459  01456
NEND0070 00001 00000F41 01480  01476
NEND0072 00001 00000F53 01501  01497
NEND0074 00001 00000F69 01526  01518
NEND0075 00001 00000F77 01540  01532
NEND0077 00001 00000F88 01561  01557
NEND0078 00001 00000F92 01571  01567
NEND0080 00001 00000FA3 01592  01588
NEND0081 00001 00000FAD 01602  01598
NEND0083 00001 00000FBF 01623  01619
NEND0084 00001 00000FCB 01632  01629
NEND0086 00001 00000FDD 01653  01649
NEND0088 00001 00000FEF 01674  01670
NEND0090 00001 00001003 01695  01691
NEND0091 00001 00001011 01704  01701
NEND0093 00001 00001024 01725  01721
NEND0095 00001 00001035 01745  01742
NEND0097 00001 00001048 01766  01762
NEND0099 00001 0000105B 01787  01783
NEND0143 00001 0000161F 02459  02456
NEND0144 00001 0000162D 02468  02465
NEWLIST  00004 000000DE 00173  00239
NEXTLIST 00004 0000016C 00237  00175
NOBREAK  00001 00000008 02645  00164 00197
NOOPEN   00006 000007E6 00788  00745 00774
NOOUTPT  00004 0000006A 00106  00101
NUMBREAK 00002 000000C0 02529  00166 00199
NUMTOTAL 00002 000000C2 02530  00159 00186
OPENLIST 00004 00000074 02525  00259 00268 00747 00768 00776 01010 01012
OUTDCB   00004 00000124 02591  00100 00222 00265 00270 00575 01009 01016 02641
OUTDCBC  00004 00000BF8 01158  01009
OUTDCBL  00001 00000060 02641  01009
OUTMOVE  00006 00000598 00580  00573 00695
OUTOPEN  00002 000008AE 00851  00839 00846
OUTPUT   00004 00000572 00569  00102 00224
OUTPUTK  00002 00000044 01736  01007 01733
OUTWORK  00256 000005C0 02660  00569 00570 00570 00570 00576 00580 00690 00691 00691 00691 00698
PAGEADDR 00004 00000070 02524  00663 00827
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                          ASM 0201 14.37 04/05/25

PAGECT   00002 000006DC 02781  00660 00662
PASS     00001 0000000E 02494  01239
PCLMAIN  00001 00000E38 01296  01297 01300 01306 01326 01327 01337 01343 01348 01358 01364 01369 01379 01385 01391 01403
                               01413 01423 01433 01443 01449 01453 01463 01473 01479 01484 01494 01500 01505 01515 01521
                               01529 01535 01544 01554 01560 01564 01570 01575 01585 01591 01595 01601 01606 01616 01622
                               01626 01636 01646 01652 01657 01667 01673 01678 01688 01694 01698 01708 01718 01724 01729
                               01739 01749 01759 01765 01770 01780 01786 01791 01796 01811 01812 01817 01832 01833 01843
                               01871 01872 01877 01898 01899 01904 01927 01928 01933 01953 01974 01975 01980 02001 02002
                               02007 02027 02048 02049 02054 02066 02067 02072 02095 02096 02101 02122 02145 02167 02168
                               02173 02194 02217 02239 02240 02245 02266 02289 02311 02312 02317 02338 02361 02383 02384
                               02389 02412 02413 02418 02440 02441 02453 02462 02471 02476
PCT      00001 00000008 02488  01225
PDL      00001 00000000 01301  00065 01310 01320 01331 01333 01352 01354 01373 01375 01395 01399 01417 01419 01437 01439
                               01467 01469 01488 01490 01509 01511 01548 01550 01579 01581 01610 01612 01640 01642 01661
                               01663 01682 01684 01712 01714 01733 01735 01753 01755 01774 01776 01800 01805 01821 01826
                               01849 01866 01883 01893 01910 01922 01939 01949 01959 01969 01986 01996 02013 02023 02033
                               02043 02058 02061 02078 02090 02107 02117 02128 02140 02151 02162 02179 02189 02200 02212
                               02223 02234 02251 02261 02272 02284 02295 02306 02323 02333 02344 02356 02367 02378 02395
                               02407 02424 02436 02445 02449 02473 02475
PDLFINI  00004 000005F8 00623  00601 00617
PDLH10   00002 00000608 00628  00606
PDLH240  00002 0000060A 00629  00604
PDLLEAVE 00004 00000602 00626  00624
PDLLOOP  00004 000005B2 00598  00608 00613 00615 00619
PDLMINUS 00001 00000186 02647  00595 00618 00623
PDLNSAVE 00004 0000007C 02526  00592 00626
PDLNUM   00004 0000059E 00592  00154 00161 00758 00764 00792 00984
PDLSP    00004 000005D8 00612  00605
PEND0055 00001 00000EB5 01319  01309
PEND0101 00001 00001090 01804  01799
PEND0103 00001 000010C2 01825  01820
PEND0119 00001 00001243 02060  02057
POST0055 00001 00000E3E 01307  01309
POST0101 00001 0000105E 01797  01799
POST0103 00001 00001093 01818  01820
POST0119 00001 0000123C 02055  02057
PRALLOC  00004 0000040A 00467  00425
PRBLREC  00004 00000526 00543  00429
PRDATES  00002 0000039A 00435  00423
PRDMOVE  00002 00000564 00560  00558
PRDSN    00004 00000554 00556  00430
PREXT    00002 000004F6 00529  00428
PRINT    00004 000002D8 00366  00108 00218
PRINTK   00002 0000003A 01613  00106 00180 00744 01610
PRINTR8  00004 00000064 02521  00366 00407
PRLSTUS  00006 000003F4 00460  00424
PRNTCLEN 00004 00000198 00256  00072
PRNTCLO  00004 000001B6 00265  00257
PRNTFREE 00004 000001D4 00277  00266
PRNTFRL  00004 000001DC 00279  00291
PRNTHEAD 00256 000003A8 02656  00677 00821 00823 00824 00824 00824 00833 01083 01084
PRNTLIN  00004 000006BE 00690  00639 00656
PRNTLINE 00004 0000060C 00635  00217 00357 00406
PRNTLRET 00004 0000073A 00731  00701
PRNTLSAV 00004 00000060 02520  00674 00685
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

