390   MESSAGES AND CODES

390.1   INTRODUCTION TO MESSAGES

This chapter describes the various printer and console messages that may be output by FDRPAS, FDRMOVE, and FDRERASE and the various ABEND codes with which the programs may terminate.

FDR MESSAGE FORMAT

Messages from all components of FDR have this format:

FDR*nnn* – *message-text*

Where "*nnn*" is a 3-digit message number. When "FDR*nnn*" is followed by "**" (2 asterisks) the message usually indicates some sort of error, which may result in an ABEND or a non-zero return code. Messages without the asterisks are usually informational.

Messages directed specifically to the z/OS console or TSO user have this format:

FDRW*nn* – *message-text*

Some of these messages require replies by the z/OS operator or TSO user. However, other "FDR*nnn*" messages may also be sent to the z/OS console.

Many FDRPAS messages contain a "*system ID*" or "*sysid*", used to identify systems in a multi-system environment. The system ID displayed is taken from field CVTSNAME in the Communication Vector Table (CVT) of each system.

RETURN CODES

FDR programs set a return code at the end of the step, unless they ABEND:

00 –   Normal completion

32 –   A trial version of an FDR product has reached the end of its trial period and no longer functions. If you have licensed a production version of the product, you should install it. Contact INNOVATION DATA PROCESSING.

Any other return code – Errors of some kind have occurred during this execution. Check the listing for the error messages. This usually indicates that errors occurred that were not severe enough to terminate the operation, yet the program wanted to call attention to the error messages at the end of processing. Severe errors usually result in an immediate ABEND.

ABEND CODES

FDR user ABEND codes range from U0100 to U0999 and are documented in Section 390.4 "ABEND Codes". Most user ABENDs are preceded by an FDR error message.

Note that user ABEND U0888 is a special case. It is issued by FDR programs to indicate that errors occurred that were not severe enough to terminate the FDR operation, yet FDR wanted to call attention to the error messages at the end of processing. Severe errors usually result in an immediate ABEND.

Some messages might be documented only in the *FDR User Manual*. See Section 100 in the *FDR User Manual* for messages that are not documented in this *FDRPAS User Manual*.

MINI-DUMP

In many cases, an error message is followed by a set of diagnostic displays, called an FDR mini-dump and it is identified by messages beginning with FDR09*x*. The mini-dump includes:

The general registers at the time of the mini-dump. These may or may not be significant, depending on the error.

Blocks of storage identified by the FDR program requesting the mini-dump. These usually have a title above them for identification. The storage displayed varies depending on the error message.

For certain I/O errors, it displays the DCB, UCB, and IOB. The IOB contains:

Bytes 2-3 –   Sense bytes 0-1.

Byte 4 –   I/O termination post code (7F = normal termination).

Bytes 8-15 –   Hardware-generated CSW (channel status word, see the IBM *z/Architecture Principles of Operation (SA22-7832)* manual), consisting of:

Bytes 8-11 –   Address of last CCW executed +8.

Bytes 12-13 –   Channel status flags.

         Bytes 14-15 –   remaining length in last CCW (CCW length field minus this gives bytes transferred).

❖   It also formats the CCW chain executed. CCW(-0) identifies the last CCW executed.

I/O ERRORS AND TRACES

For most I/O errors, FDR formats information about the error in a condensed format that includes:

❖   The IOB (I/O request block) as described above.

❖   The CCW chain (four CCWs per line in most cases).

❖   Up to eight bytes of data associated with each CCW (16 or 20 bytes for certain CCWs). The lines containing the data alternate with the lines containing the CCWs, so that the data for each CCW is immediately below the CCW itself.

INNOVATION DATA PROCESSING technical support may request that you add operands to your control statements that trace all I/Os issued by FDR. This same format is used for those traces.

390.2   CONSOLE MESSAGES

The following write-to-operator (WTO) and write-to-operator-with-reply (WTOR) are issued by FDR:

FDRW01   **CONFIRM REQUEST TO *function* VOL=*vvvvvv* TO UNIT=*uuuu* ON *nnn* SYSTEMS REPLY YES OR NO**

Reason: FDRPAS has been requested to process volume "*vvvvvv*" to offline target device "*uuuu*" and CONFMESS=YES was specified. "*nnn*" system images are participating in the function. "*function*" is SWAP for a SWAP function or DUMP for a SWAPDUMP function. If you are using the FDRPAS ISPF panels to monitor active swaps, this message also appears on the ISPF display; you can reply to it from ISPF or from the operator console.

   NOTE: If WTOR=NO is specified on the FDRPAS main statement, then the FDRW01 message is issued as a WTO, not a WTOR, and the operator cannot reply; the FDRPAS ISPF panel must be used to reply.

Action: Reply **YES** – Operator approves request.

   Reply **NO** – Operator does not approve the request; the function is terminated. Message FDR234 with REASON=Q is printed.

   To perform SWAP or SWAPDUMP without operator intervention, specify CONFMESS=NO on the SWAP statement or omit CONFMESS= (NO is the default).

CONFIRM REQUEST TO ERASE *nnnn* UNITS - REPLY YES OR NO - SEE PREVIOUS FDR235 MSG FOR UNITS

Reason: This form of message **FDRW01** is issued by FDRERASE if CONFERASE=YES is specified. It is issued once for all the units to be erased (the units are listed in message FDR235 that precedes the **FDRW01**).

Action: Reply **YES** – Operator approves request.

   Reply **NO** – Operator does not approve the request; the function is terminated. Message FDR234 REASON=Q is printed.

   To perform FDRERASE without operator intervention, specify CONFERASE=NO on the SWAP statement or omit CONFERASE= (NO is the default).

CONFIRM REQUEST TO INITV *nnnn* UNITS - REPLY YES OR NO - SEE PREVIOUS FDR235 MSG FOR UNITS

Reason: This form of message **FDRW01** is issued by FDRINITV if CONFERASE=YES is specified. It is issued once for all the units to be initialized (the units are listed in message FDR235 that precedes the **FDRW01**).

Action: Reply **YES** – Operator approves request.

   Reply **NO** – Operator does not approve the request; the function is terminated. Message FDR234 REASON=Q is printed.

   To perform INITV without operator intervention, specify CONFERASE=NO on the SWAP statement or omit CONFERASE= (NO is the default).

CONFIRM REQUEST TO VARY OFFLINE FOR *function* VOL=*vvvvvv* UNIT=*uuuu* - REPLY YES, NO OR ALL

Reason: This form of message **FDRW01** is issued by FDRERASE or FDRINITV if ONLINE=VARYOFF is specified. It is issued for each online unit that is varied offline and erased or initialized.

Action: Reply **YES** – Operator approves request for this volume.

   Reply **NO** – Operator does not approve the request; the erase of this volume is terminated. Message FDR234 REASON=Q is printed.

   Reply **ALL** – Operator approves request for this volume and all subsequent volumes in this step. No further **FDRW01** messages are issued.

FDRW07   JOB=*jobname* READY TO CONFIRM *function* REPLY YES TO CONFIRM

Reason: A MONITOR TYPE=CONFIRMSWAP or TYPE=CONFIRMSPLIT was submitted with CONFMESS=YES specified. When all the volumes in the CONFIRM step are synchronized, this **FDRW07** message is issued.

Action: Reply "**YES"** when you are ready to confirm the volumes and complete the SWAP or SWAPDUMP operation on those volumes.

CONFMESS=YES can be useful with TYPE=CONFIRM*xxxx* when you use a system automation product. The product can wait for the **FDRW07** message, perform other functions such as quiescing some applications, and then confirm the swaps by replying "**YES**".

FDRW60   FDROPSPF VER *x.x/xx* - PROCESSING ERROR - PARM-LVL *level*

Reason: The FDR Install dialog CLIST invoked program FDROPSPF with an incompatible parameter level, indicating that the DDNAME allocations for the FDR CLIST library and the FDR program library point to libraries at different maintenance levels. On a re-install, the problem might be that the new FDR program library is not allocated to either ISPLLIB or STEPLIB DDNAMEs, thus causing the prior level FDR programs to be loaded from the Linklist.

Action: Use the ABRALLOC CLIST supplied by INNOVATION DATA PROCESSING, as documented in Section 380.5 "Invoking the Install ISPF Dialog (Panel A.I)".

FDRW45   MIM ACTIVE -- MOVES ON OTHER SYSTEMS WILL NOT BE DETECTED

Reason: FDRMOVE detected that MIM is the cross-system enqueue product. This is a warning to notify the site that data set moves on other systems are not detected by FDRMOVE.

Action: The MIM cross-system enqueue product does not support GQSCAN, so FDRMOVE can not determine if a job on another system moves a data set. To reduce the window, where this is a factor, use FASTMOVE if possible or ensure that data sets are not being moved by other jobs.

FDRW66   *function* OF VOL=*vvvvvv* TO UNIT=*uuuu* STARTED ON *nnn* SYSTEMS (*sysid1 sysid2 …*)

Reason: FDRPAS has begun to process volume *vvvvvv* to offline unit *uuuu*. *nnn* systems (1-128) systems are participating in the function. The system names of the participating systems are listed (if all system names cannot fit in one message, additional **FDRW66** messages with only the additional system names are issued). "*function*" is SWAP for a SWAP function or DUMP for a SWAPDUMP function.

**   *function* OF VOL=*vvvvvv* TO UNIT=*uuuu* CONTINUES WITH OVERRIDE OF WARNINGS**

Reason: This form of the **FDRW66** message occurs when the swap has been allowed to continue despite warning messages. For example, you have replied "YES" to the **FDRW68** message, to document that you have approved continuing with the swap despite the warning that an apparent insufficient number of systems are participating, or you specified LARGERSIZE=OK to allow a swap to a larger disk. "*function*" is SWAP for a SWAP function or DUMP for a SWAPDUMP function.

**   SWAP OF VOL=*vvvvvv* TO UNIT=*uuuu* NEEDS TO BE STARTED ON *nnn* SYSTEMS**

Reason: This form of the **FDRW66** message occurs for a SIMSWAP operation and appears only in the printout, not on the console. It indicates that FDRPAS has determined that the volume "*vvvvvv*" is attached to "*nnn*" systems (not including systems for which EXCLUDE statements were present) and a MONITOR task or SWAP task should be running on each of those systems. If FDRPAS was unable to determine the number of systems, "*nnn*" is the value you specified for #SYSTEMS=*nnn*.

FDRW68   **CAUTION REQUEST TO SWAP VOL=*vvvvvv* TO UNIT=*uuuu* ON *nnn* SYSTEMS IGNORING *mmm* NON-RESPONDING CPUS REPLY YES, NO OR RETRY**

Reason: FDRPAS has been requested to process volume "*vvvvvv*" to offline target device "*uuuu*". "*nnn*" system images have indicated that they will participate in the function within a time limit imposed by FDRPAS, but FDRPAS expected that a larger number of systems would participate. This message may occur:

❖ If you have systems that are not running z/OS-type operating systems or that are not active. See "Multi-System Determination" in Section 320.1 for details.

❖ If you have not started an FDRPAS MONITOR task on all system images.

❖ If the target device is online to some systems (see message FDR235 in the MONITOR task listings).

❖ If the MONITOR tasks are not monitoring the proper target device(s).

❖ If some MONITOR tasks have failed.

❖ If the MONITOR tasks have a low dispatching priority on a busy system, or the LPAR running the MONITOR task has a low priority; you probably need to increase the task or LPAR priority to get a successful swap.

Message FDR234 with REASON=M may also be displayed on the console to identify the non-responding systems. See "System Determination" in Section 300.5 for an explanation of FDRPAS multi-system operation and the determination of the number of systems. See "#SYSTEMS=" in Section 310.2. If you are using the FDRPAS ISPF panels to monitor active swaps, this message also appears on the ISPF display; you can reply to it from ISPF or from the operator console.

NOTE: If WTOR=NO is specified on the FDRPAS main statement, then the FDRW68 message is issued as a WTO, not a WTOR, and the operator cannot reply; the FDRPAS ISPF panel must be used to reply. If you specify NONRESPONDING=FAIL, then no message is issued and FDRPAS acts as if "NO" was replied (terminate the swap).

