J E S 2 J O B L O G

```
18.17.02 JOB  156  IEF677I WARNING MESSAGE(S) FOR JOB VSTESTR2 ISSUED
18.17.02 JOB  156  $HASP373 VSTESTR2 STARTED - INIT  1 - CLASS A - SYS HMVS
18.17.02 JOB  156  IEF403I VSTESTR2 - STARTED - TIME=18.17.02
18.17.02 JOB  156  CCI001C PL1L    /IEMAA   /00:00:00.16/        /00004/SYS     /VSTESTR2
18.17.03 JOB  156  CCI001C LKED    /IEWL    /00:00:00.04/        /00000/SYS     /VSTESTR2
18.17.03 JOB  156  CCI001C GO      /PGM=*.DD/00:00:00.02/        /00000/SYS     /VSTESTR2
18.17.03 JOB  156  IEF404I VSTESTR2 - ENDED - TIME=18.17.03
18.17.03 JOB  156  $HASP395 VSTESTR2 ENDED

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

 07 JUL 20 JOB EXECUTION DATE

       23 CARDS READ

    1,076 SYSOUT PRINT RECORDS

        0 SYSOUT PUNCH RECORDS

     0.00 MINUTES EXECUTION TIME
```

```
 1      //VSTESTR2 JOB (SYS),'VSAMIOP IVP RRDSLODS',CLASS=A,MSGCLASS=X,         JOB  156
        //             REGION=4096K
        ***
        ********************************************************************
        *** PL/1 MODULE: RRDSLODS     VSAM DATASET: VSTESTRR.CLUSTER (RRDS)
        ***
        *** SEQUENTAILLY LOADS RECORDS GENERATING SERIAL RELATIVE RECORD #
        ********************************************************************
        ***
 2      //PL1F    EXEC PL1LFCLG,
        //             PARM='LOAD,NODECK,ATR,XREF,CHAR60,MACRO'
 3      XXPL1L   EXEC  PGM=IEMAA,PARM='LOAD,NODECK',REGION=52K                  00000100
 4      XXSTEPLIB  DD DSN=SYSC.LINKLIB,DISP=SHR                                 00000200
 5      //PL1L.SYSPRINT DD SYSOUT=*
        X/SYSPRINT DD  SYSOUT=A                                                 00000300
 6      XXSYSLIN   DD  DSNAME=&&LOADSET,DISP=(MOD,PASS),UNIT=SYSSQ,            *00000400
        XX             SPACE=(80,(250,100))                                     00000500
 7      XXSYSUT3  DD  DSNAME=&&SYSUT3,UNIT=SYSDA,SPACE=(80,(250,250)),          *00000600
        XX             DCB=BLKSIZE=80                                           00000700
 8      XXSYSUT1   DD  DSNAME=&&SYSUT1,UNIT=SYSDA,SPACE=(1024,(60,60),,CONTIG),*00000800
        XX             SEP=(SYSUT3,SYSLIN),DCB=BLKSIZE=1024                     00000900
 9      //PL1L.SYSIN DD DSN=SYSC.VSAMIOP.SOURCE(RRDSLODS),DISP=SHR
10      //PL1L.SYSLIB DD DSN=SYSC.VSAMIOP.MACLIB,DISP=SHR
11      XXLKED   EXEC  PGM=IEWL,PARM='XREF,LIST',COND=(9,LT,PL1L),              *00001000
        XX             REGION=96K                                               00001100
12      //LKED.SYSLIB DD
        X/SYSLIB   DD  DSNAME=SYSC.PL1LIB,DISP=SHR                              00001201
13      //         DD  DSN=SYSC.LINKLIB,DISP=SHR
14      XXSYSLMOD  DD  DSNAME=&&GOSET(GO),DISP=(MOD,PASS),                      *00001300
        XX             UNIT=SYSDA,SPACE=(1024,(50,20,1),RLSE)                   00001400
15      XXSYSUT1   DD  DSNAME=&&SYSUT1,UNIT=SYSDA,SPACE=(1024,(200,20)),        *00001500
        XX             SEP=(SYSLMOD,SYSLIB),DCB=BLKSIZE=1024                    00001600
16      //LKED.SYSPRINT DD SYSOUT=*
        X/SYSPRINT DD  SYSOUT=A                                                 00001700
17      XXSYSLIN   DD  DSNAME=&&LOADSET,DISP=(OLD,DELETE)                       00001800
18      XX         DD  DDNAME=SYSIN                                             00001900
19      XXGO     EXEC  PGM=*.LKED.SYSLMOD,COND=((9,LT,LKED),(9,LT,PL1L))       00002000
20      //GO.STEPLIB DD  DSN=SYSC.PL1LIB,DISP=SHR
        X/STEPLIB  DD  DSN=SYSC.LINKLIB,DISP=SHR                                00002102
21      XX         DD  DSN=SYSC.PL1LIB,DISP=SHR                                 00002202
22      XXSYSPRINT DD  SYSOUT=A                                                 00002300
23      //GO.PRINTR DD SYSOUT=*
24      //GO.IMAGES DD DSN=PUB001.VSAMTEST.DATA,DISP=SHR
25      //GO.SYSUDUMP DD SYSOUT=*
26      //GO.SYSPRINT DD SYSOUT=*
27      //GO.RRDSF01 DD DSN=PUB001.VSTESTRR.CLUSTER,DISP=OLD
```

```
 STMT NO. MESSAGE
-
   19     IEF686I DDNAME REFERRED TO ON DDNAME KEYWORD IN PRIOR STEP WAS NOT RESOLVED
IEF236I ALLOC. FOR VSTESTR2 PL1L PL1F
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO SYS00366
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 380  ALLOCATED TO SYSLIN
IEF237I 251  ALLOCATED TO SYSUT3
IEF237I 370  ALLOCATED TO SYSUT1
IEF237I 253  ALLOCATED TO SYSIN
IEF237I 253  ALLOCATED TO SYSLIB
IEF142I VSTESTR2 PL1L PL1F - STEP WAS EXECUTED - COND CODE 0004
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00156.SO0101                        SYSOUT
IEF285I   SYS20189.T181702.RA000.VSTESTR2.LOADSET      PASSED        *------214
IEF285I   VOL SER NOS= MVS380.
IEF285I   SYS20189.T181702.RA000.VSTESTR2.SYSUT3       DELETED       *------271
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS20189.T181702.RA000.VSTESTR2.SYSUT1       DELETED       *--------0
IEF285I   VOL SER NOS= MVS370.
IEF285I   SYSC.VSAMIOP.SOURCE                         KEPT          *--------3
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.VSAMIOP.MACLIB                         KEPT          *-------27
IEF285I   VOL SER NOS= SYSCPK.
IEF373I STEP /PL1L    / START 20189.1817
IEF374I STEP /PL1L    / STOP  20189.1817 CPU    0MIN 00.16SEC SRB    0MIN 00.04SEC VIRT  4096K SYS   212K
**** JOBCARD READ 20189 18:17:02 ************************************************************************************
*                                      PRC-CCI  370/148 VS2 R03.8  HMVS  STEP STATISTICS                              *
*  STEP NAME  PL1L        USER CORE        4096K   TAPES USED/IO 000/000000000   START   TIME  18:17:02    TCB TIME  00:00:00.16  *
*  PGM  NAME  IEMAA       SYSTEM CORE       212K   DISKS USED/IO 004/000000515   STOP    TIME  18:17:02    SRB TIME  00:00:00.04  *
*   COND CODE    0004     PRIVATE AREA SZ   4096K       ALLOC TIME  18:17:02      ELAPSED TIME                PGM LOAD  18:17:02   *
** PGNO * NR SRV UNITS * ACTIVE TIME ** PAGES IN *** PAGES OUT ** # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
*   004          2794   00:00:00.24            0             0           0             0              0             0             0  *
************************************************************************************************************************
*  CPU $ (     0.05) + EXCP $ (     0.69) + MEMORY $ (     1.86) = TOTAL $ (     2.60)                                  *
************************************************************************************************************************
IEF236I ALLOC. FOR VSTESTR2 LKED PL1F
IEF237I 253  ALLOCATED TO SYSLIB
IEF237I 253  ALLOCATED TO
IEF237I 253  ALLOCATED TO SYS00368
IEF237I 251  ALLOCATED TO SYSLMOD
IEF237I 370  ALLOCATED TO SYSUT1
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 380  ALLOCATED TO SYSLIN
IEF237I DMY  ALLOCATED TO
IEF142I VSTESTR2 LKED PL1F - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYSC.PL1LIB                                 KEPT          *------106
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.LINKLIB                                KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                    KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYS20189.T181702.RA000.VSTESTR2.GOSET        PASSED        *-------57
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS20189.T181702.RA000.VSTESTR2.SYSUT1       DELETED       *--------0
IEF285I   VOL SER NOS= MVS370.
IEF285I   JES2.JOB00156.SO0102                        SYSOUT
```

```
IEF285I   SYS20189.T181702.RA000.VSTESTR2.LOADSET      DELETED       *------215
IEF285I   VOL SER NOS= MVS380.
IEF373I STEP /LKED    / START 20189.1817
IEF374I STEP /LKED    / STOP  20189.1817 CPU    0MIN 00.04SEC SRB    0MIN 00.01SEC VIRT   260K SYS   168K
********************************************************************************************************
*                                      PRC-CCI  370/148 VS2 R03.8  HMVS  STEP STATISTICS                 *
*  STEP NAME  LKED        USER CORE          260K   TAPES USED/IO 000/000000000   START   TIME  18:17:02    TCB TIME  00:00:00.04  *
*  PGM  NAME  IEWL        SYSTEM CORE        168K   DISKS USED/IO 004/000000378   STOP    TIME  18:17:03    SRB TIME  00:00:00.01  *
*   COND CODE    0000     PRIVATE AREA SZ   4096K       ALLOC TIME  18:17:02      ELAPSED TIME                PGM LOAD  18:17:02   *
** PGNO * NR SRV UNITS * ACTIVE TIME ** PAGES IN *** PAGES OUT ** # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
*   004          1931   00:00:00.06            0             0         0             0              0             0             0  *
********************************************************************************************************
*  CPU $ (     0.01) + EXCP $ (     0.51) + MEMORY $ (     0.02) = TOTAL $ (     0.54)                    *
********************************************************************************************************
IEF236I ALLOC. FOR VSTESTR2 GO PL1F
IEF237I 251  ALLOCATED TO PGM=*.DD
IEF237I 253  ALLOCATED TO STEPLIB
IEF237I 253  ALLOCATED TO
IEF237I 253  ALLOCATED TO SYS00370
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO PRINTR
IEF237I 190  ALLOCATED TO IMAGES
IEF237I 190  ALLOCATED TO SYS00372
IEF237I JES2 ALLOCATED TO SYSUDUMP
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 190  ALLOCATED TO RRDSF01
IEF142I VSTESTR2 GO PL1F - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS20189.T181702.RA000.VSTESTR2.GOSET        KEPT          *--------0
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYSC.PL1LIB                                  KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   SYSC.PL1LIB                                  KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   UCSYSCPK                                     KEPT          *--------0
IEF285I   VOL SER NOS= SYSCPK.
IEF285I   JES2.JOB00156.SO0103                         SYSOUT
IEF285I   JES2.JOB00156.SO0104                         SYSOUT
IEF285I   PUB001.VSAMTEST.DATA                         KEPT          *-------11
IEF285I   VOL SER NOS= PUB001.
IEF285I   UCPUB001                                     KEPT          *--------0
IEF285I   VOL SER NOS= PUB001.
IEF285I   JES2.JOB00156.SO0105                         SYSOUT
IEF285I   JES2.JOB00156.SO0106                         SYSOUT
IEF285I   PUB001.VSTESTRR.CLUSTER                      KEPT          *--------3
IEF285I   VOL SER NOS= PUB001.
IEF373I STEP /GO      / START 20189.1817
IEF374I STEP /GO      / STOP  20189.1817 CPU    0MIN 00.02SEC SRB    0MIN 00.00SEC VIRT   100K SYS   180K
********************************************************************************************************
*                                      PRC-CCI  370/148 VS2 R03.8  HMVS  STEP STATISTICS                 *
*  STEP NAME  GO          USER CORE          100K   TAPES USED/IO 000/000000000   START   TIME  18:17:03    TCB TIME  00:00:00.02  *
*  PGM  NAME  PGM=*.DD    SYSTEM CORE        180K   DISKS USED/IO 003/000000014   STOP    TIME  18:17:03    SRB TIME  00:00:00.00  *
*   COND CODE    0000     PRIVATE AREA SZ   4096K       ALLOC TIME  18:17:03      ELAPSED TIME                PGM LOAD  18:17:03   *
** PGNO * NR SRV UNITS * ACTIVE TIME ** PAGES IN *** PAGES OUT ** # SWAPS * PGS SWAP IN * PGS SWAP OUT * VIO PGS IN * VIO PGS OUT **
*   004            96   00:00:00.02            0             0         0             0              0             0             0  *
********************************************************************************************************
*  CPU $ (     0.00) + EXCP $ (     0.01) + MEMORY $ (     0.00) = TOTAL $ (     0.01)                    *
********************************************************************************************************
IEF237I 251  ALLOCATED TO SYS00001
IEF285I   SYS20189.T181703.RA000.VSTESTR2.R0000001     KEPT          *--------0
IEF285I   VOL SER NOS= WORK00.
IEF285I   SYS20189.T181702.RA000.VSTESTR2.GOSET        DELETED
```

```
IEF285I   VOL SER NOS= WORK00.
IEF375I  JOB /VSTESTR2/ START 20189.1817
IEF376I  JOB /VSTESTR2/ STOP  20189.1817 CPU    0MIN 00.22SEC SRB    0MIN 00.05SEC
```