PRNTOT   00004 0000022E 00321  00141 00193 00243
PRNTPAGE 00004 00000658 00660  00645
PRNTSKP1 00004 00000648 00653  00650
PRNTSKP2 00004 00000644 00652  00649
PRNTSKP3 00004 00000640 00651  00647
PRNTTERM 00004 000006EA 00705  00637
PRNTTITH 00004 000004A8 02657  00715 00858
PRNTTITL 00256 000004AC 02658  00682 00958 00959 00959 00959 00960 00960 00962 00973 01006
PRNTTLIN 00004 00000726 00724  00711 00713
PRNTTOT8 00004 00000068 02522  00321 00359
PRNTWORK 00001 00000000 02512  00066 02670
PRPCT    00002 00000484 00500  00427
PRPCTERR 00006 000004A2 00507  00512 00514
PRPCTM   00004 000004AC 00509  00504
PRTEND   00004 0000034C 00405  00382
PRTICDEL 00004 00000940 00914  00925 00927
PRTICDLP 00006 0000091C 00903  00907
PRTICOPY 00002 00000916 00897  00915 00941
PRTIFND  00004 00000948 00923  00904
PRTINC   00004 00000340 00402  00456 00463 00477 00479 00487 00496 00508 00523 00525 00539 00552 00563
PRTINEW  00004 0000098A 00951  00892
PRTINIT  00004 00000740 00734  00079
PRTIREP  00004 00000970 00939  00947
PRTIREPA 00004 0000096C 00938  00929
PRTITSET 00002 00000992 00953  00864 00898
PRTLOOP  00002 000002EE 00371  00404
PRTLSAVE 00004 0000009C 02527  00635 00731
PRTMOVE  00006 0000035A 00409  00401 00561
PRTRTN   00002 00000360 00413  00397
PRTRTN1  00004 00000376 00422  00414
PRUNKN3  00006 000004EC 00524  00502 00506
PRUNKN6  00006 0000043C 00478  00468 00484
PRUNUSED 00004 00000446 00483  00426
RDJFCB   00004 000007B4 00768  00756
RECFM    00001 0000000B 02491  01228
ROUND    00001 00000013 02499  01238
R0       00001 00000000 00120  00379 00380 00383 00716 00716 00717 00725 00725 00726 00810 00810 00814 00873 00877 00923
                               00924 00973 00974 00977 01001
R1       00001 00000001 00121  00062 00153 00160 00187 00200 00208 00209 00216 00304 00305 00305 00306 00307 00308 00309
                               00310 00311 00312 00324 00325 00333 00334 00342 00343 00356 00370 00377 00378 00378 00380
                               00381 00383 00405 00562 00592 00593 00594 00594 00598 00626 00635 00644 00646 00648 00674
                               00685 00686 00692 00694 00708 00709 00715 00717 00719 00724 00726 00728 00731 00735 00736
                               00748 00749 00751 00754 00757 00763 00791 00806 00806 00808 00809 00819 00820 00821 00821
                               00825 00826 00826 00827 00837 00838 00841 00843 00844 00845 00847 00848 00850 00855 00856
                               00856 00857 00858 00861 00862 00890 00891 00926 00928 00951 00952 00962 00970 00970 00974
                               00975 00977 00982 00983 00993 01000 01001 01002 01003 01029 01030 01030 01037 01054 01054
                               01081 01082
R11      00001 0000000B 00131  00062 00063
R13      00001 0000000D 00133  00066
R14      00001 0000000E 00134  00387 00387 00388 00389 00398 00401 00413 00413 00422 00435 00435 00436 00439 00447 00449
                               00467 00470 00483 00485 00486 00489 00529 00529 00530 00532 00543 00545 00556 00557 00559
                               00560 00561 00721 00730 00840 00841 00843 01084
R15      00001 0000000F 00135  00155 00155 00158 00159 00162 00162 00165 00166 00390 00390 00391 00392 00409 00436 00447
                               00461 00467 00530 00543 00597 00597 00606 00607 00625 00625 00720 00721 00729 00730 00759
                               00760 00765 00773 00773 00793 00875 00985 00985 00987 00988 00989 00992 00993 00994 00994
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                                ASM 0201 14.37 04/05/25

                                00995 01031 01055 01055 01056 01061 01061
R2        00001 00000002 00122  00186 00188 00199 00201 00277 00279 00289 00289 00290 00290 00369 00372 00402 00402 00403
                                00571 00572 00572 00573 00593 00600 00643 00651 00651 00652 00652 00653 00653 00654 00655
                                00705 00706 00706 00707 00712 00740 00741 00742 00742 00743 00752 00753 00766 00770 00780
                                00849 00888 00889 00897 00903 00912 00914 00914 00933 00938 00938 00961 00964 00971 00978
                                00978 00979 01037 01038 01040 01040 01041 01043 01043 01049 01063 01083
R3        00001 00000003 00123  00088 00089 00090 00090 00173 00174 00174 00232 00279 00287 00392 00580 00694 00889 00893
                                00897 01034 01036 01044
R4        00001 00000004 00124  00170 00173 00237 00237 00238 00871 00879 00879 00887 00903 00905 00905 00906 00908 00924
                                00939 00939 00940 00945 01032 01034
R5        00001 00000005 00125  00171 00172 00278 00291 00377 00400 00409 00437 00462 00478 00507 00524 00596 00596 00598
                                00599 00599 00600 00872 00875 00876 00876 00877
R6        00001 00000006 00126  00371 00371 00372 00373 00374 00374 00376 00388 00391 00396 00500 00500 00509 00510 00598
                                00603 00612 00614 00616 00660 00661 00661 00662 00666 00692 00693 00695 00708 00724 00885
                                00886 00912 00913 00913 00933 00934 00934 00945 00946 00946 00963 00963 00964 00965 00966
                                00966 00968 00982 00991 00993 01032 01046 01063 01081 01085 01085
R7        00001 00000007 00127  00375 00375 00376 00378 00398 00399 00400 00501 00511 00511 00513 00516 00602 00602 00603
                                00604 00607 00663 00664 00673 00687 00688 00967 00967 00968 00969 00970 01000
R8        00001 00000008 00128  00096 00102 00108 00141 00154 00161 00193 00217 00218 00224 00228 00243 00313 00321 00357
                                00359 00360 00366 00406 00407 00408 00579 00592 00626 00627 00635 00731 00732 00758 00764
                                00792 00874 00984 01062
R9        00001 00000009 00129  00064 00065
SECQ      00001 00000011 02497  01236
SECT      00001 00000010 02496  01237
SETBNUM   00002 000000CC 00165  00163
SETTNUM   00002 000000B4 00158  00156
SKPBREAK  00004 0000013A 00213  00198 00202
SKPBREA2  00004 00000150 00218  00214
SORTED    00004 000000A2 00153  00084
SORTK     00002 0000002E 01440  00083 01437
SPACEK    00002 0000002A 01400  00740 01395
SPACTYPE  00006 00000188 02649  00350 00351 00743
STARS     00016 00000B5D 01092  00331 00340 00349 00446 00455 00476 00495 00522 00538 00551 00672
SUBAO1    00002 00001344 02170  01521 01535
SUBAO2    00002 00001412 02242  01560 01570
SUBAO3    00002 000014E0 02314  01591 01601
SUBBREAK  00002 00001142 01901  01479
SUBCHARS  00002 00001175 01930  01652
SUBCONT   00002 000010C3 01835  01385
SUBDSNLN  00002 000015D7 02415  01786
SUBEND    00002 00001091 01814  01364
SUBFORMT  00002 000015AE 02386  01765
SUBHEAD   00002 0000123A 02051  01694
SUBLEV    00002 0000105C 01793  01343
SUBLIMIT  00002 00001276 02098  01500
SUBLINES  00002 000011C7 01977  01673
SUBLKEY   00004 000000E0 02118  02107
SUBLOPER  00004 000000E8 02141  02128
SUBLVALU  00004 000000F0 02163  02151
SUBPRINT  00002 000011F8 02004  01622
SUBPRTIT  00004 000000C4 02044  00871 02033
SUBPRTKY  00004 000000BC 02024  00863 00890 02013
SUBSORT   00004 00000090 01894  01883
SUBSORTS  00002 00001126 01874  01449
SUBTOTAL  00002 00001244 02069  01724
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