Action: Reply **YES** – if you want the swap to continue. This should be done only if you are sure that the additional system images do not have the source volume online; INNOVATION DATA PROCESSING suggests that you use console commands on every system to verify how many have the volume online. If in doubt, reply "NO" until the condition can be investigated and corrected if necessary. **You should always contact INNOVATION DATA PROCESSING before responding "YES" to this message**.

Reply **NO** – terminate the swap request. Message FDR234 REASON=Q is printed.

Reply **RETRY** – FDRPAS waits additional time to see if the additional systems indicate their participation. If you did not start FDRPAS MONITOR tasks on all systems, start them before replying. If sufficient additional systems do not participate, the message is reissued.

Under no circumstances should you automate the reply to this message. Every occurrence of the message must be investigated by a knowledgeable person before replying. INNOVATION DATA PROCESSING recommends that you reply "RETRY" at least once in case some MONITOR tasks were running but were not able to respond in time.

NOTE: If you are running FDRPAS with FDRMOVE or specified NONRESPONING=RETRY in FDRPAS, then the FDRW68 reply only accepts "NO" or "RETRY".

FDRW89   **FDR - TRIAL VERSION FROM INNOVATION DATA PROCESSING EXPIRES IN *nnn* DAYS**

Reason: This is a trial version of FDRPAS/FDRMOVE or FDRERASE. The number of days the trial remains active is displayed. When there are 10 or fewer days before the trial is due to expire, this message becomes non-deletable.

Action: When the trial expires, it is not usable. If you have licensed a production version of FDRPAS/FDRMOVE or FDRERASE, you should install it in place of the trial version. Call INNOVATION DATA PROCESSING if you need assistance. This message can also come out on a rental version when the rental period is about to or has expired.

390.3   MESSAGES

CPK425 **UNABLE TO PROCESS VOL=*vvvvvv* - DUMMY VTOC OR CMS VOLUME**

Reason: The **CHECKSOURCE=YES** operand was specified for a volume with a DUMMY VTOC or a CMS volume.

Action: Do not use the **CHECKSOURCE=YES** operand when processing z/VM, Linux, or CMS volumes.

FDR001 *program*/*function* -- VER *v.r*/*mmt* -- INNOVATION DATA PROCESSING
        DATE=*yyyy.ddd* PAGE *nnn*

Reason: This is the FDR page heading, containing the name of program or FDR function generating the message and the version level of FDR. "*v.r*" indicates the version and release (e.g., 5.4), "*mm*" is a 2-digit number indicating the maintenance level and "*t*" is "P" for a production version or "T" for a trial.

FDR003 **NONSTANDARD RECORD ZERO -- *ccccchhhhrrkkllll* -- *function* CONTINUING**

Reason: FDRPAS detected a non-standard record zero (R0) in a track on the volume. The count field of the R0 is printed in hex. A standard IBM record zero format has an "*rrkkllll*" field of 00000008 – that is, record number zero, key length zero, and data length eight.

Action: FDRPAS continues copying data, to detect additional errors, but does not complete the swap. If necessary, contact INNOVATION DATA PROCESSING for assistance in correcting the error.

FDR007 *startend* TIME OF *function* -- *hh.mm.ss* - UNIT=*disktype,* IN=*inputdd* ,OUTPUT=*outdd*

Reason: Documents the time that FDRPAS, FDRMOVE, or FDRERASE began or ended an operation. "*startend*" is STARTING or ENDING. "*function*" indicates the type of function (e.g., FULL VOL SWAP). "*inputdd*" is the input DD name, "*outdd*" is the output DD name (always TAPE1) and "*disktype*" identifies the input or output disk device type (in the case of emulated disk, such as RAMAC, the emulated disk type, such as 3390, is shown.

FDR008 **OPEN ERROR OR NO DD STATEMENT DD=*ddname* - *function* BYPASSED**

Reason: One of the following:

1. A required disk or tape DD statement specified by "*ddname*" was missing.

2. DDname SYSPRIN*x* is missing.

3. An error occurred while OPENing the specified "*ddname*".

Action: The disk in error is bypassed. See the job log for possible IBM OPEN error messages.

FDR019 **RACF FACILITY PROTECTION FOR BYPASS FAILED FOR *resource***

Reason: FDRPAS and FDRERASE always issue a RACROUTE call to check for READ authority to resources in the FACILITY class, which you may use to control which users can do which operations. The user was not authorized to the proper resource. The "*resources*" are:

> **FDRPAS.SWAP –** For SWAP.
> **FDRPAS.SWAPDUMP –** For SWAPDUMP.
> **FDRPAS.SWAPBUILDIX –** For SWAPBUILDIX.
> **FDRERASE.ERASE –** For all FDRERASE operations except SIMERASE.
> **FDRERASE.ERASEALL –** If CHECKTARGET=NO was specified.
> **FDRERASE.ONLINE.VARYOFF –** If ONLINE=VARYOFF was specified.

If you have not defined these resources, the error may have occurred because you protect all resources by default (such as the RACF PROTECTALL option); in that case you must define the desired resources and authorize the appropriate users for READ access.

Action: A control card error is issued. Authorize the user to the resource or run FDRPAS under a different user id.

RACF FACILITY PROTECTION STGADMIN FAILED FOR *resource*

Reason: In this form of the **FDR019** message, the operand STGADMIN was specified on a MOVE or FASTMOVE statement for simplified storage administrator security authorization in FDRMOVE. The user must be authorized to the RACF resource

`STGADMIN.ADR.STGADMIN.MOVE`

in class FACILITY or the equivalent in other security systems, but the security check failed.

Action: A control card error is issued and the operation terminates. If the user cannot be authorized to this resource, remove the STGADMIN operand so that normal FDR security checking is done (see "Security" in Section 325.11).

FDR020   **RACF VOLUME PROTECTION FAILED ON VOL=*vvvvvv***

Reason: Security checking was enabled in the FDR Global Options Table (the ALLCALL option). A security call for class DASDVOL and volume "*vvvvvv*" failed. The user does not have sufficient authority to perform this swap or erase.

Action: An **U0801** ABEND is issued.

FDR021   **RACF DATASET PROTECTION FAILED ON DSN=*dsname***

Reason: Security checking was enabled in the FDR Global Options Table (the ALLCALL option). A security call for class DASDVOL and volume "*vvvvvv*" indicated that the volume was not protected by DASDVOL, so FDRPAS began doing checks in class DATASET for all data sets on the volume. The user does not have sufficient authority to the data set named, so the FDRPAS operation was terminated.

Action: An **U0801** ABEND is issued.

FDR023   **DUMMY VTOC READ -- ENTIRE PACK WILL BE DUMPED**

Reason: FDRPAS found that the VTOC on this volume started and ended on cylinder zero head zero. This is the format used on volumes initialized by z/VM; that dummy VTOC is not valid.

Action: FDRPAS copies all tracks on the volume.

FDR024   **INVALID EXTENT DESCRIPTOR [REASON=*reason* DSN=*dsname*]**

Reason: FDR read a DSCB (Format 1 or 3) that contained an invalid extent description. If a mini-dump is printed, the first five bytes of the DSCB printed after the registers in the mini-dump are the cylinder, head, and record number (CCHHR) of the DSCB in error. If REASON= is printed, it is one of the following:

     1 –   ENDING CYLINDER TOO LARGE
     2 –   STARTING TRACK TOO LARGE
     3 –   ENDING CCHH BEFORE BEGIN
     4 –   ENDING TRACK TOO LARGE

     NOTE: Reasons 2 and 4 indicate that the starting or ending track number of an extent is higher than the highest track on a cylinder, i.e., higher than 14 on 3380 or 3390; not that the start or end of an extent is after the end of the pack.

If you are swapping to a smaller disk, reason "1" probably means that a data set on the source disk has extents beyond the end of the target disk. For a SWAPBUILDIX, it may mean that the communication disk specified by SWAPUNIT= is smaller than the disk whose VTOCIX is to be rebuilt.

Action: FDRPAS terminates the swap. You must correct the VTOC error or delete the identified data set before attempting to swap the volume again. If necessary, contact INNOVATION DATA PROCESSING for assistance.

FDR032   **NO VALID TAPE(X) DD (OR MOUNT) STATEMENTS WERE FOUND**

Reason: FDRMOVE did not select any volumes to process from the supplied SELECT. This is usually due to a misspelling of the volser(s) on the SELECT statement.

Action: Check the spelling of the volser(s) on the SELECT statement and resubmit.

FDR102   PROGRAM NOT APF AUTHORIZED

Reason: Most FDR programs must be executed as an APF-authorized program in order to execute correctly. This program detected that it was not executing authorized. This most often occurs when you are testing a new version of FDR with a STEPLIB that has not been authorized.

Action: Authorize the library from which you executing FDRPAS or FDRERASE. You can update a library list in SYS1.PARMLIB and you may be able to input a console command that authorizes the library. Contact INNOVATION DATA PROCESSING if you need assistance.

FDR107   *function* SUCCESSFULLY COMPLETED VOL=*vvvvvv*

Reason: The indicated function was successfully completed on the disk volume "*vvvvvv*".

FDR122   OPERATION STATISTICS FOR *type* VOLUME...*volser*

Reason: This is the header for a table of statistics about the FDRPAS copy operation or FDRERASE operation that was performed on the volume indicated. These statistics include all tracks copied and re-copied in all passes of Phase 3, so the byte and track counts may be higher than the actual number of tracks or bytes copied. For FDRERASE, some fields are not meaningful and are zero.

> **CYLINDERS ON VOLUME –** Total number of data cylinders on volume being processed.
> **DATASETS PROCESSED –** Number of data sets on the volume.
> **BYTES READ FROM DASD –** Total number of bytes actually copied up from the volume.
> **DASD TRACKS SWAPPED/ERASED/VERIFIED –** Number of data tracks copied, erased, or verified.
> **UPDATED TRACKS RECOPIED –** Number of data tracks re-copied due to updates (FDRPAS only).
> **NUMBER OF ERASE PASSES –** Number of erase passes on each track (FDRERASE only).
> **DASD EXCPS –** Number of I/O requests issued to the source volume (FDRPAS) or erased volume (FDRERASE).
> **TARGET DASD EXCPS –** Number of write I/O requests issued to the target device.
> **CPU TIME (SECONDS) –** The CPU (TCB) time required to process this volume, in seconds and thousandths of a second.
> **ELAPSED TIME (MINUTES) –** The actual time, in minutes and tenths, required to process this volume.
> **SWAP/ERASE TIME –** The actual time, in minutes and tenths, required to swap or erase this volume (excluding initialization).

FDR124   FORMAT 4 ERROR REASON=*reason - id*

Reason: FDRPAS detected a problem with the Format 4 DSCB or label track on a source volume. The Format 4 DSCB describes the VTOC itself. The VTOC may be improperly formatted. "reason" is a reason code plus explanatory text; "id" is the DSCB count field. "*reason*" may be:

> **1 –**   **MORE THAN 1 FORMAT 4 –** More than one Format 4 DSCB was found, or the first DSCB in the VTOC was not a Format 4. This may be due to an IBM problem.
> **2 –**   **COMPAKTOR FAILURE ON VOL –** COMPAKTOR was executed against the volume but it did not complete.
> **3 –**   **LABEL TRACK IS INVALID –** The label track (cylinder 0 track 0) does not contain a properly formatted volume label.
> **4 –**   **VOL SIZE < DEVICE SIZE –** On the source volume, the number of cylinders in the VTOC is less than the actual number of cylinders on the device. (This code can also be caused by certain abnormal conditions on the target device.)

6 –   **TOO MANY VTOC ENTRIES –** ABR found too many VTOC entries on this volume and an internal table was exceeded. An U0103 ABEND follows. Contact INNOVATION DATA PROCESSING for an override.

8 –   An unknown DSCB type was found.

9 –   **VOL SIZE 1 CYL IN VTOC –** The Format 4 DSCB indicates that the volume contains only one cylinder, but the physical size of the volume is more than one cylinder.

Action: FDRPAS terminates the swap. You must correct the error before you attempt to re-execute the swap. List the VTOC in hex with:

```
//LIST   EXEC PGM=IEHLIST
//SYSPRINT DD SYSOUT=*
//DISK1    DD UNIT=3390,VOL=SER=vvvvvv,DISP=OLD
  LISTVTOC VOL=3390=vvvvvv,DUMP
/*
```

and contact INNOVATION DATA PROCESSING for assistance. For reason 4 or 9, you may be able to run ICKDSF with the REFORMAT REFVTOC command to correct the source volume before retrying the swap.