PL/I F COMPILER OPTIONS SPECIFIED ARE AS FOLLOWS--

```
     LOAD,NODECK,ATR,XREF,CHAR60,MACRO


THE COMPLETE LIST OF OPTIONS USED DURING THIS COMPILATION IS--   EBCDIC
                                                                CHAR60
                                                                MACRO
                                                                SOURCE2
                                                              NOMACDCK
                                                                COMP
                                                                SOURCE
                                                                ATR
                                                                XREF
                                                              NOEXTREF
                                                              NOLIST
                                                                LOAD
                                                              NODECK
                                                                FLAGW
                                                              NOSTMT
                                                                SIZE=4154608
                                                                LINECNT=050
                                                                OPT=01
                                                                SORMGIN=(002,072)
                                                              NOEXTDIC
                                                              NONEST
                                                              OPLIST
                                                              SYNCHKT

*OPTIONS IN EFFECT*     EBCDIC,CHAR60,MACRO,SOURCE2,NOMACDCK,COMP,SOURCE,ATR,XREF,NOEXTREF,NOLIST,LOAD,
*OPTIONS IN EFFECT*     NODECK,FLAGW,NOSTMT,SIZE=4154608,LINECNT=050,OPT=01,SORMGIN=(002,072),NOEXTDIC,
*OPTIONS IN EFFECT*     NONEST,OPLIST,SYNCHKT
```