SUB1KEY  00004 000000F8 02190  02179
SUB1OPER 00004 00000100 02213  02200
SUB1VALU 00004 00000108 02235  02223
SUB2KEY  00004 00000110 02262  02251
SUB2OPER 00004 00000118 02285  02272
SUB2VALU 00004 00000120 02307  02295
SUB3KEY  00004 00000128 02334  02323
SUB3OPER 00004 00000130 02357  02344
SUB3VALU 00004 00000138 02379  02367
SYSOUT   00004 000000C4 02536  00256 00261 00636 00676 00681 00697 00746 00752 00798 01004 02586
SYSOUTC  00004 00000B98 01104  00746
SYSOUTL  00001 00000060 02586  00746
TABSPACE 00008 00000B6D 01093  00742
TABTITL  00012 00000CE0 01257  00374 00735 00966
TITDSN   00002 000009EE 00982  00972
TITDSN2  00004 00000A02 00988  00986
TITEND   00004 00000A2E 01004  00981
TITINC   00004 000009DE 00978  00996
TITLOOP  00002 000009AA 00963  00980
TITOVER  00002 00000A22 01000  00976
TOTALK   00002 00000042 01715  01712
TOTALLOC 00004 0000004C 02515  00307 00309 00333
TOTALN   00004 000000D8 02091  00153 02078
TOTDS    00004 00000048 02514  00304 00306 00324
TOTLAST  00001 00000187 02648  00182 00207 00213 00358
TOTUSED  00004 00000050 02516  00310 00312 00342
TYPE     00001 00000014 02500  01241
UNUSED   00001 00000007 02487  01224
USERHEAD 00004 000008A0 00847  00832
VADMSG   00004 0000001C 02693  00720 00729
VOLS     00004 00000008 01321  01310
VOLUME   00001 00000002 02482  01233
VTCEPRNT 00001 000001A8 02739  00071
VTCGETMN 00004 00000210 02768  00277 02769
VTCGETMS 00001 00008000 02770  00285
VTCGETMX 00001 00000032 02769  00278
VTCSORTE 00001 000006D8 02775  00171
VTCSORTH 00004 000002D8 02774  00170 00247 00247 00248 00248 00249 00249 00250 00250
VTFACTON 00008 0000003B 02883  01258
VTFALLOC 00004 00000004 02852  00308 00485 00503 00510 01263 01264 01265
VTFBLKSZ 00002 00000030 02869  01269
VTFCATLG 00001 00000036 02874  01272
VTFCREDT 00003 0000001C 02860  01260
VTFDSN   00001 00000046 02886  00208 01082 01284
VTFDSNL  00002 00000044 02884  00556 00571
VTFDSORG 00003 00000026 02864  01267
VTFDSTYP 00001 0000003A 02879  01277
VTFEXPDT 00003 0000001F 02861  01262
VTFLRECL 00002 0000002E 02868  01270
VTFLSTAC 00003 00000022 02862  01261
VTFMT    00001 00000000 02850  00089 01258 01259 01260 01261 01262 01263 01264 01265 01266 01267 01268 01269 01270 01271
                               01272 01273 01274 01275 01276 01277 01278 01279 01281 01282 01283 01284 02885
VTFMTL   00001 00000046 02885  00572
VTFNEXT  00004 00000000 02851  00232
VTFNOEPV 00001 00000025 02863  01266
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

VTFPROT  00001 00000033 02871  01271
VTFRACF  00001 00000034 02872  01282
VTFRECFM 00005 00000029 02866  01268
VTFROUND 00001 00000032 02870  01276
VTFSECAL 00001 00000039 02876  01273
VTFSECAM 00002 00000037 02875  01274
VTFUNIT  00004 00000018 02859  01275
VTFUPD   00001 00000035 02873  01281
VTFUSED  00004 00000008 02855  00311 00483 00486 00501 00505 01278
VTFVOLUM 00006 00000012 02858  01259 01279 01283
VTOCOM   00001 00000000 02679  00063 00719 00728
VTOCPRNT 00001 00000000 00048  00055 01303 01323 01335 01345 01356 01366 01377 01387 01401 01410 01421 01430 01441 01451
                               01460 01471 01481 01492 01502 01513 01527 01541 01552 01562 01572 01583 01593 01603 01614
                               01624 01633 01644 01654 01665 01675 01686 01696 01705 01716 01726 01737 01746 01757 01767
                               01778 01788 01794 01808 01815 01829 01836 01868 01875 01895 01902 01924 01931 01951 01971
                               01978 01998 02005 02025 02045 02052 02063 02070 02092 02099 02119 02142 02164 02171 02191
                               02214 02236 02243 02263 02286 02308 02315 02335 02358 02380 02387 02409 02416 02438 02451
                               02460 02469 02478
VTPRNTEN 00001 000007A0 02666  00872 00887 00908 00923 00951
VTPRNTEX 00001 000007C8 02667  00873
VTPRNTL  00001 00000778 02665  00885
VTPRNTLS 00004 00000774 02664  00369 00862 00886 00952 00961
VTRET    00002 00000076 00113  00107 00140 00143 00251 00280 00292 01008 01020
WORKLINE 00256 000002A2 02654  00367 00368 00368 00370 00379 00405 00857
ZERO     00004 00000ADC 01069  00503 00505
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

=C'ERR'  00003 00000E28 03472  00507
=C'EX '  00003 00000E2B 03473  01046
=C'EXP'  00003 00000E2E 03474  01049
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT       1060
TOTAL RECORDS READ FROM SYSTEM LIBRARY     7601
TOTAL RECORDS PUNCHED                       105
TOTAL RECORDS PRINTED                      1989
```

```
SYMBOL   TYPE  ID   ADDR  LENGTH LDID                                                    ASM 0201 14.37 04/05/25

VTOCSORT  SD  0001 000000 000148
PCLMAIN   SD  0002 000148 0007F6
```

```
 LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                     2 ************************************************************************* 00020000
                                     3 *                                                                       * 00030000
                                     4 *                                                                       * 00040000
                                     5 * TITLE -      VTOC COMMAND  SORT  ROUTINE                              * 00050000
                                     6 *                                                                       * 00060000
                                     7 * FUNCTION -   PUT THIS FORMATTED DSCB INTO THE SORTED LIST.            * 00070000
                                     8 *                                                                       * 00080000
                                     9 * OPERATION -  IF THIS IS A NOSORT RUN, JUST CALL THE PRINT ROUTINE.    * 00090000
                                    10 *              TO BUILD THE SORTED LIST, FIRST DO A SIMPLE HASH         * 00100000
                                    11 *              ON THE FIRST CHARACTER.  BUILD UP TO 256 SEPARATE        * 00110000
                                    12 *              LISTS TO SAVE SORT TIME.  THEN SEARCH THROUGH THESE      * 00120000
                                    13 *              LISTS SEQUENTIALLY.                                      * 00130000
                                    14 *                                                                       * 00140000
                                    15 * INPUT -      VTOC COMMON AREA ( VTOCOM )                              * 00150000
                                    16 *              POINTED TO BY REGISTER 1                                 * 00160000
                                    17 *              USE PARSE DATA, CURRENT FORMATTED DSCB, SORTED LIST      * 00170000
                                    18 *                                                                       * 00180000
                                    19 * OUTPUT -     THE FORMATTED DSCB IS PLACED INTO THE SORTED LIST.       * 00190000
                                    20 *                                                                       * 00200000
                                    21 * ATTRIBUTES - REENTRANT, REUSEABLE, REFRESHABLE.                       * 00210000
                                    22 *                                                                       * 00220000
                                    23 *                                                                       * 00230000
                                    24 *         PROGRAMMED BY R. L. MILLER  (415) 485-6241                    * 00240000
                                    25 *                                                                       * 00250000
                                    26 *                                                                       * 00260003
                                    27 *                                                                       * 00270003
                                    28 * MODIFIED 8/29/88 BY A. BRUCE LELAND AT HITACHI TO CORRECT     ABL-SOR 00280004
                                    29 *                  THE SORT FOR DATA SET NAMES.                 ABL-SOR 00290004
                                    30 *                                                                       * 00300000
                                    31 ************************************************************************* 00310000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