FDR125   **I/O ERROR READING THE VTOC X'*cccchhhh*' VOL=*vvvvvv* ENTIRE PACK WILL BE DUMPED**

Reason: FDRPAS detected an I/O error reading the VTOC on the cylinder and track indicated in hex. An I/O trace message is also printed to document the error.

Action: Since FDRPAS cannot determine the data sets on the volume, all tracks on the source volume are copied to the target device. However, if the I/O error repeats when FDRPAS is trying to copy the VTOC track to the target device, the swap is terminated.

FDR126   **VTOC/DSCB ERROR REASON=*reason***

Reason: While analyzing the Data Set Control Blocks (DSCBs) in the VTOC, FDRPAS found an invalid DSCB or another VTOC-related error occurred. "*reason*" describes the error.

Action: For most errors, FDRPAS continues processing the volume, in order to detect additional errors. However, the swap is not performed. Certain errors cause immediate termination.

FDR128   **INVALID RECORD ZERO ON TRACK X'*cccchhhh*' DATA X'*cccchhhh*'**

Reason: The track specified has an invalid record zero (R0). The count field of R0 should always contain the ID of the track it resides on. The cylinder and track (in hex) of the failing track is displayed, along with the count field of R0.

Action: FDRPAS continues copying data, to detect additional errors, but does not complete the swap. If necessary, contact INNOVATION DATA PROCESSING for assistance in correcting the error.

FDR129   **I/O ERROR ON DISK PACK - LAST HOME/SEEK ADDRESS READ X'*cccchhhh*' [*additional text*]**

Reason: An I/O error was detected by FDRPAS or FDRERASE on this source volume or target device. An IBM IOS000I message may also have been printed on the job log. For FDRERASE, this *additional text* appears on the right:

WILL CONTINUE – The erase operation continues, but one or more tracks are not erased in the identified cylinder.

WILL TERMINATE – More than 20 errors were encountered, so FDRERASE terminates this disk.

Action: FDR149 I/O trace messages are printed to detail the error. FDRPAS terminates the swap on the first I/O error. FDRERASE tolerates up to 20 disk write errors before terminating the erase.

FDR130   CYL=*ccccccc* HEAD *xxx...x* WAS COPIED

Reason: Internal message showing each cylinder and track (head) copied; it appears only if PRINT=ALL is specified on the SWAP statement. An "**X**" appears for each track copied within the cylinder. "*ccccccc*" is the cylinder number in decimal.

FDR149   *trace data*

Reason: Displays data from an internal trace. The FDR operands to invoke various traces are provided by INNOVATION DATA PROCESSING when the data is required to diagnose a problem you have reported. The message is also used when I/O errors occur. It is also used by an FDRPAS MONITOR task to document I/O chains encountered that could not be interpreted.

FDR152   ICF VSAM ERROR REASON=*x* DSN=*cluster/component* VOL=*vvvvvv*

Reason: An I/O error or logical error exists within the SYS1.VVDS data set or in the VVDS information for the cluster or component indicated, on volume "*vvvvvv*" (this error may also occur for non-VSAM data sets on SMS-managed volumes).

The reason code "*x*" may be:

RC –   REASON
1 –   VSAM clusters exist on the volume, but FDR failed to find the SYS1.VVDS data set on the output disk or on the backup file. The VVDS may not exist or FDR encountered an error trying to find it. The IOB details the error.
2 –   The number of extents in the SYS1.VVDS data set was zero.
3 –   The SYS1.VVDS contains more than 3 extents. FDR had an I/O error or logical error finding an Format 3 DSCB. The IOB details the error.
4 –   An I/O error or logical error was detected when FDR read or wrote entries within the SYS1.VVDS data set, or the VVDS contains no active records (even though there are VSAM clusters on the volume). For an I/O error, the IOB details the error.
5 –   The length of a VVR/NVR entry within the VVDS is zero or negative.
6 –   The length of all of the VVR/NVR entries within a block of the VVDS exceeded the length in use within the block.
7 –   A VVDS record indicates that the length of its in-use data exceeds 4096.
8 –   An error occurred when DSF attempted to find one of the associated components for this cluster. The component may be in the VVDS but not in the VTOC. The IOB details the error.
9 –   FDR is unable to store all of the VSAM component and cluster names in its internal table. A large number of VSAM clusters must exist on the volume. Specify the keyword ICFCORE= on the DUMP TYPE= statement or permanently increase the ICFCORE value in the FDR Global Options Table.
A –   A cluster specifies a catalog name that was not found in the catalog entries stored in the first record of the VVDS.
B –   FDR could not find the volume information/allocation cell (type 23) in the VVR record, or an individual cell had an invalid length.
C –   More than one SYS1.VVDS data set was found on the volume. The operating system uses the VVDS that contains the current disk volume serial number in the name. More than one VVDS can be created if a volume with a VVDS is renamed and a VSAM cluster is allocated using the volume with the new serial number.
D –   The volume serial in the data set name of the VVDS (SYS1.VVDS.V*volser*) does not match the volume serial of the disk. This can occur if a volume was copied or restored to a new disk volume serial but the VVDS was not renamed. Another possible cause is the DUMPCONDITIONING option of DFSMSdss. This is only a warning; FDRPAS swaps the volume properly, using that VVDS. However, VSAM and SMS data sets on the volume are not usable until the condition is corrected.

E –   FDR did a GETMAIN for above the line storage for a VSAM table but the GETMAIN failed. Try increasing the REGION= parameter to more than 32M.

F –   FDR did not find both a VVR/NVR and a DSCB for a given data set; one was missing. Also occurs when FDR was unable to calculate the free space in a cluster.

G –   The imbedded index VVR (Type Q) was not found.

H –   The size of an extent was not a multiple of the CA size; or the high RBA of an extent exceeded the maximum. On a logical restore, the original cluster had an imbedded index (the IMBED attribute) and the high-level index component had more than one extent.

I –   The control interval size (CISIZE) on the backup cluster does not match the cluster on disk. The displacement is X'16' (see Note on page 390-12).

J –   The number of CIs per CA on the backup cluster does not match the cluster on disk. The displacement is X'0E' (see Note on page 390-12).

K –   The space allocation unit (TRACK vs. CYL) on the backup cluster does not match the cluster on disk. The displacement is X'10' (See Note on page 390-12). This error is also issued following an FDR160 message; see FDR160 in the FDR documentation.

L –   The physical block size or number of blocks per track on the backup cluster does not match the cluster on disk. The displacement is X'11' or X'15' (see Note on page 390-12).

M –   The number of tracks per CA on the backup cluster does not match the cluster on disk (Check the secondary allocation value specified). The displacement is X'17' (See Note on page 390-12).

N –   The VSAM cluster is being restored to a different type of cluster, e.g., KSDS to an ESDS. Flags at two displacements are checked (see Note on page 390-12).
At displacement X'03' it checks:
X'02' –   Relative Record (RRDS)
X'04' –   Key Range
X'10' –   Replication (REPLICATE)
X'20' –   Imbedded Index (IMBED)
X'80' –   Key Sequence (KSDS)
At displacement X'2A' it checks:
X'01' –   Variable RRDS (VRRDS)
X'04' –   Linear (LDS)
If none of these flags are on, the cluster is an ESDS (entry sequenced) cluster. There may be other flags on in those bytes; they do not matter. However, all of the flags named above must match (on or off) between the input and output cluster.

O –   The length of the VVR/NVR exceeds the length of the cells within the VVR/NVR.

P –   The VVR entry found is in orphan and not related to a catalog entry.

Q –   In a multi-level alias environment, the rename of the temporary data set name failed. Contact INNOVATION DATA PROCESSING for assistance.

R –   SMS Attributes of the backup cluster and the cluster on disk do not match. FDR checks for Extended Format (EF) and for "over 4GB addressing". The displacement is either X'03' or X'1D'.

S –   The backup cluster contains a key range while the disk does not or the key lengths are not the same. The displacement is X'24' (See Note on page 390-12).

T –   A VVR entry in the VVDS contains a cell type other than a 21, 23, or 60.

U –   The type of VVR entry on the backup does not match the disk (Z record being restored to Q). The user may be attempting to restore a multi-volume component to the wrong sequence component.

V –   The total length of a VVR/NVR record does not match the sum of the lengths of the cells within it, on the output disk.

W –   The total length of a VVR/NVR record does not match the sum of the lengths of the cells within it, on the backup file.

X –   The number of extents specified in the VVR record does not match the DSCB entry in the VTOC for a component.

Y –   A base cluster is being restored to an alternate index or vice versa.

Z –   Internal Error – The length of the FDR backup file control block for VSAM was less than the sum of the lengths of the VVRs/NVRs within it.

Action: Except for REASON=D, FDRPAS terminates the swap because of the logical errors on the volume. You must investigate and fix the problem before rerunning the SWAP.

> NOTE: For the indicated reason codes, FDR prints a mini-dump displaying the VVR (VSAM Volume Record) from the backup file and from the cluster on disk. In the registers at the top of the dump, register 14 points to a cell within the disk VVR and register 15 points to a cell within the backup VVR. Those registers plus the hex displacements shown above for the appropriate reason codes point to the fields that did not compare.

FDR153   VSAM SCRATCH ERROR COMP=*cccc* CODE=*code* CLUSTER=*cluster*

VSAM SCRATCH/UPDATE ERROR COMP=*cccc* CODE=*code* CLUSTER=*cluster*

Reason: FDR attempted to scratch a VSAM cluster but the CATALOG DELETE SVC failed. "*cccc*" and "*code*" match the return code and reason code documented for IBM message IDC3009I except that "*cccc*" values over 9000 are internal FDR errors.

Some commonly occurring IBM codes are:

COMP	CODE –	REASON
0008	0042 –	The cluster to be scratched was not cataloged. FDR can only scratch cataloged clusters.
0076	0000 –	User attempted to scratch a multi-volume cluster that was not aliased to a user catalog. This data set may be partially deleted.
0076	0008 –	User attempted to scratch a cluster with an alternate index that has the NOUPGRADE attribute on another volume.
0084	0000 –	The VSAM cluster is date protected. Specify VEXPD=NONE on the DUMP Statement to scratch this cluster.

COMP values over 9000 are from FDR:

COMP – REASON

9004 –   Dynamic allocation failed for the specified cluster. **"code"** is the decimal equivalent of the dynamic allocation error code; it also appears in hex in register 0 within the mini-dump. Dynamic allocation error codes are documented in the ISPF online tutorial appendix and in various IBM manuals. In particular, a dynamic allocation error code of decimal 5896 or X'1708' indicates that the input cluster was not found in the catalog.

9008 –   User attempted to move a multi-volume VSAM cluster. The components on this volume were copied to the output volume, but were not scratched. If all of the associated components have been dumped or copied, the user can use SUPERSCRATCH or IDCAMS to scratch the cluster.

9012 –   Internal Error. The TIOT search failed to find the disk DD name to which the cluster was dynamically allocated.

9020 –   A KSDS with alternate indexes has been archived but it was not scratched because ALTINDEX=NO was specified.

9024 –   Cluster cannot be scratched because it is cataloged to a different volume or because an alternate index with the NOUPGRADE attribute is on a volume by itself.

9028 –   Cluster cannot be scratched because it is cataloged as non-VSAM or cataloged to more than 255 volumes.

Action: Check the error code and correct if necessary. An FDR mini-dump is printed displaying the CATALOG DELETE parameter list and the catalog name. If needed, contact INNOVATION DATA PROCESSING for assistance.

FDR156   **ALLOCATE FAILED FOR** *nnnnn quan* **COMP=X'***code-reason***' VOL=***vvvvvv*** DSN=***dsname***
ALLOCATE FAILED FOR CATALOG COMP=*comp*** CODE=***reason*** VOL=***vvvvvv*** DSN=***dsname***

Reason: FDR attempted to allocate a non-VSAM data set "*dsname*" on volume "*vvvvvv*" and the attempt failed (if FAILED FOR CATALOG is displayed, the allocation was successful, but a later attempt to catalog the data set failed; this can also occur for VSAM). "*nnnnn*" is the size of the data set that failed allocation in tracks or cylinders, "*quan*" is TRK or CYL. If the allocation was attempted on multiple volumes (because of the NVOL= operand or the ABR RESTORE ALLOCATION LIST), it failed on all of them, but "*vvvvvv*" is the first volume on which it was tried, and "*comp*" is the error code from that volume. If the data set is SMS-managed, "*vvvvvv*" is the volume that FDR selected for the data set and may not be the same as the volume on which SMS tried to allocate it.