COMPILE-TIME MACRO PROCESSOR
MACRO SOURCE2 LISTING

```
  1    /*****************************************************************18640000
  2                                                                      18650000
  3      RRDSLODS - TESTS THE VSAMIO ROUTINE BY LOADING AN RRDS CLUSTER  18660000
  4                 SEQUENTIALLY WITH RECORDS FROM A SEQUENTIAL DATASET.  THE 18670000
  5                 RELATIVE RECORD NUMBER IS GENERATED SEQUENTIALLY AS THE  18680000
  6                 RECORDS ARE WRITTEN SO THERE ARE NO GAPS LEFT IN THE     18690000
  7                 RESULTING CLUSTER.                                       18700000
  8                                                                      18710000
  9     *****************************************************************/18720000
 10    RRDSLOS:                                                          18730000
 11       PROCEDURE OPTIONS(MAIN);                                       18740000
 12                                                                      18750000
 13          ON ERROR                                                    18760000
 14             BEGIN;                                                   18770000
 15                ON ERROR SYSTEM;                                      18780000
 16                PUT SKIP(3) LIST((54)'*' || ' DEBUG AID ' || (54)'*'); 18790000
 17                PUT SKIP DATA;                                        18800000
 18                PUT SKIP(3) LIST((54)'*' || ' DEBUG AID ' || (54)'*'); 18810000
 19             END;                                                     18820000
 20                                                                      18830000
 21          OPEN                                                        18840000
 22             FILE(IMAGES),                                            18850000
 23             FILE(PRINTR) LINESIZE(121);                              18860000
 24                                                                      18870000
 25          ON ENDFILE(IMAGES)                                          18880000
 26             MORE_RECORDS = NO;                                       18890000
 27                                                                      18900000
 28          PRINT_AREA = 'RRDSLODS: WRITE RRDS SEQUENTIALLY';           18910000
 29          WRITE FILE(PRINTR) FROM(PRINT_LINE);                        18920000
 30          PRINT_AREA = '------------------------------';              18930000
 31          WRITE FILE(PRINTR) FROM(PRINT_LINE);                        18940000
 32          PRINT_AREA = ' ';                                           18950000
 33          WRITE FILE(PRINTR) FROM(PRINT_LINE);                        18960000
 34                                                                      18970000
 35          MORE_RECORDS = YES;                                         18980000
 36                                                                      18990000
 37    /*****************************************************************19000000
 38      ESTABLISH PARAMETERS FOR VSAM DATASET AND CALL ROUTINE TO OPEN  19010000
 39     *****************************************************************/19020000
 40          VSFB_DDNAME = 'RRDSF01';                                    19030000
 41          VSFB_ORGANIZATION = VSIO_RRDS;                              19040000
 42          VSFB_ACCESS = VSIO_SEQUENTIAL;                              19050000
 43          VSFB_MODE = VSIO_OUTPUT;                                    19060000
 44          VSFB_RECORD_LENGTH = 80;                                    19070000
```

MACRO SOURCE2 LISTING

```
 45          VSFB_KEY_POSITION = 0;                                    19080000
 46          VSFB_KEY_LENGTH = 0;                                      19090000
 47          VSIO_COMMAND = VSIO_OPEN;                                 19100000
 48          CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                       19110000
 49                        VSIO_FILE_BLOCK,                            19120000
 50                        RECORD_IMAGE);                              19130000
 51          IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN             19140000
 52             DO;                                                    19150000
 53                CALL VSIO_ERROR;                                    19160000
 54                RETURN;                                             19170000
 55             END;                                                   19180000
 56                                                                    19190000
 57          DO WHILE(MORE_RECORDS);                                   19200000
 58             READ FILE(IMAGES) INTO(RECORD_IMAGE);                  19210000
 59             IF (MORE_RECORDS) THEN                                 19220000
 60                DO;                                                 19230000
 61                   RECORD_NUMBER = RECORD_NUMBER +1;                19240000
 62                   VSFB_KEY_LENGTH = RECORD_NUMBER;                 19250000
 63                   CALL WRITE_RR;                                   19260000
 64                END;                                                19270000
 65          END;                                                      19280000
 66                                                                    19290000
 67          CLOSE FILE(IMAGES);                                       19300000
 68                                                                    19310000
 69     /*****************************************************************19320000
 70      CALL ROUTINE TO CLOSE VSAM DATASET                            19330000
 71     *****************************************************************/19340000
 72          VSIO_COMMAND = VSIO_CLOSE;                                19350000
 73          CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                       19360000
 74                        VSIO_FILE_BLOCK,                            19370000
 75                        RECORD_IMAGE);                              19380000
 76          IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN             19390000
 77             CALL VSIO_ERROR;                                       19400000
 78                                                                    19410000
 79          COUNTER_EDIT = RECORD_COUNTER;                            19420000
 80          PRINT_AREA = COUNTER_EDIT ||                              19430000
 81                       ' RECORDS WERE LOADED SUCCESSFULLY';         19440000
 82          WRITE FILE(PRINTR) FROM(PRINT_LINE);                      19450000
 83                                                                    19460000
 84          RETURN;                                                   19470000
 85                                                                    19480000
 86     WRITE_RR:                                                      19490000
 87        PROCEDURE;                                                  19500000
 88                                                                    19510000
 89     /*****************************************************************19520000
```

MACRO SOURCE2 LISTING

```
 90      CALL ROUTINE TO WRITE RECORD INTO VSAM DATASET                    19530000
 91     *****************************************************************/19540000
 92          VSIO_COMMAND = VSIO_WRITE;                                   19550000
 93          CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                          19560000
 94                        VSIO_FILE_BLOCK,                               19570000
 95                        RECORD_IMAGE);                                 19580000
 96          IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN                19590000
 97             CALL VSIO_ERROR;                                          19600000
 98          ELSE                                                         19610000
 99             RECORD_COUNTER = RECORD_COUNTER + 1;                      19620000
100                                                                       19630000
101          RETURN;                                                      19640000
102                                                                       19650000
103       END WRITE_RR;                                                   19660000
104                                                                       19670000
105    VSIO_ERROR:                                                        19680000
106       PROCEDURE;                                                      19690000
107          PRINT_AREA = 'VSAMIO ERROR OCCURRED DURING ' ||              19700000
108                       VSIO_COMMAND;                                   19710000
109          WRITE FILE(PRINTR) FROM(PRINT_LINE);                         19720000
110          PRINT_AREA = 'VSIO_RETURN_CODE = ' ||                        19730000
111                       VSIO_RETURN_CODE;                               19740000
112          WRITE FILE(PRINTR) FROM(PRINT_LINE);                         19750000
113          PRINT_AREA = 'VSIO_VSAM_RETURN_CODE = ' ||                   19760000
114                       VSIO_VSAM_RETURN_CODE;                          19770000
115          WRITE FILE(PRINTR) FROM(PRINT_LINE);                         19780000
116          PRINT_AREA = 'VSIO_VSAM_FUNCTION_CODE = ' ||                 19790000
117                       VSIO_VSAM_FUNCTION_CODE;                        19800000
118          WRITE FILE(PRINTR) FROM(PRINT_LINE);                         19810000
119          PRINT_AREA = 'VSIO_VSAM_FEEDBACK_CODE = ' ||                 19820000
120                       VSIO_VSAM_FEEDBACK_CODE;                        19830000
121          WRITE FILE(PRINTR) FROM(PRINT_LINE);                         19840000
122          PRINT_AREA = ' ';                                            19850000
123                                                                       19860000
124          RETURN;                                                      19870000
125                                                                       19880000
126       END VSIO_ERROR;                                                 19890000
127                                                                       19900000
128       DECLARE                                                         19910000
129          IMAGES FILE INPUT RECORD SEQUENTIAL EXTERNAL                 19920000
130             ENV(F),                                                   19930000
131          PRINTR FILE OUTPUT RECORD SEQUENTIAL EXTERNAL                19940000
132             ENV(F CTLASA);                                            19950000
133                                                                       19960000
134       DECLARE                                                         19970000
```