                                    33 VTOCSORT ENTER 12,24          DO THE HOUSEKEEPING                        00330000
000000                              34+VTOCSORT CSECT                                                           00004220
000000 47F0 F00E      0000E         35+         B     14(0,15)                        BRANCH AROUND ID         00450000
000004 08                           36+         DC    AL1(8)                          LENGTH OF IDENTIFIER     00550000
000005 E5E3D6C3E2D6D9E3             37+         DC    CL8'VTOCSORT'                   IDENTIFIER               00750000
00000D 00
00000E 90EC D00C      0000C         38+         STM   14,12,12(13)                    SAVE REGISTERS           03700000
000012 18CF                         39+         LR    12,15         SET FIRST BASE REG                         00004700
000014                              40+         CNOP  0,4                                                        00004800
                            00000   41+         USING VTOCSORT,12                                                00008600
000014 5811 0018      00018         42+         L     1,24+0(1)      NUMERIC &SAVE IMPLIES A PASSED SAVEAREA   00012600
000018 50D1 0004      00004         43+         ST    13,4(1)        PRIOR SAVEAREA ADDRESS TO MINE            00012700
00001C 501D 0008      00008         44+         ST    1,8(13)        MY SAVEAREA ADDRESS TO HIS                00012800
000020 182D                         45+         LR    2,13           KEEP THE SAVEAREA ADDRESS FOR REGS        00012900
000022 18D1                         46+         LR    13,1           THIS IS MY SAVEAREA                       00013000
000024 9802 2014      00014         47+         LM    0,2,20(2)      RESTORE ORIGINAL REGS                     00013100
000028 18B1                         48          LR    R11,R1         SAVE ADDR OF VTOCOM                       00340000
                            00000   49          USING VTOCOM,R11     SET ITS ADDRESSABILITY                    00350000
00002A 5890 B048      00048         50          L     R9,ADDRANSR    POINT TO THE PARSE ANSWER                 00360000
                            00000   51          USING PDL,R9         SET ITS ADDRESSABILITY                    00370000
                            00000   52          USING SORTWORK,R13   SET ADDRESSABILITY FOR LOCAL WORK AREA    00380000


                                    54 *                                                                       00400000
                                    55 *        IS THIS A NOSORT RUN ?                                         00410000
                                    56 *        IF SO, JUST CALL PRINT                                         00420000
                                    57 *                                                                       00430000
00002E 9502 902F      0002F         58          CLI   SORTK+1,2      IS THIS NOSORT?                           00440000
000032 4770 C044      00044         59          BNE   GOSORT         NO, KEEP ON TRUCKIN'                      00450000
                                    60          VTCALL PRNT          YES, CALL PRINT AND GET OUT               00460000
000036 4110 B000      00000         61+         LA    R1,VTOCOM      POINT TO THE COMMON AREA                  00000300
00003A 58F0 B030      00030         62+         L     R15,VADPRNT    POINT TO THE ROUTINE                      00000400
00003E 05EF                         63+         BALR  R14,R15        THEN CALL IT                              00000900
000040 47F0 C11A      0011A         64          B     SORTRET        GET OUT OF HERE                           00470000
                                    65 *                                                                       00480000
                                    66 *        PUT THIS ENTRY WHERE IT BELONGS                                00490000
                                    67 *                                                                       00500000
000044 5830 B198      00198         68 GOSORT   L     R3,FORMATAD    POINT TO THE FORMATTED DSCB               00510000
                            00000   69          USING VTFMT,R3       SET ADDRESSABILITY                        00520000
000048 4160 B1C8      001C8         70          LA    R6,SORTTAB     POINT TO THE SORT FIELDS TABLE            00530000
00004C 1B44                         71          SR    R4,R4                                                    00540000
00004E 4340 6001      00001         72          IC    R4,1(0,R6)     LOAD HIGH KEY OFFSET                      00550000
000052 4144 3000      00000         73          LA    R4,VTFMT(R4)   POINT TO HIGH KEY                         00560000
000056 4120 B2CC      002CC         74          LA    R2,VTCSORTH-12 SORT HEADER AREA                          00570000
00005A 4120 200C      0000C         75 GOSORT1  LA    R2,12(0,R2)    NEXT ENTRY                                00580000
00005E 4850 2004      00004         76          LH    R5,4(0,R2)     LOAD COMAPRE LENGTH                       00590000
000062 95C4 6000      00000         77          CLI   0(R6),C'D'     DESCENDING SORT                           00600000
000066 4780 C07E      0007E         78          BE    GOSORT3        YES                                       00610000
00006A 47F0 C08A      0008A         79          B     GOSORT4        NO                                        00620000
00006E BF5F 2000      00000         80 GOSORT2  ICM   R5,B'1111',0(R2) GET THE HEAD OF THE LIST                 00630000
000072 4770 C096      00096         81          BNZ   NOTFIRST       IF NON-ZERO, SEARCH THE LIST              00640000
                                    82 *                                                                       00650000
                                    83 *        FIRST ENTRY ON THE LIST, IT'S EASY                             00660000
                                    84 *                                                                       00670000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000076 5032 0000      00000          85          ST    R3,0(R2)       START UP THE LIST                        00680000
00007A 47F0 C11A      0011A          86          B     SORTRET        THEN RETURN                              00690000
00007E 4450 C138      00138          87 GOSORT3  EX    R5,GOSORTCL    COMPARE TO GET CORRECT LIST              00700000
000082 4740 C05A      0005A          88          BL    GOSORT1                                                 00710000
000086 47F0 C06E      0006E          89          B     GOSORT2                                                 00720000
00008A 4450 C138      00138          90 GOSORT4  EX    R5,GOSORTCL    COMPARE TO GET CORRECT LIST              00730000
00008E 4720 C05A      0005A          91          BH    GOSORT1                                                 00740000
000092 47F0 C06E      0006E          92          B     GOSORT2                                                 00750000
                                     93 *                                                                      00760000
                                     94 *        FIND A SLOT FOR THIS ENTRY                                    00770000
                                     95 *              FIRST GET THE SHORTER DSN LENGTH                        00780000
                                     96 *                                                                      00790000
000096 1B11                          97 NOTFIRST SR    R1,R1                                                   00800000
000098 4310 6001      00001          98          IC    R1,1(0,R6)     OFFSET OF SORT FIELD                     00810000
00009C 4171 5000      00000          99          LA    R7,0(R1,R5)    LOAD PREV ENTRY FIELD ADDR               00820000
0000A0 4181 3000      00000         100          LA    R8,0(R1,R3)    LOAD NEW ENTRY FIELD ADDR                00830000
0000A4 5910 C140      00140         101          C     R1,=A(VTFDSN-VTFMT)  DSN                               00840000
0000A8 4770 C0C0      000C0         102          BNE   NOTFRST1                                                00850000
                                    103 *** LENGTH; IT SHOULD ALWAYS USE LENGTH 44 FOR DATA SET NAMES.  ABL-SOR 00880003
0000AC 4810 3044      00044         104          LH    R1,VTFDSNL-VTFMT(0,R3)                                  00890000
0000B0 4910 5044      00044         105          CH    R1,VTFDSNL-VTFMT(0,R5)                                  00900000
0000B4 47D0 C0BC      000BC         106          BNH   NOTFRST0                                                00910000
0000B8 4810 5044      00044         107          LH    R1,VTFDSNL-VTFMT(0,R5)                                  00920000
                                    108 ***FRST0 BCTR  R1,0                                            ABL-SOR 00930004
0000BC                              109 NOTFRST0 DS    0H             ***COMPARE FOLLOWING BLANK TOO    ABL-SOR 00931004
0000BC 47F0 C0C4      000C4         110          B     NOTFRST2                                                00940000
0000C0 4810 6002      00002         111 NOTFRST1 LH    R1,2(0,R6)     LOAD SORT FIELD EXEC LENGTH              00950000
0000C4 95C4 6000      00000         112 NOTFRST2 CLI   0(R6),C'D'     DESCENDING SORT                          00960000
0000C8 4780 C0DC      000DC         113          BE    NOTFRST4       YES                                      00970000
0000CC 4410 C132      00132         114 NOTFRST3 EX    R1,COMPVTF     COMPARE THE FIELDS                       00980000
0000D0 4740 C106      00106         115          BL    NEXTENT        LIST ENTRY IS LOWER, UP THE CHAIN        00990000
0000D4 4780 C0F4      000F4         116          BE    CHECKNXT       IDENTICAL, CHECK NEXT FIELD              01000000
0000D8 47F0 C0E8      000E8         117          B     INSERT                                                  01010000
0000DC 4410 C132      00132         118 NOTFRST4 EX    R1,COMPVTF     COMPARE THE FIELDS                       01020000
0000E0 4720 C106      00106         119          BH    NEXTENT        LIST ENTRY IS LOWER, UP THE CHAIN        01030000
0000E4 4780 C0F4      000F4         120          BE    CHECKNXT       IDENTICAL, CHECK NEXT FIELD              01040000
                                    121 *                                                                      01050000
                                    122 *        THE NEW ENTRY GOES HERE                                       01060000
                                    123 *                                                                      01070000
0000E8 5032 0000      00000         124 INSERT   ST    R3,0(R2)       SAVE THE NEW POINTER                     01080000
0000EC 5050 3000      00000         125          ST    R5,VTFNEXT     JUST BEFORE THIS LIST ENTRY              01090000
0000F0 47F0 C11A      0011A         126          B     SORTRET        THEN EXIT                                01100000
                                    127 *                                                                      01110000
                                    128 *                                                                      01120000
0000F4 4160 6004      00004         129 CHECKNXT LA    R6,4(0,R6)     NEXT SORT FIELD                          01130000
0000F8 D503 6000 C144 00000 00144   130          CLC   0(4,R6),=F'0'  ANY MORE FIELDS                          01140000
0000FE 4780 C0E8      000E8         131          BE    INSERT         NO, PUT IT HERE                          01150000
000102 47F0 C096      00096         132          B     NOTFIRST       YES, CHECK IT                            01160000
                                    133 *                                                                      01170000
                                    134 *        GET THE NEXT ENTRY ON THIS LIST                               01180000
                                    135 *                                                                      01190000
000106 4125 0000      00000         136 NEXTENT  LA    R2,VTFNEXT-VTFMT(R5)  POINT BACK TO THIS ENTRY           01200000
00010A 4160 B1C8      001C8         137          LA    R6,SORTTAB     RELOAD SORT FIELD TABLE ADDR             01210000
00010E BF5F 5000      00000         138          ICM   R5,B'1111',VTFNEXT-VTFMT(R5)  GET THE NEXT ENTRY        01220000
000112 4770 C096      00096         139          BNZ   NOTFIRST       THERE IS ONE, CHECK IT                   01230000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                        ASM 0201 14.37 04/05/25