"*comp*" may be return codes from the IBM ALLOCATE SVC (SVC 32), from the IBM CATALOG SVC (SVC 26), from the IBM SMS interface, or internal diagnostic codes from FDR itself.

If "**FAILED FOR CATALOG**" is displayed, "*comp*" is the return code and "*reason*" is the reason code from the CATALOG SVC, in decimal, as documented for the IBM message IDC3009I. Some of the common catalog codes shown under message FDR157 also apply to **FDR156**. Note that if "*comp*" is 51; look up the "*reason*" code under code 50 in message IDC3009I. If "*comp*" is 300, this is an internal error; contact INNOVATION DATA PROCESSING for assistance. If "*comp*" is 9*xxx*, contact INNOVATION DATA PROCESSING for assistance. "*reason*" equal to 00040 may mean an attempt to catalog a GDG generation when the GDG base does not exist.

Otherwise, if "*comp*" is a value less than X'1000', it is from the ALLOCATE SVC, in hex. "*reason*" may be an eight-digit hex IBM diagnostic code. For z/OS, see the IBM manual *z/OS DFSMSdfp Diagnosis (GY27-7618).*

Common DADSM CREATE (ALLOCATE) codes include:

COMP – REASON
0004 – Duplicate Data set name in VTOC; data set already exists on the volume. This may occur for multi-volume data sets if the piece currently on the volume has a different volume sequence number than the piece being restored.
0008 – VTOC or VTOC index (VTOCIX) is full.
000C – I/O error in VTOC or VTOC index (VTOCIX).
0010 – Requested absolute tracks not available; an unmovable data set cannot be allocated because the required tracks are not free.
0014 – Requested space quantity not available; DADSM was unable to find sufficient free space (in up to 5 extents) to allocate the data set, or the specific space required for an unmovable data set was not free.
00AC – No security authorization to create data set. You must have ALTER authority to the data set under RACF or the equivalent in other security systems.
00B4 – IGGPRE00 installation exit rejected the request. A local exit or DASD Control software product has disallowed allocation on the volume that FDR selected.
00C0 – SMS failed the allocation request. The most common cause is a mismatch between the SMS flags in the VTOC of the output volume and that volume's status in the current SMS configuration; common reason codes are:
04160053 – VTOC indicates INITIAL status (in process of conversion to SMS).
04160054 – VTOC indicates NON-SMS, but the volume is in an SMS storage group.
04160055 – VTOC indicates SMS, but the volume is not in an SMS storage group.

Action: You can use FDRCONVT (Section 70.30) to convert the volume to SMS or non-SMS, or you can remove the volume from its storage group in the current SMS configuration. "*comp*" values greater than 1000 are from FDR, in hex, as follows:

COMP – REASON

2354 – The name of the data set being restored does not meet IBM's data set naming conventions. If NEWNAME=, NEWGROUP=, or NEWINDEX= was specified, the error is in the new name; otherwise it is the original name of the data set that is invalid. You can bypass this check by specifying NODSNCHK on the RESTORE statement; the data set is allocated but the catalog probably fails.

FD*xx* – The IBM subsystem interface (IEFJSREQ) failed with return code "*xx*".

FE*xx* – The IBM SMS interface failed the allocation request with return code "*xx*", (usually 08). "*reason*" is an SMS error code, in decimal. You can find the description by looking up IBM message IGD*xxxxx*, where "*xxxxx*" is the reason code.

FF04 – FDR cannot allocate an ISAM file. See member **ISAM** in ICL Library.

FF08 – FDR cannot allocate a non-ICF VSAM file.

FF0C – FDR cannot allocate an unmovable file with more than three extents.

FF18 – On a COPY/MOVE of a data set protected by a discrete RACF profile, an attempt to issue RACDEF to define a profile for the output data set failed."*reason*" is "0000*xxyy*" where "*xx*" is the RACF return code and "*yy*" the RACF reason code ("*xx*" of 04 indicates that the profile already exists, 08 that the user is not authorized to create the profile)

FF50 – GETMAIN failure during allocation. Increase the region size.

FF51 – Allocation parameter list error. Contact INNOVATION DATA PROCESSING.

FF52 – FDR did not select a target output volume. This can occur if the data set's original volume or the volume you specified as NVOL= is not online. Specify a new NVOL= value or update the ABR Restore Allocation List to direct the data set to an online volume.

FF53 – NVR is not record type N. Contact INNOVATION DATA PROCESSING.

FF54 – NVR cell type not 22. Contact INNOVATION DATA PROCESSING.

FF55 – NVR type 24 cell length invalid. Contact INNOVATION DATA PROCESSING.

FF56 – NVS SMS sub cell not type 24. Contact INNOVATION DATA PROCESSING.

FF57 – DSCB address not passed. Contact INNOVATION DATA PROCESSING.

FF58 – The selected target disk volume was SMS-managed, but no storage class was assigned. It may be that your SMS Automatic Class Selection (ACS) routines are assigning a null storage class to this data set. To restore as SMS, specify STORCLAS=; if it still fails, use BYPASSACS or update your Automatic Class Selection (ACS) routines. To restore as non-SMS, specify NVOL= to direct it to a non-SMS volume.

FF59 – Volsers in CPL cannot be located, or over 10 volumes passed. Contact INNOVATION DATA PROCESSING.

FF92 – Tracks in extent not divisible by CASIZE during FDRMOVE operation. This means that the extent allocated by DADSM was not the proper size to allow the move of a multi-volume component on all volumes tried by FDRMOVE. Those volumes are probably fragmented.

Action: Determine the cause and take appropriate action. It may be possible to circumvent the problem by pre-allocating the output data set. If needed, contact INNOVATION DATA PROCESSING for assistance.

FDR157   VSAM ALLOCATION ERROR COMP=*comp* CODE=*reason* VOL=*vvvvvv* CLUSTER=*clustername*

Reason: FDR attempted to allocate a VSAM cluster, using the IBM CATALOG SVC, but the attempt failed. "*comp*" is the return code and "*reason*" is the reason code from CATALOG, in decimal, or is a value generated by FDR itself. If the allocation was attempted on multiple volumes (because of the NVOL= operand), it failed on all of them, but "*vvvvvv*" is the first volume on which it was tried, and the codes are from that volume. If the cluster is SMS-managed, "*vvvvvv*" is the volume that FDR selected for the cluster and may not be the same as the volume on which SMS tried to allocate it.

Codes from the IBM CATALOG SVC can be found documented under IBM message IDC3009I. Common codes include:

COMP	CODE –	REASON
0004	00010 –	The catalog selected by FDR to catalog this cluster does not exist (see the description of the ICFCAT= operand). If you dumped this cluster on one system and are restoring it on another, this may mean that a catalog with the name of the original cluster's catalog does not exist; you may need to specify ICFCAT=ALIAS to catalog it into the proper catalog.
0004	00120 –	The catalog selected by FDR to catalog this cluster is not defined in the master catalog. See 0004-0010 above.
0008	00008 –	Name already in the catalog. A NEWGROUP= or NEWINDEX= value may have resulted in renaming the output cluster or some of its components to the same name.
0008	00038 –	Name already in the catalog. Either the cluster or component name already exists, or the original cluster is still cataloged. The VRECAT operand can be used on the RESTORE statement to delete the duplicate names.
0056	00006 –	Insufficient security authorization to define the cluster. You must have ALTER authority to the cluster under RACF or the equivalent in other security systems.
0068	00008 –	The VTOC or Indexed VTOC is full.
0068	00020 –	Insufficient space available to define the cluster.

If "*comp*" is a value above 9000, the error is generated by FDR itself (COMP values from 9052 through 9080 may occur if the cluster being restored had an imbedded index, and at the time of the backup the index component was in multiple extents):

COMP	CODE –	REASON
9004 –		The VVR entry for the data component on the backup contains an unknown cell type.
9012 –		FDR cannot allocate a multi-volume component.
9016 –		The VVR entry for the index component on the backup contains an unknown cell type.
9024 –		SELECT specified a component name instead of cluster name, or a component of the requested cluster was missing from the VVDS at the time of the backup, or ICF=IGNORE was specified during the dump.
9028 –		FDR could not find the type 23 cell in the VVR.
9032 –		FDR cannot allocate a VSAM cluster that contains an alternate index to a NEWNAME. Use NEWGROUP or NEWINDEX instead of NEWNAME.
9036 –		FDR cannot allocate a key range VSAM cluster using NEWNAME=. Use NEWGROUP= or NEWINDEX= instead of NEWNAME=.
9040 –		The volume serial number in the SYS1.VVDS data set does not reflect the volume it is on. If FDR were to allocate a VSAM cluster under these conditions, the operating system would create a new VVDS data set.
9044 –		The name of the cluster or one of its components being restored does not meet IBM's data set naming standards.
9048 –		Error occurred applying the NEWINDEX= value.
9052 –		A LOCATE SVC failed. CODE shows the return code from LOCATE. The reason code is not shown.
9056 –		Unable to find the PCCB for a user catalog.
9060 –		Dynamic allocation failed. CODE shows the return code in register 15 from SVC 99. The dynamic allocation return code (DARC) from the SVC 99 parameter list is not shown.
9064 –		VSAM OPEN failed. Message IEC161I may appear on the job log. CODE shows the return code from VSAM OPEN, as documented under IBM message IEC161I. For example, code 0040 indicates a security violation.
9068 –		VSAM PUT failed. CODE shows the return code from VSAM PUT.
9072 –		AMB Extension was not found.

9076 –		Internal error in reconstructing the imbedded index; RBA of index extent is not correct.
9080 –		VSAM EOV failed. Message IEC070I may appear on the job log. CODE shows the return code from VSAM EOV, as documented under IBM message IEC161I. For example, code 0104 or 0209 indicates that the volume that you were restoring to did not have enough space to contain the data set. It should be possible to restore the cluster to another volume with more space available.
9084 –		Error from RACF, for a cluster with a discrete profile. FDR successfully allocated the cluster, and then tried to define a new discrete profile, using the profile of the original cluster as a MODEL. The CODE value is the RACF return code, and register 0 within the mini-dump contains the RACF reason code. A CODE of 4 indicates that the profile already exists, 8 indicates the user is not authorized to create the profile.
9088 –		A KSDS with an excessive number of key ranges cannot be defined.
9092 –		A PAGE/SWAP cluster cannot be moved.
9093 –		CISIZE of input cluster is invalid for logical restore.
9094 –		Physical block size of input cluster is invalid for logical restore.
9095 –		CASIZE of input cluster does not fit in a cylinder of the output disk for logical restore. For example, a cluster allocated in cylinders on a 3390 cannot be restored to a 3380.
9096 –		Allocation of a multi-volume VSAM cluster failed. This can also occur for a KSDS with the IMBED option or keyranges. "*reason*" indicates the specific error:
9096	**00004 –**	GETMAIN/FREEMAIN error.
9096	**00008 –**	Volume list from LOCATE is invalid.
9096	**00012 –**	Non-VSAM catalog entry invalid.
9096	**00016 –**	Unable to obtain LOCAL lock.
9096	**00020 –**	Type 23/21 cell not found in VVR.
9096	**00024 –**	Cluster on more than 255 volumes.
9096	**00028 –**	Number of extents does not match Type 60 cell.
9096	**00032 –**	UCB not found for output disk.
9096	**00036 –**	Imbedded index extents do not match.
9096	**00040 –**	Length error on cluster/component name.
9096	**00044 –**	VVR length invalid.
9096	**00048 –**	NEWNAME= not supported (use NEWG/NEWI).
9096	**00052 –**	Catalog entry type not non-VSAM. Multi-volume VSAM clusters that have not been completely restored are cataloged as non-VSAM (the first volser is ####Vx) but the cluster name is currently cataloged as something else (usually VSAM). This may be due to a previous incomplete restore of this cluster. See "Action" below.
9096	**00056 –**	LOCATE error. This can occur if the original catalog of the cluster is not available on the system on which the restore was done. Specify ICFCAT=ALIAS to restore into the aliased catalog on the current system. Also, see "Action" below.
9096	**00060 –**	Cluster has alternate index.
9096	**00064 –**	VRECAT failed.
9096	**00068 –**	Cluster has over 123 extents on a volume.
9096	**00072 –**	Number of extents on volume not correct. Probably due to free space fragmentation on the target device causing DADSM to allocate the request in multiple extents.
9096	**00076 –**	Unlike device restore not supported.
9096	**00080 –**	Attempted to move a VSAM component but it is not cataloged to the input volume.
9096	**00084 –**	Cataloged to over 255 volumes during FDRMOVE move of a multi-volume cluster.