MACRO SOURCE2 LISTING

```
135          COUNTER_EDIT                  PICTURE 'ZZ,ZZZ,ZZ9V',          19980000
136          MORE_RECORDS                  BIT(1),                          19990000
137          NO                            BIT(1)    INIT('0'B),            20000000
138          RECORD_COUNTER                FIXED BINARY(15,0) INIT(0),      20010000
139          RECORD_NUMBER                 FIXED BINARY(15,0) INIT(0),      20020000
140          YES                           BIT(1)    INIT('1'B);            20030000
141                                                                          20040000
142       DECLARE                                                            20050000
143          1 RECORD_IMAGE,                                                 20060000
144             2 RECORD_IDENT             CHAR(7),                         20070000
145             2 RECORD_SEQUENCE          CHAR(3),                         20080000
146             2 RECORD_FIELDS            CHAR(70);                        20090000
147                                                                          20100000
148       DECLARE                                                            20110000
149          1 PRINT_LINE,                                                   20120000
150             2 CARRIAGE_CONTROL         CHAR(1)   INIT(' '),             20130000
151             2 PRINT_AREA               CHAR(120);                       20140000
152                                                                          20150000
153    %INCLUDE (VSAMIO);                                                    20160000
154    %INCLUDE (VSAMIOFB);                                                  20170000
155                                                                          20180000
156       END RRDSLOS;                                                       20190000
```

INCLUDED TEXT FOLLOWS FROM DD.MEMBER = SYSLIB .VSAMIO

```
157    /*****************************************************************31100000
158                                                                          31110000
159            VV   VV    SSSSS       A      M     M    IIII      OOOOO       31120000
160            VV   VV   SS   SS     AAA     MM   MM     II      OO   OO      31130000
161            VV   VV   SS         AA AA    MMM MMM     II      OO   OO      31140000
162            VV   VV    SSSSS    AA   AA   MMMMMMM     II      OO   OO      31150000
163            VV   VV        SS   AA   AA   MM M MM     II      OO   OO      31160000
164             VV VV    SS   SS   AAAAAAA   MM   MM     II      OO   OO      31170000
165              VVV     SS   SS   AA   AA   MM   MM     II      OO   OO      31180000
166              V        SSSSS    AA   AA   MM   MM    IIII      OOOOO       31190000
167                                                                          31200000
168     *****************************************************************31210000
169      THESE PARAMETERS ARE USED TO INTERFACE WITH THE VSAM DATASET ACCESS  31220000
170      ROUTINE.                                                            31230000
171                                                                          31240000
172      THE VSIO_PARAMETER_VALUES SUPPLY THE VALUES USED TO MOVE INTO       31250000
173      PARAMETER ENTRIES TO TAILOR THE ROUTINE TO A SPECIFIC DATASET AND    31260000
174      TO PROVIDE COMMANDS TO DRIVE THE ROUTINE.                           31270000
175     *****************************************************************/31280000
```

MACRO SOURCE2 LISTING

```
176                                                                  31290000
177            DECLARE                                               31300000
178               1 VSIO_PARAMETER_VALUES   STATIC,                  31310000
179                  2 VSIO_OPEN            CHAR(8)   INIT('OPEN    '),  31320000
180                  2 VSIO_CLOSE           CHAR(8)   INIT('CLOSE   '),  31330000
181                  2 VSIO_READ            CHAR(8)   INIT('READ    '),  31340000
182                  2 VSIO_WRITE           CHAR(8)   INIT('WRITE   '),  31350000
183                  2 VSIO_REWRITE         CHAR(8)   INIT('REWRITE '),  31360000
184                  2 VSIO_DELETE          CHAR(8)   INIT('DELETE  '),  31370000
185                  2 VSIO_START_EQUAL     CHAR(8)   INIT('STARTEQ '),  31380000
186                  2 VSIO_START_NOTLESS   CHAR(8)   INIT('STARTGE '),  31390000
187                  2 VSIO_KSDS            CHAR(4)   INIT('KSDS'),      31400000
188                  2 VSIO_ESDS            CHAR(4)   INIT('ESDS'),      31410000
189                  2 VSIO_RRDS            CHAR(4)   INIT('RRDS'),      31420000
190                  2 VSIO_SEQUENTIAL      CHAR(10)  INIT('SEQUENTIAL'),31430000
191                  2 VSIO_DIRECT          CHAR(10)  INIT('DIRECT    '),31440000
192                  2 VSIO_DYNAMIC         CHAR(10)  INIT('DYNAMIC   '),31450000
193                  2 VSIO_INPUT           CHAR(6)   INIT('INPUT '),    31460000
194                  2 VSIO_OUTPUT          CHAR(6)   INIT('OUTPUT'),    31470000
195                  2 VSIO_INPUT_OUTPUT    CHAR(6)   INIT('UPDATE'),    31480000
196                  2 (VSIO_RC_SUCCESS                INIT(0),          31490000
197                     VSIO_RC_LOGIC_ERROR            INIT(8),          31500000
198                     VSIO_RC_END_OF_FILE            INIT(9999),       31510000
199                     VSIO_RC_UNKNOWN_COMMAND        INIT(20),         31520000
200                     VSIO_RC_DATASET_ALREADY_OPEN   INIT(21),         31530000
201                     VSIO_RC_DATASET_NOT_OPEN       INIT(22),         31540000
202                     VSIO_RC_ORGANIZATION_UNKNOWN   INIT(23),         31550000
203                     VSIO_RC_ACCESS_UNKNOWN         INIT(24),         31560000
204                     VSIO_RC_ORG_ACCESS_MISMATCH    INIT(25),         31570000
205                     VSIO_RC_MODE_UNKNOWN           INIT(26),         31580000
206                     VSIO_RC_MODE_UNSUPPORTED       INIT(27),         31590000
207                     VSIO_RC_DDNAME_BLANK           INIT(28))         31600000
208                                       FIXED BINARY(15,0),            31610000
209                  2 (VSIO_FB_DUPLICATE_RECORD       INIT(8),          31620000
210                     VSIO_FB_KEY_SEQUENCE           INIT(12),         31630000
211                     VSIO_FB_RECORD_NOT_FOUND       INIT(16),         31640000
212                     VSIO_FB_NO_MORE_SPACE          INIT(28),         31650000
213                     VSIO_FB_READ_WITHOUT_START     INIT(88))         31660000
214                                       FIXED BINARY(15,0),            31670000
215      /*************************************************************31680000
216        THE VSIO_PARAMETER_BLOCK IS THE COMMUNICATION INTERFACE TO THE 31690000
217        THE ROUTINE.                                                  31700000
218       *************************************************************/31710000
219                                                                      31720000
220                1 VSIO_PARAMETER_BLOCK    STATIC,                   31730000
```

MACRO SOURCE2 LISTING

```
221                  2 VSIO_COMMAND         CHAR(8)   INIT(' '),             31740000
222                  2 (VSIO_RETURN_CODE,                                     31750000
223                     VSIO_VSAM_RC,                                         31760000
224                     VSIO_VSAM_FUNCTION,                                   31770000
225                     VSIO_VSAM_FEEDBACK) FIXED BINARY(15,0) INIT(0);       31780000
226                                                                           31790000
227     /*****************************************************************31800000
228                             END OF VSAMIO COPY BOOK                       31810000
229      *****************************************************************/31820000
```