000116 5032 0000      00000         140          ST    R3,0(R2)       LAST ENTRY ON THE LIST, PUT IT THERE      01240000
                                    141 *                                                                       01250000
                                    142 *        RETURN                                                         01260000
                                    143 *                                                                       01270000
                                    144 SORTRET  LEAVE EQ,RC=0                                                  01280000
00011A 182D                         145+SORTRET  LR    2,13                                                     00000400
00011C 58DD 0004      00004         146+         L     13,4(13)                                                 00000500
000120 41F0 0000      00000         147+         LA    15,0           LOAD THE RETURN CODE                      00000700
000124 90F1 D010      00010         148+         STM   15,1,16(13)  STORE RETURN REGS                           00000800
000128 98EC D00C      0000C         149+         LM    14,12,12(13)                      RESTORE THE REGISTERS   00650000
00012C 92FF D00C      0000C         150+         MVI   12(13),X'FF'                      SET RETURN INDICATION   01600000
000130 07FE                         151+         BR    14                                RETURN                  02000000
                            00000   152+R0       EQU   0        *USED BY O.S.                                    00000100
                            00001   153+R1       EQU   1        *USED BY O.S. // ADDRESS OF PARAMETER LIST       00000200
                            00002   154+R2       EQU   2                                                         00000300
                            00003   155+R3       EQU   3                                                         00000400
                            00004   156+R4       EQU   4                                                         00000500
                            00005   157+R5       EQU   5                                                         00000600
                            00006   158+R6       EQU   6                                                         00000700
                            00007   159+R7       EQU   7                                                         00000880
                            00008   160+R8       EQU   8                                                         00000900
                            00009   161+R9       EQU   9                                                         00001000
                            0000A   162+R10      EQU   10                                                        00001100
                            0000B   163+R11      EQU   11                                                        00001200
                            0000C   164+R12      EQU   12                                                        00001300
                            0000D   165+R13      EQU   13       *USED BY O.S. // SAVE-AREA ADDRESS               00001400
                            0000E   166+R14      EQU   14       *USED BY O.S. // RETURN ADDRESS                  00001500
                            0000F   167+R15      EQU   15       *USED BY O.S. // ENTRY-PT ADDR, RETURN CODE     00001600
                                    168 *                                                                       01290000
                                    169 *                                                                       01300000
                                    170 *                                                                       01310000
                                    171 *        PROGRAM CONSTANTS                                              01320000
                                    172 *                                                                       01330000
000132 D500 7000 8000 00000 00000   173 COMPVTF  CLC   0(0,R7),0(R8)     EXECUTED COMPARE                      01340000
000138 D500 4000 2006 00000 00006   174 GOSORTCL CLC   0(0,R4),6(R2)     EXECUTED COMPARE                      01350000
                                    175 *                                                                       01360000
                                    176 *                                                                       01370000
                                    177          PRINT NOGEN                                                    01380000
```

```
  LOC  OBJECT CODE    ADDR1 ADDR2  STMT   SOURCE STATEMENT                                    ASM 0201 14.37 04/05/25

                                    179 *                                                                   01400000
                                    180 *                                                                   01410000
                                    181 *        P A R S E   C O N T R O L   L I S T                        01420000
                                    182 *                                                                   01430000
                                    183 *                                                                   01440000
                                    184          PRINT OFF                                                  01450000
                                    186          PUSH  PRINT                                                00000100
                                    187          PRINT NOGEN                                                00000200
                                   1373          POP   PRINT                                                00017600
                                   1400          PRINT ON                                                   01470000
                                   1401 *                                                                   01480000
                                   1402 *        DYNAMIC WORK AREA                                          01490000
                                   1403 *                                                                   01500000


000000                             1405 SORTWORK DSECT                                                     01520000
000000                             1406          DS    18A            PRINT ROUTINE SAVE AREA              01530000

000048                             1408          DS    0D                                                   01550000
                            00048  1409 LENWORK  EQU   *-SORTWORK                                           01560000
                                   1410 *                                                                   01570000
                                   1411 *        VTOC COMMAND COMMON AREA                                   01580000
                                   1412 *                                                                   01590000
                                   1413          PRINT NOGEN                                                01600000
                                   1414          VTOCOM                                                     01610000


                                   1582 *                                                                   01630000
                                   1583 *        FORMATTED DSCB                                             01640000
                                   1584 *                                                                   01650000
                                   1585          VTFMT                                                      01660000