9096	**00088 –**	Catalog entry type not non-VSAM, and VRECAT was specified, but the piece of the cluster on the current source volume is guaranteed candidate space and does not warrant deleting the cataloged cluster. The parts of the cluster that contain data may have been restored already, or may be restored subsequently.
9096	**00092 –**	Tracks in extent not divisible by CASIZE during FDRMOVE operation. This means that the extents allocated by DADSM were not the proper size to allow the move of a multi-volume component on all volumes tried by FDRMOVE. Those volumes are probably fragmented.
9096	**00096 –**	Extent update LOCATE failed during FDRMOVE move of a multi-volume cluster.
9096	**00100 –**	Extent update UCBADDR failed during FDRMOVE move of a multi-volume cluster.
9096	**00104 –**	Extent update DATANAM failed during FDRMOVE move of a multi-volume cluster.
9096	**00108 –**	Extent update READVVR failed during FDRMOVE move of a multi-volume cluster.
9096	**00112 –**	Extent update UPDTVVR failed during FDRMOVE move of a multi-volume cluster.
9096	**00116 –**	Extent update ENDUPDT failed during FDRMOVE move of a multi-volume cluster.
9096	**00120 –**	Extent update, VVR type not type 60 during FDRMOVE move of a multi-volume cluster.
9096	**00124 –**	Cluster not cataloged or cataloged as non-VSAM during FDRMOVE move of a multi-volume cluster.
9096	**00128 –**	Extent update, number of extents is less than 1 during FDRMOVE move of a multi-volume cluster.
9096	**01*xxx* –**	OBTAIN error ("*xxx*" is OBTAIN error code).
9096	**02*xxx* –**	DYNAMIC ALLOCATION error ("*xxx*" is allocation error code).
9096	**03*xxx* –**	EXTEND error ("*xxx*" is EXTEND error code).
9096	**03129 –**	Insufficient space for component on this volume.
9100 –		The selected output disk volume was SMS-managed, but no storage class was assigned. Specify STORCLAS= or select a non-SMS volume, and resubmit.
91*xx* –		The IBM SMS interface failed the allocation request with return code "*xx*" (usually 08). "*reason*" is an SMS error code, in decimal. You can find the description by looking up IBM message IGD*xxxxx*, where "*xxxxx*" is the reason code.
92*xx* –		The IBM subsystem interface (IEFJSREQ) failed with return code "*xx*".
9450 –		GETMAIN failure during allocation. Increase the region size.
9451 –		Allocation parameter list error. Contact INNOVATION DATA PROCESSING.
9452 –		UCB address not passed or invalid. Can occur if the data set is not SMS-managed (no storage class assigned), but FDR has not selected a volume on which to allocate it. Specify NVOL= and rerun.
9458 –		BYPASSSMS was specified and the selected output disk volume was SMS-managed, but no storage class was assigned. Specify STORCLAS= or select a non-SMS volume, and resubmit.
9459 –		Volsers in CPL cannot be located, or over 10 volumes passed. Contact INNOVATION DATA PROCESSING.

Action: An FDR mini-dump is printed displaying the CATALOG DEFINE parameter list and related data areas. Determine the cause and take appropriate action. For errors involving names already in the catalog, the VRECAT operand on the RESTORE statement may be used to DELETE the duplicate names from the catalog (but should be used cautiously since it may DELETE other clusters). If needed, contact INNOVATION DATA PROCESSING for assistance.

FDR158   **DATA SET IS ACTIVE DSN=*dsname***

Reason: FDRPAS or FDRMOVE has found that the data set named is active (enqueued to another job or task on this system or another system).

Action: FDRPAS copies all the tracks allocated to the data set.

For FDRMOVE, this is normal for active data sets; FDRMOVE retries the data set until it becomes available.

FDR159   **UNABLE TO MOVE *reason* VOL=*vvvvvv* DSN=*dsname***

Reason: If the "*reason*" indicates "**A CATALOG**", then a catalog was selected. FDRMOVE cannot move a catalog. "*dsname*" is the catalog or CATINDEX name.

If the "*reason*" indicates "**IN CPK RECOVERY**", then the "*dsname*" data set that is listed was involved in a prior CPK function that failed and is still in recovery state. The data set is not moved by FDRMOVE.

If the "*reason*" indicates "**VSAM ORPHAN**", a problem was found in the VSAM data set structure for the VSAM data set listed in "*dsname*". The VSAM data set entry is in the VTOC, but not in the VVDS.

If this message appears with the text "**REASON=**", consult Chapter 100 of the standard FDR manual for an explanation. This should not occur when using the standard FDRMOVE unmovable table.

FDR162   **SMS ERROR MESSAGE FOR DSN=*dsname message text***

Reason: The allocation of an SMS-managed data set failed. The diagnostic and informational messages generated by SMS during this allocation are printed.

Action: Examine the messages to determine the cause of the allocation failure.

FDR164   **CANDIDATE-SPACE ALLOCATION BYPASSED DSN=*dsname***

Reason: The current backup or input disk contains an extent of a multi-volume VSAM cluster that was flagged as a "candidate space". A candidate space is created when a multi-volume SMS cluster is allocated with a storage class with the "guaranteed space" attribute and real volume serials are specified. SMS pre-allocates extents on the volume, but they are not part of the active extents of the cluster until it expands and uses them.

Action: The candidate space is bypassed and is not allocated. FDR does not restore VSAM candidate volumes, either regular or candidate-space.

FDR170   **DEVICE IS NOT ELIGIBLE FOR *function* UNIT=*uuuu* VOLID=*volid reason* [OVERRIDDEN]**

Reason: The indicated disk device is not eligible to be erased by FDRERASE or initialized by FDRINITV for the reason indicated. If VOLID= is displayed, this is the ID in the first four bytes of the volume label (VOL1 indicates a normal volume label, FDR*n* indicates a volume label modified by FDRPAS, FDRERASE, or FDRINSTANT.

If the text **OVERRIDDEN** appears, then the condition is overridden by an operand (such as ACTIVETARGET=PROCESS). If VOLID is VOL1, this message may be preceded by an FDR255 message if the volume contains data sets.

Action: The disk is not erased unless the condition is overridden.

DEVICE IS NOT ELIGIBLE FOR *function* UNIT=*uuuu* VOL=*vvvvvv* ONLINE TO CPU=*cupid*

Reason: This form of the **FDR170** message is issued when the target device is found to be online. An active pathgroup relationship for an EMC subsystem can also cause this message to be issued.

Action: This disk is not erased unless ACTIVETARGET=PROCESS was specified. For an active pathgroup relationship in an EMC subsystem, you can vary the device online followed by varying the device offline to break the relationship.

DEVICE IS ALREADY ERASED UNIT=*uuuu* VOL=*vvvvvv* [OVERRIDDEN]

Reason: This form of the **FDR170** message is issued when the target device has already been successfully erased. The text OVERRIDDEN appears if the condition was overridden by ALREADYERASED=PROCESS.

Action: The disk is not erased unless ALREADYERASED=PROCESS was specified.

DEVICE IS ELIGIBLE FOR *function* UNIT=*uuuu* VOL=*vvvvvv* VOLID=*volid* CU=*mfrseral*/*ssid-diskid*

Reason: This form of the **FDR170** message is issued only for SIMERASE operations in FDRERASE and FDRINITV INITVTOC operations. The indicated disk device is eligible to be erased by FDRERASE and is erased by a real erase operation or is eligible to have a VTOC built. "*mfr*" is the disk subsystem manufacturer (e.g., IBM), "*seral*" is the subsystem serial number, "*ssid*" is the subsystem ID (SSID), and "*diskid*" is the internal disk identification, if it can be determined, or the device address, if not.

function BYPASSED UNIT=*uuuu* DOES NOT HAVE A VALID VTOC AND VTOC LOCATION/VOLSER NOT PROVIDED

Reason: This form of the **FDR170** message is issued only for FDRERASE EMPTYVTOC or FDRINITV INITVTIC operations. The indicated disk device does not have a valid volume label and/or VTOC.

Action: The disk is not re-initialized unless the condition is overridden. Specify the VTOC location and size on the MOUNT statement. Specify CHANGEVOL= if there is not a proper volume serial.

program BYPASSED UNIT=uuuu CHANGEVOL NUMBER WRAPPED

Reason: This form of the **FDR170** message is issued by FDRERASE or FDRINITV when volumes were being relabeled by a CHANGEVOL= parameter that included slashes "/" to generate a sequence number. The sequence number exceeded its maximum value for the number of slashes specified.

FDR171   ERASE RELEASED ITS CSA STORAGE

Reason: FDRERASE released the small area of CSA it uses to track active and completed erase operations.

FDR172   ERASE STARTED/ENDED PASS *n* PATTERN=*hh*

Reason: FDRERASE has started or ended pass "*n*" on a disk volume, using pattern byte X'hh'. See the description of the ERASEPASS= and ERASEPATTERN= operands for details. The pattern is "ERASE" if the tracks are being hardware erased (ERASE pattern "01").

FDR173   ERASE HARDENED DATA TO UNIT=*uuuu* IN *nnn* SECS *errortext internal*

Reason: At the end of a pass for ERASE or SECUREERASE, FDRERASE issued commands to ensure that the overwriting data has been "hardened" from cache to the physical disk. This took "*nnn*" seconds. If an error occurred while hardening the data, "*errortext*" appears; it can be "**I/O ERROR**" or "**TIMEOUT**". **TIMEOUT** indicates that the control unit has not acknowledged the hardening of the data for over the HARDENTIMEOUT value (default 2 minutes), or the count of remaining tracks has not decreased for some time. "*internal*" is some internal numbers about the hardening operation. Note that this message may appear in the erase subtask listing (SYSPRT*xx*) or the SWAP task listing (SYSPRINT).

Action: FDRERASE has successfully erased or overwritten the disk. However, if "*errortext*" appears, FDRERASE cannot be certain when the data is actually written to the physical disk, but it continues with the erase operation.

FDR174   *function* REWROTE VTOC TO UNIT=*uuuu* [*additional text*]

Reason: For FDRERASE ERASE operations and FDRINITV INITVTOC operations, CPYVOLID=YES
was specified and FDRERASE/FDRINITV invoked ICKDSF to rewrite an empty VTOC on
the volume (FDRERASE erases it first). "*additional text*" can be:

> **AND REBUILT INDEXED VTOC –** A VTOCIX was also allocated and initialize on
> the volume.
>
> **FAILED CHECK IXSYSP*xx* –** ICKDSF failed, check the IXSYSP*xx* DD output for
> error messages.
>
> **FAILED IXSYS ERROR –** An error occurred dynamically allocating or opening
> IXSYSP*xx* or IXSYSX*xx*.

FDR175   PRINT UNIT=*uuuu* CYL.*ccccc* TRK.*tt* REC.*rrr* KL.*kl* DL.*dl* DATA=*data*

Reason: A PRINT statement was used with FDRERASE, which requests that information about the
contents of tracks be printed from an offline or online disk. One **FDR175** message is
printed for each record on the selected tracks. However, if ERASEDATA=NONE was
specified, only Record 0 (R0) is printed for each track, to reduce the size of the printout.

The cylinder (*ccccc*), track (*tt*), and record number (*rrr*) are displayed, along with the
key length (*kl*) and data length (*dl*) of the record; all values are in decimal. "*data*" is the
first and last eight bytes of the record, in hexadecimal plus the first eight bytes in
EBCDIC. If all data bytes in the record are the same, the last eight hex bytes are
replaced with the text "**ALL BYTES THE SAME**"; this is the expected result if you
have used the ERASE or SECUREERASE function to erase a disk unless
ERASEPATTERN=FE was used (for SECUREERASE or ERASE with ERASEPASS,
the results of the last pass are shown). If "**END OF FILE**" is displayed, then the printed
record is an EOF (a record with a data length of 0).