INCLUDED TEXT FOLLOWS FROM DD.MEMBER = SYSLIB .VSAMIOFB

```
230     /*****************************************************************00000100
231                                                                           00000200
232        VV   VV   SSSSS      A     M     M  IIII   OOOOO   FFFFFFF  BBBBBB  00000300
233        VV   VV  SS   SS    AAA    MM   MM   II   OO   OO  FF       BB   BB 00000400
234        VV   VV  SS        AA AA   MMM MMM   II   OO   OO  FF       BB   BB 00000500
235        VV   VV   SSSSS   AA   AA  MMMMMMM   II   OO   OO  FFFFF    BBBBBB  00000600
236        VV   VV       SS  AA   AA  MM M MM   II   OO   OO  FF       BB   BB 00000700
237         VV VV   SS   SS  AAAAAAA  MM   MM   II   OO   OO  FF       BB   BB 00000800
238          VVV    SS   SS  AA   AA  MM   MM   II   OO   OO  FF       BB   BB 00000900
239           V      SSSSS   AA   AA  MM   MM  IIII   OOOOO   FF       BBBBBB  00001000
240                                                                           00001100
241      *****************************************************************00001200
242        THESE PARAMETERS ARE USED TO INTERFACE WITH THE VSAM DATASET ACCESS 00001300
243        ROUTINE, AND ARE USED TO COMMUNICATE CHARACTERISTICS FOR A SINGLE   00001400
244        VSAM DATASET.                                                      00001500
245                                                                           00001600
246        WITH THE 2 EXCEPTIONS FOR RECORD LENGTH (TO ACCOMODATE VARIABLE     00001700
247        LENGTH RECORDS) AND RELATIVE RECORD (TO ACCOMODATE RELATIVE RECORD  00001800
248        DATASETS), THESE DATA NAMES MUST BE POPULATED PRIOR TO CALLING THE  00001900
249        ROUTINE TO OPEN THE DATASET AND MUST NOT THEN BE CHANGED UNTIL THE  00002000
250        DATASET HAS BEEN CLOSED.                                           00002100
251      *****************************************************************/00002200
252                                                                           00002300
253           DECLARE                                                         00002400
254              1 VSIO_FILE_BLOCK            STATIC,                         00002500
255                 2 VSFB_DDNAME             CHAR(8)   INIT(' '),            00002600
256                 2 VSFB_ORGANIZATION       CHAR(4)   INIT(' '),            00002700
257                 2 VSFB_ACCESS             CHAR(10)  INIT(' '),            00002800
258                 2 VSFB_MODE               CHAR(6)   INIT(' '),            00002900
259                 2 (VSFB_RECORD_LENGTH,                                    00003000
260                    VSFB_KEY_POSITION,                                     00003100
261                    VSFB_KEY_LENGTH)       FIXED BINARY(15,0) INIT(0),     00003200
```

MACRO SOURCE2 LISTING

```
262                2 VSFB_FILE_STATUS        CHAR(1)   INIT('C'),             00003300
263                2 VSFB_RESERVED           CHAR(161);                       00003400
264                                                                           00003500
265     /*****************************************************************00003600
266                             END OF VSAMIOFB COPY BOOK                     00003700
267      *****************************************************************/00003800
```

NO ERROR OR WARNING CONDITION HAS BEEN DETECTED FOR THIS MACRO PASS.