                                   1627          PDEDSNAM                                                   01680000


                                   1649          END                                                        01700000
000140 00000046                    1650                =A(VTFDSN-VTFMT)
000144 00000000                    1651                =F'0'
```

SYMBOL	LEN	VALUE	DEFN	REFERENCES	
ADDRANSR	00004	00000048	01447	00050	
AL00271	00001	00000279	00417	00416	
AL00281	00001	00000287	00431	00430	
ANDOR1K	00002	00000034	00405	00402	
ANDOR2K	00002	00000036	00444	00441	
ANDOR3K	00002	00000038	00475	00472	
BLKSZSET	00004	000000AC	00863	00852	
BREAK	00004	0000009C	00816	00803	
BREAKK	00002	00000030	00363	00360	
CATK	00002	0000002C	00313	00310	
CHARSK	00002	0000003C	00536	00533	
CHARSPL	00004	000000A4	00843	00832	
CHECKNXT	00004	000000F4	00129	00116	00120
COMPVTF	00006	00000132	00173	00114	00118
CONTAIN	00004	00000084	00760	00742	
CONTAINK	00002	00000028	00269	00266	
DEND0058	00001	00000435	00758	00741	
DEND0060	00001	00000451	00785	00775	
DEND0062	00001	00000484	00814	00802	
DEND0064	00001	000004B5	00841	00831	
DEND0065	00001	000004D6	00861	00851	
DEND0067	00001	00000507	00888	00878	
DEND0069	00001	0000052D	00915	00905	
DEND0070	00001	00000549	00935	00925	
DEND0074	00001	00000585	00982	00970	
DEND0076	00001	000005C0	01009	00999	
DEND0077	00001	0000060F	01032	01020	
DEND0078	00001	00000653	01054	01043	
DEND0080	00001	0000068E	01081	01071	
DEND0081	00001	000006DD	01104	01092	
DEND0082	00001	00000721	01126	01115	
DEND0084	00001	0000075C	01153	01143	
DEND0085	00001	000007AB	01176	01164	
DEND0086	00001	000007EF	01198	01187	
DEND0088	00001	0000082A	01225	01215	
DEND0089	00001	00000879	01248	01236	
DEND0090	00001	000008BD	01270	01259	
DEND0092	00001	000008E6	01299	01287	
DEND0094	00001	00000913	01328	01316	
DENT0058	00001	000003D5	00739	00741	
DENT0060	00001	00000438	00773	00775	
DENT0062	00001	00000454	00800	00802	
DENT0064	00001	00000487	00829	00831	
DENT0065	00001	000004B5	00849	00851	
DENT0067	00001	000004D9	00876	00878	
DENT0069	00001	0000050A	00903	00905	
DENT0070	00001	0000052D	00923	00925	
DENT0074	00001	00000556	00968	00970	
DENT0076	00001	00000588	00997	00999	
DENT0077	00001	000005C0	01018	01020	
DENT0078	00001	0000060F	01041	01043	
DENT0080	00001	00000656	01069	01071	
DENT0081	00001	0000068E	01090	01092	
DENT0082	00001	000006DD	01113	01115	
DENT0084	00001	00000724	01141	01143	

SYMBOL	LEN	VALUE	DEFN	REFERENCES	
DENT0085	00001	0000075C	01162	01164	
DENT0086	00001	000007AB	01185	01187	
DENT0088	00001	000007F2	01213	01215	
DENT0089	00001	0000082A	01234	01236	
DENT0090	00001	00000879	01257	01259	
DENT0092	00001	000008C0	01285	01287	
DENT0094	00001	000008E9	01314	01316	
DSNLNTYP	00002	00000154	01343	01338	
DSNPLN	00004	0000014C	01330	01317	
DSNPLNK	00002	00000048	00670	00667	
ENDING	00004	00000068	00720	00714	
ENDKEY	00002	00000026	00248	00245	
FORMATAD	00004	00000198	01465	00068	
FORMATK	00002	00000046	00649	00646	
FORMATSP	00004	00000140	01301	01288	
GOSORT	00004	00000044	00068	00059	
GOSORTCL	00006	00000138	00174	00087	00090
GOSORT1	00004	0000005A	00075	00088	00091
GOSORT2	00004	0000006E	00080	00089	00092
GOSORT3	00004	0000007E	00087	00078	
GOSORT4	00004	0000008A	00090	00079	
HEADING	00004	000000D0	00955	00951	
HEADK	00002	00000040	00578	00575	
IECSDSL3	00001	00000770	01568	01569	
IECSDSL4	00001	0000070C	01527	01528	
IKJ$0006	00001	0000093E	01370	00190	
IKJ$0008	00001	000001C5	00211	00207	
IKJ$0058	00001	00000400	00752	00751	
IKJ$0062	00001	00000484	00813	00812	
IKJ$0074	00001	00000585	00981	00980	
IKJ$0077	00001	0000060F	01031	01030	
IKJ$0078	00001	00000653	01053	01052	
IKJ$0081	00001	000006DD	01103	01102	
IKJ$0082	00001	00000721	01125	01124	
IKJ$0085	00001	000007AB	01175	01174	
IKJ$0086	00001	000007EF	01197	01196	
IKJ$0089	00001	00000879	01247	01246	
IKJ$0090	00001	000008BD	01269	01268	
IKJ$0092	00001	000008E6	01298	01297	
IKJ$0094	00001	00000913	01327	01326	
IKJ@0006	00001	00000158	01368	00191	
IKJ@0007	00001	0000007D	00220	00192	
IKJ@0008	00001	0000017C	00206	00205	
IKJ@0010	00001	000001D5	00235	00234	
IKJ@0012	00001	000001E8	00256	00255	
IKJ@0014	00001	000001FF	00277	00276	
IKJ@0015	00001	0000020C	00290	00289	
IKJ@0016	00001	00000215	00301	00300	
IKJ@0018	00001	00000223	00321	00320	
IKJ@0020	00001	00000232	00341	00340	
IKJ@0021	00001	0000023F	00351	00350	
IKJ@0023	00001	0000024F	00371	00370	
IKJ@0025	00001	00000261	00392	00391	
IKJ@0027	00001	00000272	00413	00412	
IKJ@0028	00001	00000281	00427	00426	

SYMBOL	LEN	VALUE	DEFN	REFERENCES
IKJ@0030	00001	00000296	00452	00451
IKJ@0031	00001	000002A0	00462	00461
IKJ@0033	00001	000002B1	00483	00482
IKJ@0034	00001	000002BB	00493	00492
IKJ@0036	00001	000002CD	00514	00513
IKJ@0037	00001	000002DB	00524	00523
IKJ@0039	00001	000002EB	00544	00543
IKJ@0041	00001	000002FD	00565	00564
IKJ@0043	00001	00000311	00586	00585
IKJ@0044	00001	00000321	00596	00595
IKJ@0046	00001	00000332	00616	00615
IKJ@0048	00001	00000345	00637	00636
IKJ@0050	00001	00000356	00657	00656
IKJ@0052	00001	00000369	00678	00677
IKJ@0053	00001	00000258	00705	00686
IKJ@0054	00001	000003A0	00696	00695
IKJ@0055	00001	0000028A	00726	00707
IKJ@0056	00001	000003D2	00717	00716
IKJ@0057	00001	000002ED	00765	00728
IKJ@0058	00001	000003F0	00749	00748
IKJ@0059	00001	00000309	00792	00767
IKJ@0060	00001	00000450	00783	00782
IKJ@0061	00001	0000033C	00821	00794
IKJ@0062	00001	00000481	00810	00809
IKJ@0063	00001	0000038E	00868	00823
IKJ@0064	00001	000004B4	00839	00838
IKJ@0065	00001	000004D5	00859	00858
IKJ@0066	00001	000003BF	00895	00870
IKJ@0067	00001	00000506	00886	00885
IKJ@0068	00001	00000401	00942	00897
IKJ@0069	00001	0000052C	00913	00912
IKJ@0070	00001	00000548	00933	00932
IKJ@0071	00001	0000040B	00960	00944
IKJ@0073	00001	0000043D	00989	00962
IKJ@0074	00001	00000582	00978	00977
IKJ@0075	00001	0000050B	01061	00991
IKJ@0076	00001	000005BF	01007	01006
IKJ@0077	00001	000005E4	01028	01027
IKJ@0078	00001	0000062C	01051	01050
IKJ@0079	00001	000005D9	01133	01063
IKJ@0080	00001	0000068D	01079	01078
IKJ@0081	00001	000006B2	01100	01099
IKJ@0082	00001	000006FA	01123	01122
IKJ@0083	00001	000006A7	01205	01135
IKJ@0084	00001	0000075B	01151	01150
IKJ@0085	00001	00000780	01172	01171
IKJ@0086	00001	000007C8	01195	01194
IKJ@0087	00001	00000775	01277	01207
IKJ@0088	00001	00000829	01223	01222
IKJ@0089	00001	0000084E	01244	01243
IKJ@0090	00001	00000896	01267	01266
IKJ@0091	00001	0000079E	01306	01279
IKJ@0092	00001	000008E3	01295	01294
IKJ@0093	00001	000007CB	01334	01308
IKJ@0094	00001	0000090F	01324	01323

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                    ASM 0201 14.37 04/05/25

IKJ@0095 00001 00000922 01340  01339
IKJ@0096 00001 0000092F 01351  01350
IKJ@0097 00001 0000093D 01360  01359
IKJA0058 00001 00000435 00757  00753
IKJ00081 00001 000001C5 00210  00209
IKJ00581 00001 00000435 00756  00755
INSERT   00004 000000E8 00124  00117 00131
KEND0009 00001 000001CB 00225  00223
KEND0011 00001 000001DD 00246  00244
KEND0013 00001 000001F0 00267  00265
KEND0015 00001 0000020C 00291  00287
KEND0017 00001 0000021B 00311  00309
KEND0019 00001 00000229 00331  00329
KEND0022 00001 00000245 00361  00359
KEND0024 00001 00000257 00382  00380
KEND0026 00001 00000269 00403  00401
KEND0029 00001 0000028D 00442  00440
KEND0032 00001 000002A8 00473  00471
KEND0035 00001 000002C3 00504  00502
KEND0038 00001 000002E1 00534  00532
KEND0040 00001 000002F3 00555  00553
KEND0042 00001 00000305 00576  00574
KEND0045 00001 00000327 00606  00604
KEND0047 00001 0000033A 00627  00625
KEND0049 00001 0000034B 00647  00645
KEND0051 00001 0000035E 00668  00666
KEND0095 00001 00000922 01341  01337
KEYW0009 00001 000001C5 00221  00223
KEYW0011 00001 000001D7 00242  00244
KEYW0013 00001 000001EA 00263  00265
KEYW0015 00001 00000201 00285  00287
KEYW0017 00001 00000215 00307  00309
KEYW0019 00001 00000223 00327  00329
KEYW0022 00001 0000023F 00357  00359
KEYW0024 00001 00000251 00378  00380
KEYW0026 00001 00000263 00399  00401
KEYW0029 00001 00000287 00438  00440
KEYW0032 00001 000002A2 00469  00471
KEYW0035 00001 000002BD 00500  00502
KEYW0038 00001 000002DB 00530  00532
KEYW0040 00001 000002ED 00551  00553
KEYW0042 00001 000002FF 00572  00574
KEYW0045 00001 00000321 00602  00604
KEYW0047 00001 00000334 00623  00625
KEYW0049 00001 00000345 00643  00645
KEYW0051 00001 00000358 00664  00666
KEYW0095 00001 00000913 01335  01337
LEVEL    00004 0000004C 00699  00693
LEVKEY   00002 00000024 00227  00224