Every track has a record 0 (R0), so at least one line is printed per track. If there are no
other records on the track, the text "**NO RECORDS ON TRACK**" appears to the right
of the eight-byte data field of R0. If there are other records on the track "***nn***
RECORDS ON TRACK" is displayed on the R0 line. After an ERASE or
SECUREERASE function, you see one record on the track.

FDR177   VERIFY CHECKED UNIT=*uuuu* AND ALL TRACKS CONTAINED ERASE DATA PATTERN=*xx*

Reason: A VERIFY function was executed on disk "*uuuu*" and all selected tracks contained data
written by FDRERASE. "*xx*" is a single hexadecimal byte if all bytes in all records
contained that byte. It is "**FE** (Random)" if the tracks contained the random pattern
generated by ERASEPATTERN=FE. If the disk was erased using multiple passes
(such as SECUREERASE), the displayed pattern is the last one used.

              VERIFY CHECKED UNIT=*uuuu* AND ALL TRACKS CONTAINED NO RECORDS PATTERN=ERASE

Reason: In this form of the **FDR177** message, a VERIFY function was executed on disk "*uuuu*"
and all selected tracks were empty (containing no records).

              VERIFY CHECKED UNIT=*uuuu* AND ALL TRACKS DID NOT CONTAIN ERASE DATA

Reason: In this form of the **FDR177** message, a VERIFY function was executed on disk "*uuuu*"
and one or more selected tracks contained records that were not written by
FDRERASE. This may mean that the disk was not erased, or the erase failed.

This can also occur if the CHANGEVOL operand was specified on the MOUNT statement.
The CHANGEVOL operand places a volser in CYL 0 and this causes the VERIFY function
to not have erase data in that location causing this message to be printed.

Action: FDR175 messages are issued for each non-erased track to indicate its contents. If more
than ERASENUMB= tracks fail verification, the VERIFY function terminates on this
volume. The step terminates with a non-zero return code.

FDR181 **MOVE REQUEST ALREADY ON NVOL=*volser* DSN=*dsname***

Reason: An FDRMOVE request found that a selected data set was already on a volume in the NVOL= list, so the data set is not moved.

MOVE REQUEST HAS YET TO MOVE VOL=*volser* DSN=*dsname*

Reason: In this form of the **FDR181** message, the specified data set has not yet been moved.

FDR182 **FDR REQUESTS THAT VOL=*volser* MOVE TO/FROM THE TRANSIT STATION**

FDRPAS *status* SWAP TASK TO MOVE TO TRANSIT STATION VOL=*vvvvvv*

Reason: The first form of this message indicates a FASTMOVE job has requested that the SWAP TYPE=TRANSIT job move the specified volume to a transit station disk, or move it back to its original device.

The second form of this message indicates that the transit job has received the move request. The "*status*" keyword indicates the current status of the move request and indicates STARTED, ENDED, or DELAYED. DELAYED indicates that is a delay is processing the request that can be due to the maximum number of transit jobs already running or all of the available target units are already being used.

FDR183 **FDR SMS DISABLENEW VOL=*volser***

Reason: DISABLENEW=YES was specified on a MOVE or FASTMOVE statement, and the source volumes were SMS-managed, so FDRMOVE marked the source volumes as DISABLENEW to prevent new allocations.

FDR MARKED PRIVATE VOL=*volser*

Reason: In this form of the **FDR183** message, DISABLENEW=YES was specified on a MOVE or FASTMOVE statement, and the source volumes were non-SMS, so FDRMOVE changed their mount status to PRIVATE. This prevents new non-specific allocations to those volumes but specific volser allocations are still allowed.

FDR SUBMITTED FDRPAS TRANSIT JOBNAME=*jobname*

Reason: In this form of the **FDR183** message, FASTMOVE determined that one or more of the source volumes must be moved to transit stations, so it submitted the internal FDRPAS "SWAP TYPE=TRANSIT" specified by the PASJOB DD statement. A SIMMOVE waits up to 15 seconds for the SWAP job to start; FASTMOVE waits up to 10 minutes. If the job does not start, the FDRMOVE job fails.

FDR SUBMITTED FDRPAS MONITOR JOBNAME=*jobname* FOR CPUID=*cpuid*

Reason: In this form of the **FDR183** message, FDRPAS determined that a FDRPAS monitor was not running on an LPAR and submitted the job for that CPUID based on the JCL in the PASJOB DD statement.

FDR184 *status message*

Reason: This is the message produced by the console STATUS command (F *movejob*,STATUS). It has many different forms but briefly, it displays the status of volumes and data sets being processed by FDRMOVE. For FASTMOVE it shows which volumes are moving to transit stations. For all functions it shows the active data sets that FDRMOVE is waiting to move. Similar messages are displayed by the FDRMOVE ISPF panel. Examples and more details appear throughout Chapter 325 "FDRMOVE".

VOL=*volser status source - target, nnnnnnnn* DATASETS TO MOVE - HIGHEST SEQ# *nnnn* --[NOIX]

Reason: This form of the **FDR184** message identifies the source volume being processed and the current processing being done. Also shown are the source and target DASD subsystem as well as the number of data sets to be moved and the number of unique volumes required for multi-volume data sets. "**NOIX**" is appended to the message to indicate that either the source or target volume (or both) does not have an indexed VTOC and processing may be slower for this volume. The "*status*" for the volume level message can be:

AWAITING MOVE FROM – Volume is available to be processed, but not selected yet.

IN TRANSIT STATION – The source volume has been moved to the transit station and is now available to FDRINSTANT to move the individual data sets.

AWAITING TRANSIT – No transit station is currently available for use by this volume.

MOVING TO TRANSIT – The source volume is being moved to a transit volume so FDRINSTANT can be used to move the individual data sets.

VTOC IS NOT EMPTY – A SIMMOVE operand was specified with VTOCEMPTY=CHECK and it was found that not all data sets would be moved.

|---FOR ACTIVE DSN=*dsn nn* JOBS(*jobnames*)

Reason: This form of the **FDR184** message provides information on the individual data sets and the job(s) that an enqueue on the data set. Up to four job names are listed in the message.

FDR MOVED *nnnnnnnn* DATASETS/COMPONENTS SUCESSFULLY

**MOVE STATUS *nnnnnnn* ACTIVE DATASETS *nnnn* AWAITING TRANSIT *nnnn*
MOVING TO TRANSIT *nnnn* IN TRANSIT STATION**

Reason: These two forms of the **FDR184** message is a summary of all the data sets by current status.

nnnn JOBS ACTIVE MIM-JOB(UNKNOWN ON OTHER LPARS

Reason: This form of the **FDR184** message is displayed when MIM is determined to be in the system and the MIM job on the other LPARs cannot be identified.

MIM NOT ACTIVE MOVE TERMINATED VOL=*volser*

Reason: This form of the **FDR184** message is displayed when MIM is determined to be the cross-system enqueue product, but it is not active. The FDRMOVE job stops to prevent possible data set corruption.

TRANSIT JOBNAME=*jobname* WAS SUBMITTED BUT IS NOT ACTIVE

Reason: This form of the **FDR184** message can be a STATUS response and can be issued independently. It indicates that the FDRPAS TYPE=TRANSIT job with the indicated job name was submitted but has not become active. It can also be issued if the job was active but was terminated prematurely. In a SIMSWAP, this comes out once after 15 seconds if the job does not become active. In a FASTMOVE, it comes out every 15 seconds for five minutes, after which the FDRMOVE job fails.

One common cause of this is an invalid JOB statement in the FDRPAS job stream. Although FDRMOVE does some validation of the JOB statement (see the error message), it is not comprehensive and an invalid JOB may cause the job to fail. If you do not see the error, check SYSLOG for JES messages that may give you guidance.

FDR185   FDRMOVE ERROR REASON=*x*

Reason: FDRMOVE has detected a serious error and terminates. Many of the reasons relate to errors submitting the FDRPAS transit job.

The reason code "*x*" may be:

1   **PASJOB DD FAILED TO OPEN –** The PASJOB DD was omitted or points to an improper data set.

2   **INTRDR DD FAILED TO OPEN –** The internal INTRDR DD allocated to submit the PASJOB had an error.

3   **PASJOB MISSING PROCESS TABLE –** An internal table is missing.

4   **PASJOB DOES NOT START WITH // –** The internal PASJOB does not have "//" in columns 1-2 of the first statement

5   **PASJOB DOES NOT START WITH JOB –** The internal PASJOB does not have the verb JOB in the first statement.

6   **PASJOB MOUNT EXCEEDS 16 CARDS –** If VOL=&&&&&& is used on the MOUNT statement, the SWAPUNIT= operand cannot be continued to more than15 statements (16 total).

7   **PASJOB MOUNT CONTINUE IS BLANK –** A continuation statement for a MOUNT statement was blank.

8   **I/O ERROR ON INTRDR DD –**

9   **I/O ERROR ON PASJOB DD –**

A	**PASJOB DD IS EMPTY –** There is no JOB in the PASJOB DD.	
B	**JOBNAME MISSING OR OVER 8 BYTES –** There on the first statement in PASJOB, which must be a JOB statement, the job name was missing or too long.	
C	**CANNOT FIND MODULE FDRDSF –** Internal error.	
D	**INSUFFICENT STORAGE AVAILABLE –** Unable to GETMAIN a needed table.	
E	**CONTROL CARD NAME MISMATCH –** Internal error.	
F	**ENQUEUE DATASET NAME BLANK –** Internal error.	
G	**PASJOB MOUNT STATEMENT MISSING –** The internal PASJOB must have a MOUNT statement.	
H	**PASJOB MULTIPLE MOUNT CARDS –** If the internal PASJOB uses VOL=&&&&&& on the MOUNT statement, there must be only one MOUNT.	
J	**NVOL LIST HAS NO ONLINE VOLUME –**	

▸ NVOL= on an FDRMOVE SELECT statement does not point to any online volumes.

▸ NEWCUID was specified without NEWSTORGRP or ENEWSTORGP.

K	**PASJOB NAME ALREADY ACTIVE –** The job name specified in PASJOB is already running.	
M	**PASJOB TYPE=TRANSIT MISSING –** The first control statement to FDRPAS must specify SWAP TYPE=TRANSIT.	
N	**VOL= VOLUME SAME AS NVOL= VOL –** A MOUNT statement in the FDRPAS job specifies VOL= with a volser matching an NVOL= in the FASTMOVE input	
O	**SMS TO NON-SMS OR VICE-VERSA –** FDRMOVE cannot move a non-SMS source volume to an SMS target volume, or vice versa.	
P	**NVOL= NOT SAME DEVICE TYPE VOL=***volser* **–** The NVOL list for the indicated volume contains a device type that does not match the VOL=, such as a 3390 to a 3380.	
Q	*vvvvvv* **MOVED TO WRONG CNTLUNIT –** The volume indicated was swapped to a different control unit than the selected FDRMOVE target volumes reside in. This was moved by the FDRPAS "SWAP TYPE=TRANSIT" job, but you specified the wrong SWAPUNIT= values for the volume.	
R	**NO ONLINE VOLUMES MATCH VOL=***volser* **–** In FDRMOVE:	

▸ VOL= ending in an asterisk was specified but no matching volsers were found.

▸ VOL=* was specified. This is not valid.

▸ CUID was specified without STORGRP.

S	**ONLINE VOLUMES EXCEED MAXCARDS –** VOL= ending in an asterisk was specified but the number of volumes found (including preceding statements) exceeded MAXCARDS=. Increase MAXCARDS=.	

FDR186 **DSN=***dsname* **VOL=***volser nnnnnn* **ELIGIBLE NVOLS** *nvol nvol …*

Reason: The NVOLs eligible for an FDRMOVE of the indicated data set are displayed. "*nnnnnn*" is the number of NVOLs.

DSN= ALLDSN *storgrp* **VOL=***volser nnnnnn* **ELIGIBLE NVOLS** *nvol nvol*

Reason: This format of the **FDR186** message indicates that all the data sets from the indicated storage group are moved to the NVOLs specified. "*nnnnnn*" is the number of NVOLs.