SOURCE LISTING.

```
                /*****************************************************************    1
                                                                                       1
                  RRDSLODS - TESTS THE VSAMIO ROUTINE BY LOADING AN RRDS CLUSTER       1
                             SEQUENTIALLY WITH RECORDS FROM A SEQUENTIAL DATASET.  THE  1
                             RELATIVE RECORD NUMBER IS GENERATED SEQUENTIALLY AS THE    1
                             RECORDS ARE WRITTEN SO THERE ARE NO GAPS LEFT IN THE       1
                             RESULTING CLUSTER.                                        1
                                                                                       1
                 *****************************************************************/    1
                                                                                       9
1               RRDSLOS:                                                              10
                   PROCEDURE OPTIONS(MAIN);                                           11
                                                                                      12
2                     ON ERROR                                                        13
3                     BEGIN;                                                          14
4                        ON ERROR SYSTEM;                                             15
5                        PUT SKIP(3) LIST((54)'*' || ' DEBUG AID ' || (54)'*');       16
6                        PUT SKIP DATA;                                               17
7                        PUT SKIP(3) LIST((54)'*' || ' DEBUG AID ' || (54)'*');       18
8                     END;                                                            19
                                                                                      20
9                     OPEN                                                            21
                         FILE(IMAGES),                                                22
                         FILE(PRINTR) LINESIZE(121);                                  23
                                                                                      24
10                    ON ENDFILE(IMAGES)                                              25
11                       MORE_RECORDS = NO;                                           26
                                                                                      27
12                    PRINT_AREA = 'RRDSLODS: WRITE RRDS SEQUENTIALLY';               28
13                    WRITE FILE(PRINTR) FROM(PRINT_LINE);                            29
14                    PRINT_AREA = '--------------------------------';                30
15                    WRITE FILE(PRINTR) FROM(PRINT_LINE);                            31
16                    PRINT_AREA = ' ';                                               32
17                    WRITE FILE(PRINTR) FROM(PRINT_LINE);                            33
                                                                                      34
18                    MORE_RECORDS = YES;                                             35
                                                                                      36
                   /*****************************************************************  37
                     ESTABLISH PARAMETERS FOR VSAM DATASET AND CALL ROUTINE TO OPEN     37
                    *****************************************************************/  37
                                                                                      39
19                    VSFB_DDNAME = 'RRDSF01';                                        40
20                    VSFB_ORGANIZATION = VSIO_RRDS;                                  41
```

```
                    VSFB_ACCESS = VSIO_SEQUENTIAL;                                  42
                    VSFB_MODE = VSIO_OUTPUT;                                        43
                    VSFB_RECORD_LENGTH = 80;                                        44
                    VSFB_KEY_POSITION = 0;                                          45
                    VSFB_KEY_LENGTH = 0;                                            46
                    VSIO_COMMAND = VSIO_OPEN;                                       47
                    CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                             48
                                  VSIO_FILE_BLOCK,                                  49
                                  RECORD_IMAGE);                                    50
                    IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN                   51
                       DO;                                                          52
                          CALL VSIO_ERROR;                                          53
                          RETURN;                                                   54
                       END;                                                         55
                                                                                    56
                    DO WHILE(MORE_RECORDS);                                         57
                       READ FILE(IMAGES) INTO(RECORD_IMAGE);                        58
                       IF (MORE_RECORDS) THEN                                       59
                          DO;                                                       60
                             RECORD_NUMBER = RECORD_NUMBER +1;                      61
                             VSFB_KEY_LENGTH = RECORD_NUMBER;                       62
                             CALL WRITE_RR;                                         63
                          END;                                                      64
                    END;                                                            65
                                                                                    66
                    CLOSE FILE(IMAGES);                                             67
                                                                                    68
                   /*****************************************************************69
                     CALL ROUTINE TO CLOSE VSAM DATASET                             69
                    *****************************************************************/69
                                                                                    71
                        VSIO_COMMAND = VSIO_CLOSE;                                  72
                        CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                         73
                                      VSIO_FILE_BLOCK,                              74
                                      RECORD_IMAGE);                                75
                        IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN               76
                           CALL VSIO_ERROR;                                         77
                                                                                    78
                        COUNTER_EDIT = RECORD_COUNTER;                              79
                        PRINT_AREA = COUNTER_EDIT ||                                80
                                     ' RECORDS WERE LOADED SUCCESSFULLY';           81
                        WRITE FILE(PRINTR) FROM(PRINT_LINE);                        82
                                                                                    83
                        RETURN;                                                     84
                                                                                    85
                    WRITE_RR:                                                       86
                       PROCEDURE;                                                   87
```

```
                                                                          88
              /*************************************************************  89
                CALL ROUTINE TO WRITE RECORD INTO VSAM DATASET             89
               *************************************************************/  89
                                                                          91
52                  VSIO_COMMAND = VSIO_WRITE;                            92
53                  CALL VSAMIOP (VSIO_PARAMETER_BLOCK,                   93
                                  VSIO_FILE_BLOCK,                        94
                                  RECORD_IMAGE);                          95
54                  IF (VSIO_RETURN_CODE ^= VSIO_RC_SUCCESS) THEN         96
55                     CALL VSIO_ERROR;                                   97
56                  ELSE                                                  98
56                     RECORD_COUNTER = RECORD_COUNTER + 1;               99
                                                                         100
57                  RETURN;                                              101
                                                                         102
58                END WRITE_RR;                                          103
                                                                         104
59              VSIO_ERROR:                                              105
                   PROCEDURE;                                            106
60                 PRINT_AREA = 'VSAMIO ERROR OCCURRED DURING ' ||       107
                                VSIO_COMMAND;                            108
61                 WRITE FILE(PRINTR) FROM(PRINT_LINE);                  109
62                 PRINT_AREA = 'VSIO_RETURN_CODE = ' ||                 110
                                VSIO_RETURN_CODE;                        111
63                 WRITE FILE(PRINTR) FROM(PRINT_LINE);                  112
64                 PRINT_AREA = 'VSIO_VSAM_RETURN_CODE = ' ||            113
                                VSIO_VSAM_RETURN_CODE;                   114
65                 WRITE FILE(PRINTR) FROM(PRINT_LINE);                  115
66                 PRINT_AREA = 'VSIO_VSAM_FUNCTION_CODE = ' ||          116
                                VSIO_VSAM_FUNCTION_CODE;                 117
67                 WRITE FILE(PRINTR) FROM(PRINT_LINE);                  118
68                 PRINT_AREA = 'VSIO_VSAM_FEEDBACK_CODE = ' ||          119
                                VSIO_VSAM_FEEDBACK_CODE;                 120
69                 WRITE FILE(PRINTR) FROM(PRINT_LINE);                  121
70                 PRINT_AREA = ' ';                                     122
                                                                         123
71                 RETURN;                                               124
                                                                         125
72               END VSIO_ERROR;                                         126
                                                                         127
73               DECLARE                                                 128
                    IMAGES FILE INPUT RECORD SEQUENTIAL EXTERNAL         129
                       ENV(F),                                           130
                    PRINTR FILE OUTPUT RECORD SEQUENTIAL EXTERNAL        131
                       ENV(F CTLASA);                                    132
                                                                         133
```

```
74                 DECLARE                                                    134
                      COUNTER_EDIT                 PICTURE 'ZZ,ZZZ,ZZ9V',     135
                      MORE_RECORDS                 BIT(1),                    136
                      NO                           BIT(1)    INIT('0'B),      137
                      RECORD_COUNTER               FIXED BINARY(15,0) INIT(0), 138
                      RECORD_NUMBER                FIXED BINARY(15,0) INIT(0), 139
                      YES                          BIT(1)    INIT('1'B);      140
                                                                              141
75                 DECLARE                                                    142
                      1 RECORD_IMAGE,                                         143
                         2 RECORD_IDENT            CHAR(7),                   144
                         2 RECORD_SEQUENCE         CHAR(3),                   145
                         2 RECORD_FIELDS           CHAR(70);                  146
                                                                              147
76                 DECLARE                                                    148
                      1 PRINT_LINE,                                           149
                         2 CARRIAGE_CONTROL        CHAR(1)   INIT(' '),       150
                         2 PRINT_AREA              CHAR(120);                 151
                                                                              152
               /*************************************************************  157
                                                                              157
                  VV    VV    SSSSS       A      M     M    IIII      OOOOO    157
                  VV    VV   SS   SS     AAA     MM   MM     II      OO   OO   157
                  VV    VV   SS         AA AA    MMM MMM     II      OO   OO   157
                  VV    VV    SSSSS    AA   AA   MMMMMMM     II      OO   OO   157
                  VV    VV        SS   AA   AA   MM M MM     II      OO   OO   157
                   VV VV    SS   SS   AAAAAAA   MM   MM     II      OO   OO   157
                    VVV     SS   SS   AA   AA   MM   MM     II      OO   OO   157
                     V       SSSSS    AA   AA   MM   MM    IIII      OOOOO    157
                                                                              157
                 *************************************************************  157
                  THESE PARAMETERS ARE USED TO INTERFACE WITH THE VSAM DATASET ACCESS  157
                  ROUTINE.                                                    157
                                                                              157
                  THE VSIO_PARAMETER_VALUES SUPPLY THE VALUES USED TO MOVE INTO  157
                  PARAMETER ENTRIES TO TAILOR THE ROUTINE TO A SPECIFIC DATASET AND  157
                  TO PROVIDE COMMANDS TO DRIVE THE ROUTINE.                   157
                 *************************************************************/  157
                                                                              175
77                       DECLARE                                              177
                            1 VSIO_PARAMETER_VALUES   STATIC,                 178
                               2 VSIO_OPEN            CHAR(8)   INIT('OPEN    '),  179
                               2 VSIO_CLOSE           CHAR(8)   INIT('CLOSE   '),  180
                               2 VSIO_READ            CHAR(8)   INIT('READ    '),  181
                               2 VSIO_WRITE           CHAR(8)   INIT('WRITE   '),  182
                               2 VSIO_REWRITE         CHAR(8)   INIT('REWRITE '),  183
                               2 VSIO_DELETE          CHAR(8)   INIT('DELETE  '),  184
```

```
                     2 VSIO_START_EQUAL     CHAR(8)   INIT('STARTEQ '),        185
                     2 VSIO_START_NOTLESS   CHAR(8)   INIT('STARTGE '),        186
                     2 VSIO_KSDS            CHAR(4)   INIT('KSDS'),            187
                     2 VSIO_ESDS            CHAR(4)   INIT('ESDS'),            188
                     2 VSIO_RRDS            CHAR(4)   INIT('RRDS'),            189
                     2 VSIO_SEQUENTIAL      CHAR(10)  INIT('SEQUENTIAL'),      190
                     2 VSIO_DIRECT          CHAR(10)  INIT('DIRECT    '),      191
                     2 VSIO_DYNAMIC         CHAR(10)  INIT('DYNAMIC   '),      192
                     2 VSIO_INPUT           CHAR(6)   INIT('INPUT '),          193
                     2 VSIO_OUTPUT          CHAR(6)   INIT('OUTPUT'),          194
                     2 VSIO_INPUT_OUTPUT    CHAR(6)   INIT('UPDATE'),          195
                     2 (VSIO_RC_SUCCESS                INIT(0),                196
                        VSIO_RC_LOGIC_ERROR            INIT(8),                197
                        VSIO_RC_END_OF_FILE            INIT(9999),             198
                        VSIO_RC_UNKNOWN_COMMAND        INIT(20),               199
                        VSIO_RC_DATASET_ALREADY_OPEN   INIT(21),               200
                        VSIO_RC_DATASET_NOT_OPEN       INIT(22),               201
                        VSIO_RC_ORGANIZATION_UNKNOWN   INIT(23),               202
                        VSIO_RC_ACCESS_UNKNOWN         INIT(24),               203
                        VSIO_RC_ORG_ACCESS_MISMATCH    INIT(25),               204
                        VSIO_RC_MODE_UNKNOWN           INIT(26),               205
                        VSIO_RC_MODE_UNSUPPORTED       INIT(27),               206
                        VSIO_RC_DDNAME_BLANK           INIT(28))               207
                                          FIXED BINARY(15,0),                  208
                     2 (VSIO_FB_DUPLICATE_RECORD       INIT(8),                209
                        VSIO_FB_KEY_SEQUENCE           INIT(12),               210
                        VSIO_FB_RECORD_NOT_FOUND       INIT(16),               211
                        VSIO_FB_NO_MORE_SPACE          INIT(28),               212
                        VSIO_FB_READ_WITHOUT_START     INIT(88))               213
                                       FIXED BINARY(15,0),                     214
                  /*************************************************************  215
                    THE VSIO_PARAMETER_BLOCK IS THE COMMUNICATION INTERFACE TO THE  215
                    THE ROUTINE.                                                 215
                   *************************************************************/  215
                                                                                 218
                               1 VSIO_PARAMETER_BLOCK    STATIC,                220
                                  2 VSIO_COMMAND         CHAR(8)   INIT(' '),   221
                                  2 (VSIO_RETURN_CODE,                          222
                                     VSIO_VSAM_RC,                              223
                                     VSIO_VSAM_FUNCTION,                        224
                                     VSIO_VSAM_FEEDBACK) FIXED BINARY(15,0) INIT(0);  225
                                                                                226
                  /*************************************************************  227
                                        END OF VSAMIO COPY BOOK                  227
                   *************************************************************/  227
                  /*************************************************************  230
                                                                                 230
```

```
                    VV   VV   SSSSS      A     M     M  IIII   OOOOO   FFFFFFF  BBBBBB    230
                    VV   VV  SS   SS    AAA    MM   MM   II   OO   OO  FF       BB   BB   230
                    VV   VV  SS        AA AA   MMM MMM   II   OO   OO  FF       BB   BB   230
                    VV   VV   SSSSS   AA   AA  MMMMMMM   II   OO   OO  FFFFF    BBBBBB    230
                    VV   VV       SS  AA   AA  MM M MM   II   OO   OO  FF       BB   BB   230
                     VV VV   SS   SS  AAAAAAA  MM   MM   II   OO   OO  FF       BB   BB   230
                      VVV    SS   SS  AA   AA  MM   MM   II   OO   OO  FF       BB   BB   230
                       V      SSSSS   AA   AA  MM   MM  IIII   OOOOO   FF       BBBBBB    230
                                                                                           230
                  ************************************************************************ 230
                    THESE PARAMETERS ARE USED TO INTERFACE WITH THE VSAM DATASET ACCESS    230
                    ROUTINE, AND ARE USED TO COMMUNICATE CHARACTERISTICS FOR A SINGLE      230
                    VSAM DATASET.                                                          230
                                                                                           230
                    WITH THE 2 EXCEPTIONS FOR RECORD LENGTH (TO ACCOMODATE VARIABLE        230
                    LENGTH RECORDS) AND RELATIVE RECORD (TO ACCOMODATE RELATIVE RECORD     230
                    DATASETS), THESE DATA NAMES MUST BE POPULATED PRIOR TO CALLING THE     230
                    ROUTINE TO OPEN THE DATASET AND MUST NOT THEN BE CHANGED UNTIL THE     230
                    DATASET HAS BEEN CLOSED.                                               230
                  ************************************************************************/ 230
                                                                                           251
78                    DECLARE                                                              253
                         1 VSIO_FILE_BLOCK            STATIC,                            254
                            2 VSFB_DDNAME             CHAR(8)   INIT(' '),               255
                            2 VSFB_ORGANIZATION       CHAR(4)   INIT(' '),               256
                            2 VSFB_ACCESS             CHAR(10)  INIT(' '),               257
                            2 VSFB_MODE               CHAR(6)   INIT(' '),               258
                           2 (VSFB_RECORD_LENGTH,                                        259
                            VSFB_KEY_POSITION,                                           260
                            VSFB_KEY_LENGTH)          FIXED BINARY(15,0) INIT(0),        261
                           2 VSFB_FILE_STATUS         CHAR(1)   INIT('C'),               262
                           2 VSFB_RESERVED            CHAR(161);                         263
                                                                                          264
                  /************************************************************************ 265
                                        END OF VSAMIOFB COPY BOOK                         265
                   ************************************************************************/ 265
                                                                                          155
79                    END RRDSLOS;                                                        156
```