LIMITK   00002 00000032 00384  00381
LINESK   00002 0000003E 00557  00554
LINESPP  00004 000000B4 00890  00879
NAME0010 00001 000001CB 00231  00233
NAME0012 00001 000001DD 00252  00254
NAME0014 00001 000001F0 00273  00275
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

NAME0016 00001 0000020C 00297  00299
NAME0018 00001 0000021B 00317  00319
NAME0020 00001 00000229 00337  00339
NAME0021 00001 00000234 00347  00349
NAME0023 00001 00000245 00367  00369
NAME0025 00001 00000257 00388  00390
NAME0027 00001 00000269 00409  00411
NAME0028 00001 00000279 00423  00425
NAME0030 00001 0000028D 00448  00450
NAME0031 00001 00000298 00458  00460
NAME0033 00001 000002A8 00479  00481
NAME0034 00001 000002B3 00489  00491
NAME0036 00001 000002C3 00510  00512
NAME0037 00001 000002CF 00520  00522
NAME0039 00001 000002E1 00540  00542
NAME0041 00001 000002F3 00561  00563
NAME0043 00001 00000305 00582  00584
NAME0044 00001 00000313 00592  00594
NAME0046 00001 00000327 00612  00614
NAME0048 00001 0000033A 00633  00635
NAME0050 00001 0000034B 00653  00655
NAME0052 00001 0000035E 00674  00676
NAME0096 00001 00000922 01347  01349
NAME0097 00001 0000092F 01356  01358
NEND0010 00001 000001D7 00237  00233
NEND0012 00001 000001EA 00258  00254
NEND0014 00001 00000201 00279  00275
NEND0016 00001 00000215 00302  00299
NEND0018 00001 00000223 00322  00319
NEND0020 00001 00000234 00343  00339
NEND0021 00001 0000023F 00352  00349
NEND0023 00001 00000251 00373  00369
NEND0025 00001 00000263 00394  00390
NEND0027 00001 00000279 00419  00411
NEND0028 00001 00000287 00433  00425
NEND0030 00001 00000298 00454  00450
NEND0031 00001 000002A2 00464  00460
NEND0033 00001 000002B3 00485  00481
NEND0034 00001 000002BD 00495  00491
NEND0036 00001 000002CF 00516  00512
NEND0037 00001 000002DB 00525  00522
NEND0039 00001 000002ED 00546  00542
NEND0041 00001 000002FF 00567  00563
NEND0043 00001 00000313 00588  00584
NEND0044 00001 00000321 00597  00594
NEND0046 00001 00000334 00618  00614
NEND0048 00001 00000345 00638  00635
NEND0050 00001 00000358 00659  00655
NEND0052 00001 0000036B 00680  00676
NEND0096 00001 0000092F 01352  01349
NEND0097 00001 0000093D 01361  01358
NEXTENT  00004 00000106 00136  00115 00119
NOTFIRST 00002 00000096 00097  00081 00132 00139
NOTFRST0 00002 000000BC 00109  00106
NOTFRST1 00004 000000C0 00111  00102
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES                                                          ASM 0201 14.37 04/05/25

NOTFRST2 00004 000000C4 00112  00110
NOTFRST4 00004 000000DC 00118  00113
OUTPUTK  00002 00000044 00629  00626
PCLMAIN  00001 00000148 00189  00190 00193 00199 00219 00220 00230 00236 00241 00251 00257 00262 00272 00278 00284 00296
                               00306 00316 00326 00336 00342 00346 00356 00366 00372 00377 00387 00393 00398 00408 00414
                               00422 00428 00437 00447 00453 00457 00463 00468 00478 00484 00488 00494 00499 00509 00515
                               00519 00529 00539 00545 00550 00560 00566 00571 00581 00587 00591 00601 00611 00617 00622
                               00632 00642 00652 00658 00663 00673 00679 00684 00689 00704 00705 00710 00725 00726 00736
                               00764 00765 00770 00791 00792 00797 00820 00821 00826 00846 00867 00868 00873 00894 00895
                               00900 00920 00941 00942 00947 00959 00960 00965 00988 00989 00994 01015 01038 01060 01061
                               01066 01087 01110 01132 01133 01138 01159 01182 01204 01205 01210 01231 01254 01276 01277
                               01282 01305 01306 01311 01333 01334 01346 01355 01364 01369
PDL      00001 00000000 00194  00051 00203 00213 00224 00226 00245 00247 00266 00268 00288 00292 00310 00312 00330 00332
                               00360 00362 00381 00383 00402 00404 00441 00443 00472 00474 00503 00505 00533 00535 00554
                               00556 00575 00577 00605 00607 00626 00628 00646 00648 00667 00669 00693 00698 00714 00719
                               00742 00759 00776 00786 00803 00815 00832 00842 00852 00862 00879 00889 00906 00916 00926
                               00936 00951 00954 00971 00983 01000 01010 01021 01033 01044 01055 01072 01082 01093 01105
                               01116 01127 01144 01154 01165 01177 01188 01199 01216 01226 01237 01249 01260 01271 01288
                               01300 01317 01329 01338 01342 01366 01368
PEND0008 00001 000001C5 00212  00202
PEND0054 00001 000003A0 00697  00692
PEND0056 00001 000003D2 00718  00713
PEND0072 00001 00000553 00953  00950
POST0008 00001 0000014E 00200  00202
POST0054 00001 0000036E 00690  00692
POST0056 00001 000003A3 00711  00713
POST0072 00001 0000054C 00948  00950
PRINTK   00002 0000003A 00506  00503
R1       00001 00000001 00153  00048 00061 00097 00097 00098 00099 00100 00101 00104 00105 00107 00111 00114 00118
R11      00001 0000000B 00163  00048 00049
R13      00001 0000000D 00165  00052
R14      00001 0000000E 00166  00063
R15      00001 0000000F 00167  00062 00063
R2       00001 00000002 00154  00074 00075 00075 00076 00080 00085 00124 00136 00140 00174
R3       00001 00000003 00155  00068 00069 00085 00100 00104 00124 00140
R4       00001 00000004 00156  00071 00071 00072 00073 00073 00174
R5       00001 00000005 00157  00076 00080 00087 00090 00099 00105 00107 00125 00136 00138 00138
R6       00001 00000006 00158  00070 00072 00077 00098 00111 00112 00129 00129 00130 00137
R7       00001 00000007 00159  00099 00173
R8       00001 00000008 00160  00100 00173
R9       00001 00000009 00161  00050 00051
SORTK    00002 0000002E 00333  00058 00330
SORTRET  00002 0000011A 00145  00064 00086 00126
SORTTAB  00004 000001C8 01495  00070 00137
SORTWORK 00001 00000000 01405  00052 01409
SPACEK   00002 0000002A 00293  00288
SUBAO1   00002 00000654 01063  00414 00428
SUBAO2   00002 00000722 01135  00453 00463
SUBAO3   00002 000007F0 01207  00484 00494
SUBBREAK 00002 00000452 00794  00372
SUBCHARS 00002 00000485 00823  00545
SUBCONT  00002 000003D3 00728  00278
SUBDSNLN 00002 000008E7 01308  00679
SUBEND   00002 000003A1 00707  00257
SUBFORMT 00002 000008BE 01279  00658
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

SUBHEAD  00002 0000054A 00944  00587
SUBLEV   00002 0000036C 00686  00236
SUBLIMIT 00002 00000586 00991  00393
SUBLINES 00002 000004D7 00870  00566
SUBLKEY  00004 000000E0 01011  01000
SUBLOPER 00004 000000E8 01034  01021
SUBLVALU 00004 000000F0 01056  01044
SUBPRINT 00002 00000508 00897  00515
SUBPRTIT 00004 000000C4 00937  00926
SUBPRTKY 00004 000000BC 00917  00906
SUBSORT  00004 00000090 00787  00776
SUBSORTS 00002 00000436 00767  00342
SUBTOTAL 00002 00000554 00962  00617
SUB1KEY  00004 000000F8 01083  01072
SUB1OPER 00004 00000100 01106  01093
SUB1VALU 00004 00000108 01128  01116
SUB2KEY  00004 00000110 01155  01144
SUB2OPER 00004 00000118 01178  01165
SUB2VALU 00004 00000120 01200  01188
SUB3KEY  00004 00000128 01227  01216
SUB3OPER 00004 00000130 01250  01237
SUB3VALU 00004 00000138 01272  01260
TOTALK   00002 00000042 00608  00605
TOTALN   00004 000000D8 00984  00971
VADPRNT  00004 00000030 01437  00062
VOLS     00004 00000008 00214  00203
VTCGETMN 00004 00000210 01507  01508
VTCSORTH 00004 000002D8 01513  00074
VTFDSN   00001 00000046 01625  01650
VTFDSNL  00002 00000044 01623  00104 00105 00107
VTFMT    00001 00000000 01589  00069 00073 00104 00105 00107 00136 00138 01624 01650
VTFNEXT  00004 00000000 01590  00125 00136 00138
VTOCOM   00001 00000000 01418  00049 00061
VTOCSORT 00001 00000000 00034  00041 00196 00216 00228 00238 00249 00259 00270 00280 00294 00303 00314 00323 00334 00344
                               00353 00364 00374 00385 00395 00406 00420 00434 00445 00455 00465 00476 00486 00496 00507
                               00517 00526 00537 00547 00558 00568 00579 00589 00598 00609 00619 00630 00639 00650 00660
                               00671 00681 00687 00701 00708 00722 00729 00761 00768 00788 00795 00817 00824 00844 00864
                               00871 00891 00898 00918 00938 00945 00956 00963 00985 00992 01012 01035 01057 01064 01084
                               01107 01129 01136 01156 01179 01201 01208 01228 01251 01273 01280 01302 01309 01331 01344
                               01353 01362 01371
```

```
SYMBOL    LEN   VALUE   DEFN    REFERENCES

=A(VTFDSN-VTFMT)
         00004 00000140 01650  00101
=F'0'    00004 00000144 01651  00130
```