FDR187 **CANDIDATE VOLUME** *volser action* **FOR DSN=***dsname*

Reason: The indicated non-SMS VSAM cluster has candidate volumes. If action is "**UPDATE DEFERRED**" then updating the candidate volume has been deferred until all active pieces of the cluster have been moved. "**UPDATED TO** *volsr2*" indicates that the candidate was updated to an unused volser in the NVOL list. If a catalog error occurs while updating the candidates, another form of the **FDR187** message displays the catalog error codes.

Action: If all occurrences of the **FDR187** message say "**UPDATE DEFERRED**" (and never **"UPDATED TO"**) then there were not sufficient unused NVOLs and the candidate was not updated; in this case, you may need to use the IDCAMS command with the REMOVEVOLUMES and ADDVOLUMES operands to change the candidate list to valid volsers.

FDR188   ALL VOLUMES IN TRANSIT STATION

Reason: All required volumes referenced in this FDRMOVE FASTMOVE step have been moved to transit stations in the target control unit, but FASTMOVE is still waiting for data sets on those volumes to be released.

Action: Stop the application(s) using those data sets; you can display the data set names with the console STATUS command or the FDRMOVE ISPF interface (see Section 325.11 "FDRMOVE Special Considerations"). As soon as the data sets are dequeued, FASTMOVE moves them with whatever instant replication facility is available in the target control unit.

FDR189   SWAP OF ACTIVE JES VOL=*vvvvvv* [*additional text*]

Reason: This is an information message indicating that FDRPAS has processed an active JES volume. The message displays the JES volume serial "*vvvvvv*". "*Additional text*" details the type of JES volume and when the volume has been serialized. The additional text can be "SERIALIZED", "CHECKPOINT", or "COUPLING". The message may be issued multiple times for a volume serial if multiple passes are performed on the volume.

FDR210   I/O ERROR ON TARGET UNIT=*uuuu* [*additional text*]

Reason: An I/O error occurred on the target device (documented by a preceding FDR149 message). Is it also issued to the console as a non-scrollable message.

Action: If SWAPIOERR=NORETRY was specified or defaulted, the swap is immediately terminated.

If SWAPIOERR=RETRY was specified, it has the *additional text* "**I/O WILL BE RETRIED EVERY 5 SECONDS**" and the failing I/O is retried until it is successful or until the swap is aborted. If the I/O is eventually successful, the message is issued again with the *additional text* "**RECOVERED**".

FDR230   *program* RELEASE ERROR - UNIT=*uuuu* REASON=*reason*

Reason: FDRERASE FDRINITV had an error attempting to do a "deleted space release" on an IBM RVA or Oracle StorageTek SVA. Reason codes include:

G   **MESSAGE ID=*mmmm* STATUS CODE=*ssss* –** ECAM message number "*mmmm*" was issued to the RVA/SVA. The message was accepted but it returned status code "*ssss*". Contact INNOVATION DATA PROCESSING for assistance.

H   **MSG=*mmmm* COMP *cccc* REASON=*rrrr* –** ECAM message number "*mmmm*" was issued to the RVA/SVA. The message was rejected with completion code "*cccc*" and reason code "*rrrr*". Contact INNOVATION DATA PROCESSING for assistance.

I   **MSG=*mmmm* PARM *pppp* CC=*cccc* RS=*rrrr* –**

K   **UNDEFINED SNAPSHOT STATUS –** Unexpected response from the RVA/SVA.

L   **UNDEFINED SNAPSHOT MESSAGE COUNT –** Unexpected response from the RVA/SVA.

M   **EXPECTED MSGID=*nnnn* - RECEIVED MSGID=*nnnn* –** Unexpected response from the RVA/SVA; the wrong ECAM message was received.

Action: FDRERASE reverts to using standard erase commands.

FDR232   *program* RELEASED PHYSICAL SPACE FROM UNIT=*uuuu*

Reason: An FDRINITV step is erasing tracks from a disk in an IBM RVA or a Oracle StorageTek SVA subsystem. Instead of erasing each individual track, the tracks were released by an ECAM "deleted space release" request, which has the same effect but takes only seconds per volume. This is also done for an ERASE function where a pattern byte of "01" (erase) is specified.

FDR233   *systemid* (SERIAL# *sssssssss*) ACKNOWLEDGES THE *function* OF VOL=*vvvvvv*
               variable-text

Reason: This form of the **FDR233** message indicates that the FDRPAS task on the indicated system
acknowledged the SWAP or SWAPDUMP request for volume "*vvvvvv*". "*systemid*" is the
system name and "*sssssssss*" is the hardware serial number of that system as reported
by the STIDP instruction. The unit addresses shown are the addresses on the system
indicated (the same device may have different addresses on different systems). "*function*"
is SWAP for a SWAP function or DUMP for a SWAPDUMP function.

"*variable-text*" can be:

AND HAS JOINED IN THE *function* OF UNIT=*ssss* TO *tttt* – Indicates that the
MONITOR task on the indicated system acknowledged the swap request
for the volume "*vvvvvv*" and participates in the swap of the volume. This
message prints in the output of the MONITOR task on each system, and the
messages from every system print in the output of the SWAP or
SWAPDUMP task for the volume.

AND WILL NOT JOIN BECAUSE SOURCE IS NOT ONLINE – Indicates that the
MOINTOR task on the indicated system acknowledged the swap request
for the volume "*vvvvvv*" and waits for the swap process but does not
participate in the swap of the volume because the volume is not online on
that system. This message prints in the output of the MONITOR task on
each system and the messages from every system print in the output of the
SWAP or SWAPDUMP task for the volume.

mftr-info **–** This appears on the SWAP or DUMP task and indicates the hardware
manufacturer and type of the source and target devices.

CPU WITH (SERIAL# *sssssssss*) IS ATTACHED TO VOL=*vvvvvv* [WAS EXCLUDED]

Reason: This form of the **FDR233** message indicates that FDRPAS has identified that the system
with hardware serial "*sssssssss*" is attached to the source volume "*vvvvvv*". "**WAS
EXCLUDED**" appears only if an EXCLUDE statement was included for that serial.

Action: If this is a SIMSWAP, verify that an FDRPAS MONITOR task is running on each of the
identified systems (except for excluded systems), monitoring the target device for this
swap, before you run the real SWAP operation. If some of the identified systems do
not participate in the swap, you may need to exclude them (see "Multi-System
Determination" in Section 320.1 for details).

**CPU WITH (SERIAL# *sssssssss*) CANNOT DETERMINE # OF SYSTEMS
ATTACHED TO VOL=*vvvvvv***

Reason: This form of the **FDR233** message is issued by a SIMSWAP operation. It indicates that
FDRPAS cannot determine the systems attached to the specified volume, because it
is in a subsystem that does not support that determination. "*sssssssss*" is the serial
of the system where SIMSWAP is running.

Action: Use the #SYSTEMS= operand on the SWAP statement when swapping this volume; be
sure to specify the number of systems correctly and ensure that a MONITOR task is
running on each system.

FDR234   SWAP ERROR ON VOL=****** - UNIT=*uuuu* REASON=B - TARGET VOLUME DOES
               NOT CONTAIN PAS ID IN LABEL

Reason: This form of the **FDR234** message is issued by a RESETVOL operation. It indicates that
FDRPAS did not find a valid PAS ID in the label track of the specified target volume.

Action: 1. Ensure that the specified target volume was previously processed by FDRPAS SWAP.

2. Check the RESETVOL control statements to ensure that the specified target volume is not
specified more than once in the control statements or by multiple RESETVOL operations.

MESSAGES AND CODES

FDR234   *function* **ERROR ON VOL=***vvvvvv* **- UNIT=***uuuu* **REASON=***reason*

Reason: This form of the **FDR234** message indicates that FDRPAS had an error that caused the operation on the specified volume to the specified unit to fail. "*function*" is SWAP for a SWAP function or DUMP for a SWAPDUMP function. A similar form of the message is issued by FDRERASE and FDRINITV for certain reason codes. Reason codes include:

0   **I/O INTERCEPTS ADDRESSES OR UNIT ADDR HAVE CHANGED –** The FDRPAS I/O intercept addresses in the DDT of the source volume or the device address of the source volume have changed unexpectedly. This probably indicates that some other program has also installed an I/O intercept on the source volume, with unknown results. The device address changed means that some other program swapped the volume that FDRPAS was processing.

1   **MOUNT STATEMENT NOT SPECIFIED –** There were no MOUNT statements following a SWAP or MONITOR statement. MOUNT statements are used to define the source volume and target device for SWAP or the potential target volumes be monitored for MONITOR.

2   **MOUNT STATEMENT NOT FOUND –** Some control statements were provided after the SWAP or MONITOR statement, but none of them were MOUNT statements. Only MOUNT statements can follow that statement.

3   **SWAPUNIT= NOT SPECIFIED IN MOUNT STATEMENT OR MORE THAN 1 UNIT –** SWAPUNIT= must be specified on the MOUNT statement. Following a SWAP statement, the SWAPUNIT= operand can only specify a single device. It may also be that you specified a blank preceding SWAPUNIT= in the control statement.

4   **SOURCE AND TARGET UNIT ADDRESS ARE EQUAL –** The current device address of the volume specified by VOL= is equal to the device address specified by SWAPUNIT=.

5   **INCOMPATIBLE SOURCE AND TARGET UNIT DEVICE TYPES –** The device type of the source volume specified by VOL= is different from the device type of the target device specified by SWAPUNIT=. For example, one is a 3380 and the other is a 3390.

5   **MISMATCH SOURCE AND TARGET MIDAW FLAGS –** On a System z processor (or beyond), both the source and target devices must support MIDAWs (Modified IDAWs) or both must not. All IBM disk subsystems support MIDAWs but some non-IBM subsystems may not. In order to swap, you must shut down MIDAW support with the console command: `SETIOS MIDAW=NO`.

6   **TARGET SWAPUNIT NOT FOUND –** The device address specified by SWAPUNIT= was not found in the current I/O configuration.

7   **TARGET SWAPUNIT NOT DASD –** The device address specified by SWAPUNIT= is not configured as a disk (DASD) device.

8   **TARGET SWAPUNIT IS NOT OFFLINE –** The device address specified by SWAPUNIT= is not offline on this system. If this is the intended target device for the swap, vary it offline on all systems and resubmit the swap request.

8   **TARGET ERASEUNIT IS NOT OFFLINE OR NOT CONNECTED OR HAS VOLSER –** The device address specified by ERASEUNIT= is not offline on this system, or has no channel paths, or is marked offline but has a volume serial filled in the UCB. If it is not offline, you can either vary it offline or include the operand ONLINE=VARYOFF if you are sure the volume should be erased. If it is offline with a volser, you may need to vary it online and offline again to clear this illogical condition.

8   **TARGET ERASEUNIT IS ONLINE AND ACTIVE –** The device address specified by ERASEUNIT= is not offline on this system and it is currently allocated to one or more address spaces, so it cannot be varied offline and erased.

8   **TARGET ERASEUNIT FAILED TO COME OFFLINE –** The device address specified by ERASEUNIT= is not offline on this system; an internal VARY OFFLINE did not succeed.

8   **TARGET ERASEUNIT CAME ONLINE DURING ERASE –** The device address specified by ERASEUNIT= was varied online during the erase process; the process is terminated.

9   **TARGET VOLSER CHANGED –** The volume serial on the target device was changed unexpectedly. One possible cause is an ICKDSF offline INIT of the target device during the swap.

A   **SWAP TARGET UNIT ALREADY IN USE –** The specified target device is already in use as a swap target for another source volume. Another FDRPAS SWAP task has this device enqueued and is trying to initiate a swap to it.

B   **SOURCE VOLUME DOES NOT CONTAIN VOL1 –** The source volume is online but does not contain a proper z/OS volume label. Use FDRDSF PRINT or another tool to print the label track of the volume and contact INNOVATION DATA PROCESSING for assistance.