ATTRIBUTE AND CROSS-REFERENCE TABLE

DCL NO.		IDENTIFIER	ATTRIBUTES AND REFERENCES
76		CARRIAGE_CONTROL	IN PRINT_LINE,AUTOMATIC,UNALIGNED,INITIAL,STRING(1),CHARACTER
74		COUNTER_EDIT	AUTOMATIC,UNALIGNED,DECIMAL,PICTURE(ZZ,ZZZ,ZZ9V) 47,48
73		IMAGES	FILE,EXTERNAL,INPUT,RECORD,SEQUENTIAL,ENVIRONMENT(F) 9,10,34,42
74		MORE_RECORDS	AUTOMATIC,UNALIGNED,STRING(1),BIT 11,18,33,35
74		NO	AUTOMATIC,UNALIGNED,INITIAL,STRING(1),BIT 11
76		PRINT_AREA	IN PRINT_LINE,AUTOMATIC,UNALIGNED,STRING(120),CHARACTER 12,14,16,48,60,62,64,66,68,70
76		PRINT_LINE	AUTOMATIC,STRUCTURE 13,15,17,49,61,63,65,67,69
73		PRINTR	FILE,EXTERNAL,OUTPUT,RECORD,SEQUENTIAL,ENVIRONMENT(F CTLASA) 9,13,15,17,49,61,63,65,67,69
74	*********	RECORD_COUNTER	AUTOMATIC,ALIGNED,INITIAL,BINARY,FIXED(15,0) 47,56,56
75		RECORD_FIELDS	IN RECORD_IMAGE,AUTOMATIC,UNALIGNED,STRING(70),CHARACTER
75		RECORD_IDENT	IN RECORD_IMAGE,AUTOMATIC,UNALIGNED,STRING(7),CHARACTER
75		RECORD_IMAGE	AUTOMATIC,STRUCTURE 27,34,44,53
74	*********	RECORD_NUMBER	AUTOMATIC,ALIGNED,INITIAL,BINARY,FIXED(15,0) 37,37,38
75		RECORD_SEQUENCE	IN RECORD_IMAGE,AUTOMATIC,UNALIGNED,STRING(3),CHARACTER
1		RRDSLOS	ENTRY,DECIMAL,FLOAT(SINGLE)
		SYSPRINT	FILE,EXTERNAL

DCL NO.		IDENTIFIER	ATTRIBUTES AND REFERENCES
			5,6,7
		VSAMIOP	EXTERNAL,ENTRY,DECIMAL,FLOAT(SINGLE) 27,44,53
78		VSFB_ACCESS	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(10),CHARACTER 21
78		VSFB_DDNAME	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(8),CHARACTER 19
78		VSFB_FILE_STATUS	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(1),CHARACTER
78	*********	VSFB_KEY_LENGTH	IN VSIO_FILE_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED(15,0) 25,38
78	*********	VSFB_KEY_POSITION	IN VSIO_FILE_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED(15,0) 24
78		VSFB_MODE	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(6),CHARACTER 22
78		VSFB_ORGANIZATION	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(4),CHARACTER 20
78	*********	VSFB_RECORD_LENGTH	IN VSIO_FILE_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED(15,0) 23
78		VSFB_RESERVED	IN VSIO_FILE_BLOCK,STATIC,UNALIGNED,STRING(161),CHARACTER
77		VSIO_CLOSE	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER 43
77		VSIO_COMMAND	IN VSIO_PARAMETER_BLOCK,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER 26,43,52,60
77		VSIO_DELETE	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER
77		VSIO_DIRECT	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(10), CHARACTER
77		VSIO_DYNAMIC	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(10),