ASM 0201 14.37 04/05/25

```
NO STATEMENTS FLAGGED IN THIS ASSEMBLY
HIGHEST SEVERITY WAS    0
OPTIONS FOR THIS ASSEMBLY
  ALIGN, ALOGIC, BUFSIZE(STD), DECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
  NOMLOGIC, NONUMBER, NOOBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
  SYSPARM()
WORK FILE BUFFER SIZE/NUMBER =19066/ 1
TOTAL RECORDS READ FROM SYSTEM INPUT        169
TOTAL RECORDS READ FROM SYSTEM LIBRARY     2867
TOTAL RECORDS PUNCHED                        46
TOTAL RECORDS PRINTED                       627
```

```
 F64-LEVEL LINKAGE EDITOR OPTIONS SPECIFIED XREF,LET,LIST,SIZE=(600K,64K),RENT,REUS,REFR
           VARIABLE OPTIONS USED -  SIZE=(491520,55296)
IEW0000      ENTRY VTOCCMD
IEW0000      NAME VTOC(R)


                                                CROSS REFERENCE TABLE


  CONTROL SECTION                        ENTRY

    NAME    ORIGIN  LENGTH                NAME   LOCATION     NAME   LOCATION     NAME   LOCATION     NAME   LOCATION
  VTOCCMD       00    120C
  PCLMAIN     1210     7F6
  VTOCCHEK    1A08     B6B
  VTOCEXCP    2578     754
  VTOCFORM    2CD0     53A
  VTOCMSG     3210      E6
  VTOCPRNT    32F8     E31
  VTOCSORT    4130     148


  LOCATION  REFERS TO SYMBOL  IN CONTROL SECTION             LOCATION  REFERS TO SYMBOL  IN CONTROL SECTION
      5F8           VTOCMSG         VTOCMSG                     600            VTOCEXCP        VTOCEXCP
      604           VTOCCHEK        VTOCCHEK                    608            VTOCFORM        VTOCFORM
      60C           VTOCPRNT        VTOCPRNT                    610            VTOCSORT        VTOCSORT
      614           PCLMAIN         PCLMAIN
 ENTRY ADDRESS      00

 TOTAL LENGTH      4278
****VTOC      NOW REPLACED IN DATA SET
AUTHORIZATION CODE IS         0.
**MODULE HAS BEEN MARKED REENTERABLE, REUSABLE, AND REFRESHABLE.
```