DCL NO.	IDENTIFIER	ATTRIBUTES AND REFERENCES
		CHARACTER
59	VSIO_ERROR	ENTRY,DECIMAL,FLOAT(SINGLE) 30,46,55
77	VSIO_ESDS	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(4), CHARACTER
77 *********	VSIO_FB_DUPLICATE_RECORD	IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
77 *********	VSIO_FB_KEY_SEQUENCE	IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
77 *********	VSIO_FB_NO_MORE_SPACE	IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
77 *********	VSIO_FB_READ_WITHOUT_START	IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
77 *********	VSIO_FB_RECORD_NOT_FOUND	IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
78	VSIO_FILE_BLOCK	STATIC,STRUCTURE 27,44,53
77	VSIO_INPUT	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(6), CHARACTER
77	VSIO_INPUT_OUTPUT	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(6), CHARACTER
77	VSIO_KSDS	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(4), CHARACTER
77	VSIO_OPEN	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER 26
77	VSIO_OUTPUT	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(6), CHARACTER 22
77	VSIO_PARAMETER_BLOCK	STATIC,STRUCTURE 27,44,53

```
DCL NO.          IDENTIFIER                        ATTRIBUTES AND REFERENCES

77               VSIO_PARAMETER_VALUES             STATIC,STRUCTURE
77     ********* VSIO_RC_ACCESS_UNKNOWN            IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_DATASET_ALREADY_OPEN      IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_DATASET_NOT_OPEN          IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_DDNAME_BLANK              IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_END_OF_FILE               IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_LOGIC_ERROR               IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_MODE_UNKNOWN              IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_MODE_UNSUPPORTED          IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_ORG_ACCESS_MISMATCH       IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_ORGANIZATION_UNKNOWN      IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77     ********* VSIO_RC_SUCCESS                   IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
                                                  28,45,54
77     ********* VSIO_RC_UNKNOWN_COMMAND           IN VSIO_PARAMETER_VALUES,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
77               VSIO_READ                         IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8),
                                                  CHARACTER
77     ********* VSIO_RETURN_CODE                  IN VSIO_PARAMETER_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED
                                                  (15,0)
```

DCL NO.		IDENTIFIER	ATTRIBUTES AND REFERENCES
			28,45,54,62
77		VSIO_REWRITE	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER
77		VSIO_RRDS	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(4), CHARACTER 20
77		VSIO_SEQUENTIAL	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(10), CHARACTER 21
77		VSIO_START_EQUAL	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER
77		VSIO_START_NOTLESS	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER
77	*********	VSIO_VSAM_FEEDBACK	IN VSIO_PARAMETER_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
		VSIO_VSAM_FEEDBACK_CODE	AUTOMATIC,ALIGNED,DECIMAL,FLOAT(SINGLE) 68
77	*********	VSIO_VSAM_FUNCTION	IN VSIO_PARAMETER_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
		VSIO_VSAM_FUNCTION_CODE	AUTOMATIC,ALIGNED,DECIMAL,FLOAT(SINGLE) 66
77	*********	VSIO_VSAM_RC	IN VSIO_PARAMETER_BLOCK,STATIC,ALIGNED,INITIAL,BINARY,FIXED (15,0)
		VSIO_VSAM_RETURN_CODE	AUTOMATIC,ALIGNED,DECIMAL,FLOAT(SINGLE) 64
77		VSIO_WRITE	IN VSIO_PARAMETER_VALUES,STATIC,UNALIGNED,INITIAL,STRING(8), CHARACTER 52
51		WRITE_RR	ENTRY,DECIMAL,FLOAT(SINGLE) 39
74		YES	AUTOMATIC,UNALIGNED,INITIAL,STRING(1),BIT

DCL NO. IDENTIFIER ATTRIBUTES AND REFERENCES

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AGGREGATE LENGTH TABLE

STATEMENT NO.	IDENTIFIER	LENGTH IN BYTES
76	PRINT_LINE	121
75	RECORD_IMAGE	80
78	VSIO_FILE_BLOCK	196
77	VSIO_PARAMETER_BLOCK	16
77	VSIO_PARAMETER_VALUES	158

STORAGE REQUIREMENTS.

THE STORAGE AREA FOR THE PROCEDURE LABELLED RRDSLOS IS 544 BYTES LONG.

THE STORAGE AREA FOR THE ON UNIT AT STATEMENT NO. 3 IS 184 BYTES LONG.

THE STORAGE AREA FOR THE ON UNIT AT STATEMENT NO. 10 IS 176 BYTES LONG.

THE STORAGE AREA (IN STATIC) FOR THE PROCEDURE LABELLED WRITE_RR IS 176 BYTES LONG.

THE STORAGE AREA (IN STATIC) FOR THE PROCEDURE LABELLED VSIO_ERROR IS 256 BYTES LONG.

THE PROGRAM CSECT IS NAMED RRDSLOS AND IS 1726 BYTES LONG.

THE STATIC CSECT IS NAMED RRDSLOSA AND IS 5640 BYTES LONG.

STATISTICS MACRO RECORDS = 267,SOURCE RECORDS = 269,PROG TEXT STMNTS = 79,OBJECT BYTES = 1726

TABLE OF OFFSETS AND STATEMENT NUMBERS WITHIN ON UNIT

OFFSET (HEX) 0000 0050 005C 007A 0094 00B2
STATEMENT NO 3 4 5 6 7 8

TABLE OF OFFSETS AND STATEMENT NUMBERS WITHIN ON UNIT

OFFSET (HEX) 0000 0048 0052
STATEMENT NO 11 11

TABLE OF OFFSETS AND STATEMENT NUMBERS WITHIN PROCEDURE WRITE_RR

OFFSET (HEX) 0000 0038 003E 005E 006A 0078 0088 008E
STATEMENT NO 51 52 53 54 55 56 57 58

TABLE OF OFFSETS AND STATEMENT NUMBERS WITHIN PROCEDURE VSIO_ERROR

OFFSET (HEX) 0000 0038 0052 006A 00B6 00CE 0104 011C 014E 0166 0198 01B0 01BC 01C2
STATEMENT NO 59 60 61 62 63 64 65 66 67 68 69 70 71 72

TABLE OF OFFSETS AND STATEMENT NUMBERS WITHIN PROCEDURE RRDSLOS

OFFSET (HEX) 0000 00F4 0102 010C 011A 0126 013E 014A 0162 016E 0186 018C 0192 0198 0198 019E 01A4 01AA 01B0 01B6 01D2
STATEMENT NO 1 2 9 10 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

OFFSET (HEX) 01DE 01DE 01E8 01EE 01EE 01F6 020E 0216 0216 0222 0228 0232 0232 0236 0240 0246 0262 026E 0278 0292 02AE
STATEMENT NO 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

OFFSET (HEX) 02C6 02CC
STATEMENT NO 50 79

COMPILER DIAGNOSTICS.

WARNINGS.

IEM0227I NO FILE/STRING OPTION SPECIFIED IN ONE OR MORE GET/PUT STATEMENTS. SYSIN/SYSPRINT HAS BEEN
ASSUMED IN EACH CASE.

IEM0764I ONE OR MORE FIXED BINARY ITEMS OF PRECISION 15 OR LESS HAVE BEEN GIVEN HALFWORD STORAGE. THEY
ARE FLAGGED '*********' IN THE XREF/ATR LIST.

IEM1790I DATA CONVERSIONS WILL BE DONE BY SUBROUTINE CALL IN THE FOLLOWING STATEMENTS 64, 66, 68.

END OF DIAGNOSTICS.

AUXILIARY STORAGE WILL NOT BE USED FOR DICTIONARY WHEN SIZE = 138K

COMPILE TIME .00 MINS
ELAPSED TIME .00 MINS

```
 F64-LEVEL LINKAGE EDITOR OPTIONS SPECIFIED   NONE
          DEFAULT OPTION(S) USED -  SIZE=(231424,55296)
****GO        DOES NOT EXIST BUT HAS BEEN ADDED TO DATA SET
AUTHORIZATION CODE IS         0.
```

```
RRDSLODS: WRITE RRDS SEQUENTIALLY
---------------------------------
       100 RECORDS WERE LOADED SUCCESSFULLY
```