C   **CPU*xxxxx* PAS I/O INTERCEPT FAILED CODE=*c* –** An FDRPAS I/O intercept on the source volume had an internal failure and has de-activated itself. The code "*c*" indicates the cause:

         0 –   Unknown CCWs (see REASON=E) or illogical condition.
         1 –   An IOSB had a 64-bit real address (not issued in V5.4/30 or above).
         2 –   A CCW chain included a TIC to a TIC, an illegal sequence.
         4 –   Too many concurrent update I/Os on one device. Re-submit this swap when less update activity.
         6 –   The DDT of the source volume was unexpectedly changed.
         8 –   An ABEND occurred in the intercept.
         9 –   Invalid seek address in sense data.
         A –   GETMAIN failure for ESQA for the FDRPAS track table.
         B –   FCX command no IOSB extension.
         C –   Cancel by dialog.
         D –   The ALIAS is disconnected.
         E –   With ALLOWPAV=YES specified, FDRPAS intercepted a write I/O issued to a specific PAV alias. Write I/O's should be done to the base PAV device, not the alias. A PAV command directed to the alias may have caused this error. Re-executing FDRPAS may allow FDRPAS to process this device.
         F –   The lock cannot be acquired after trying for 3 seconds.
         G –   The source volume was swapped by Hyperswap.

D   **JES3-MANAGED DISK –** This system is executing under JES3 and the disk to be swapped is flagged as JES3-managed (disks referenced by a DEVICE statement in the JES3 initialization parameters are JES3-managed). A JES3 routine was called to notify JES3 about the swap, but the routine returned an error. Verify that the target device is offline to JES3.

E   *systemid* **PAS I/O INTERCEPT FOUND UNKNOWN COMMAND(S) –** The FDRPAS I/O intercepts on the source volume on the indicated system encountered an I/O sequence that it could not interpret. Since the effects are unknown, FDRPAS could not determine if tracks were updated. The MONITOR task prints a summary of the unknown commands with the job name and time of the issuer; please attempt to determine what that job was doing and contact INNOVATION DATA PROCESSING so that we can determine if FDRPAS can be enhanced to handle the unknown commands.

NOTE: If the job was using facilities that are documented as restricted during a swap (see Chapter 320 "FDRPAS Special Considerations"), you may be able to resubmit the swap when those facilities are not in use.

F   *systemid* **FAILED THE SWAP REASON=*x* –** The FDRPAS MONITOR task on the indicated system failed the swap. "*x*" is an additional reason code, which usually matches the FDR234 reason code. Save the listing from the MONITOR or SWAP task on the indicated system to determine the cause. Contact INNOVATION DATA PROCESSING for assistance if necessary.

G   **INSUFFICENT STORAGE IN REGION –** Increase the REGION= parameter specified in the FDRPAS JCL. REGION=0M is recommended. It may also occur if too many FDRPAS tasks are executing in this address space; in that case, reduce the number of concurrent tasks.

H   **COULD NOT RAISE IOS LEVEL OR I/O HUNG ON SOURCE –** FDRPAS attempted to raise the IOSLEVEL of the source volume, to inhibit I/Os for a short time during a phase of the swap, but either the IOSLEVEL request failed or there is an active I/O on the device that has not completed within 2 minutes. During Phase 5, it can also occur if one system held a long-term RESERVE or had a long-running I/O on the source volume; you may need to retry the swap during a time when such long I/Os are not likely to occur.

H   **COULD NOT RAISE IOS LEVEL VOLUME RESERVED –** FDRPAS attempts to raise the IOSLEVEL of the source volume, to inhibit I/Os for a short time during a phase of the swap, but some other task held a long term RESERVE on the device. Either a task holding the RESERVE is hung; or a process holding a long-term RESERVE, such as a restore of the device, is in progress.

I   **I/O INTERCEPTS FAILED TO ACTIVATE –** The dynamic installation of the FDRPAS I/O intercepts on the source volume was unsuccessful.

J   **MONITOR SWAP FOUND MULTIPLE MOUNT STATEMENTS –** A MONITOR statement may be followed by only one MOUNT statement, although that MOUNT may specify multiple devices or device groups to monitor. See Section 310.6 "MONITOR SWAP MOUNT Statement".

K   **MONITOR SWAP FOUND NO MATCHING OFFLINE UNITS –** None of the device addresses specified on the MOUNT statement following a MONITOR statement were offline disk devices. This can also occur in FDRERASE if an ERASEUNIT= specifies a 3-digit device address; unit addresses must always be four digits. Note that a MONITOR for a SWAPBUILDIX function requires one offline unit as a communication device.

L   **OUR SERIAL# NOT IN ESTABLISHED PATHS - DEFAULTING TO #SYSTEMS= –** The source volume is on a control unit that reports the systems with access to the disk, but the ID of the system that the FDRPAS SWAP task is executing on is not among those systems. This may indicate a failure in that hardware facility. If you specified the #SYSTEMS= operand, FDRPAS prints this message but defaults to that value. If #SYSTEMS= is omitted, the step fails. If necessary, contact INNOVATION DATA PROCESSING for assistance.

M   **CPU (SERIAL#=*serial*) FAILED TO RESPOND IN PHASE *x* –** The system with the indicated CPU serial number did not respond during the indicated phase of FDRPAS operation. This usually results in message FDRW68; see that message for possible causes.
This message is also produced if DYNMON=YES is specified on a MONITOR statement for SWAP TYPE=TRANSIT since FDRMOVE does not support the use of DYNMON=YES.

N   **MORE THAN 128 ACTIVE SYSTEMS OR INTERNAL ERROR –** Either more than 128 systems have access to the source volume or an error occurred determining the number of systems.

N   **MONITOR EXCEEDED MAXIMUM NUMBER OF UCBS FOR 1 JOB –** The MOUNT statement following a MONITOR statement specified more than 8190 offline disk device addresses.

O   **CONSISTENCY GROUP MISMATCH SOURCE=*grpname* TARGET=*grpname* –** FDRPAS detected that the source volume was in an EMC consistency group and either the target volume was not in a consistency group, or was in a different group. "*grpname*" may be N/A if FDRPAS was unable to determine the name or if the target is not in a group.

P   **ACTIVE PAGE/SWAP DATA SET ON VOLUME –** The volume to be swapped contained an active local page or swap data set.

Q	**SWAP OPERATION CANCELLED BY OPERATOR –** The console operator replied "NO" to the **FDRW02** message (see FDR documentation) requesting confirmation of the swap or a TSO user requested that the swap be terminated via the FDRPAS ISPF panels. To avoid this message and proceed with the swap without operator confirmation, specify CONFMESS=NO on the SWAP statement.	
R	**DISK DOES NOT SUPPORT ACTIVE CPU SERIAL# - SPECIFY #SYSTEMS= –** The source volume is in a disk subsystem that does not support identifying the serial numbers of the systems that have access to the device (such as a 3990-3, IBM RVA, or Oracle StorageTek SVA). You must specify #SYSTEMS=*nnn* on the SWAP statement to identify the number of systems with access to the disk.	
S	**SWAPUNIT DOES NOT SPECIFY 4 CHARACTERS –** The MOUNT statement following a SWAP or SWAPDUMP statement must specify a 4-digit target device address.	
T	**VOL= ON MOUNT MISSING OR NOT FULL VOLSER –** The MOUNT statement following a SWAP or SWAPDUMP statement must specify source volume serial, with no asterisk. It may also be that you specified a blank preceding SWAPUNIT= in the control statement. The MOUNT statement following a MONITOR TYPE=VARYONLINE or TYPE=RESETVOL statement must specify NVOL=.	
U	**COMMAND SPECIFIED THAT IS NOT A MOUNT –** Only a MOUNT or EXCLUDE statement is supported following a SWAP, SWAPDUMP, or MONITOR statement.	
V	**SWAP VOLUME IS IN A HYPERSWAP ENVIRONMENT –** The specified source volume is currently involved in an IBM GDPS HyperSwap relationship. Such volumes cannot be swapped with FDRPAS. Remove the volume from HyperSwap if you need to swap it.	
W	**SWAP SOURCE VOLUME CURRENTLY BEING SWAPPED –** The specified source volume is already being processed by FDRPAS.	
X	**SWAPUNIT ALREADY IN SWAP STATUS OR PRIOR FAILURE –** The selected target device is already involved in a swap or a prior swap failed in a way that FDRPAS did not completely cleanup the swap. If you are sure that target device is not currently involved in another swap, re-initialize the target disk with an offline ICKDSF INIT and re-execute the swap.	
Y	**SWAPUNIT MISMATCHED NUMBER OF CYLINDERS –** The source volume and target device do not have the same number of data cylinders. To accept the swap to a target device with more cylinders, specify LARGERSIZE=OK on the SWAP statement.	
Z	**SWAPUNIT DOES NOT SUPPORT LOCATE –** The specified target device does not support the LOCATE RECORD CCW so it is not supported by FDRPAS. This usually means that the device is in a non-caching IBM 3880 subsystem or equivalent.	
Z	**SWAPUNIT IS RESERVED OR NOT CONFIGURED AS SHARED –** The specified target device has a RESERVE outstanding against it, or it is not marked SHARED in the I/O configuration. If the latter, update the configuration to mark the target devices shared and retry the swap. A RESERVE should not occur against the offline target device; contact INNOVATION DATA PROCESSING for assistance diagnosing this error.	
Z	**SWAPUNIT DOES NOT HAVE A VALID DCE –** FDRPAS cannot locate the DCE (Device Class Extension of the UCB) for the target device. This should not occur; contact INNOVATION DATA PROCESSING for assistance.	

Action: The swap is terminated. Depending on the error, you may be able to correct the error and re-execute the swap. If in doubt, contact INNOVATION DATA PROCESSING for assistance.

FDR235   FDRPAS ON CPU SERIAL# *sssssssss* IS MONITORING THE FOLLOWING *nnnnnn* UNITS:
   list of device numbers

Reason: An FDRPAS MONITOR task is monitoring the potential offline target devices listed. It is executing on a system with serial number "*sssssssss*". If some target devices you specified are not listed, it means that those devices were online on this system (MONITOR tasks bypass online disks).

FDRERASE WILL ERASE THE FOLLOWING *nnnnnn* UNITS:
   list of device numbers

Reason: In this form of the **FDR235** message, FDRERASE was requested to erase the indicated disk devices. If some specified devices were not listed, it probably means that they were not eligible for erase, probably because they are online.

FDRINITV WILL INITV THE FOLLOWING *nnnnnn* UNITS:
   list of device numbers

Reason: In this form of the **FDR235** message, FDRINITV was requested to rebuild the VTOCs on the specified offline devices. If some specified devices were not listed, it probably means that they were not eligible for INITV, probably because they are online.

FDR236   *systemid* ACTIVATED I/O INTERCEPTS ON UNIT=*uuuu* [*text*]

Reason: The system indicated has joined in the swap of an online volume on device number "*uuuu*" by installing the FDRPAS I/O intercepts on the device. This message is printed by the MONITOR task on that system. It is also printed for all systems by the SWAP task for the volume.

The "text" field may contain "**FAILED MISMATCH SOURCE AND TARGET MIDAW FLAGS**". On a System z processor (or beyond), both the source and target devices must support Modified IDAWs (MIDAWs) or both must not. All IBM disk subsystems support MIDAWs but some non-IBM subsystems may not. In order to swap, you must shut down MIDAW support with the console command: `SETIOS MIDAW=NO`.

systemid DE-ACTIVATED I/O INTERCEPTS ON UNIT=*uuuu* *nnnnnnnn* TRACKS UPDATED *internal-info*

Reason: This form of the **FDR236** message shows that the system has de-activated the I/O intercepts on device number "*uuuu*". While the intercepts were active, a total of "*nnnnnnnn*" tracks were updated on the volume by this system (this total counts tracks multiple times if they were updated during more than one pass). This message is printed only by the MONITOR task on that system. "internal-info" contains information for use by INNOVATION DATA PROCESSING technical support.

FDR237   *systemid* FAILED TO DE-ACTIVATE I/O INTERCEPTS ON UNIT=*uuuu*

Reason: The system indicated attempted to de-activate the I/O intercepts on device number "*uuuu*" but the attempt failed for some reason. Other messages indicate if the swap was successfully completed or not.

Action: The intercepts remain active. In some cases, this causes no harm, but they remain active until the next IPL. However, if the deactivation failed because some other software was trying to modify the DDT of the disk to install its own intercept, failures may occur. In either case, contact INNOVATION DATA PROCESSING for assistance.

FDR238 **FDRPAS** *startend* **MONITOR JOIN TASK FOR UNIT=***uuuu* **STC=***procname.taskname*
[WITH ERRORS]

Reason: If an FDRPAS MONITOR task is monitoring more than one potential target device, it must start a separate FDRPAS MONITOR task when it detects a swap is beginning on one of those devices. This message documents that such a "join" task has started or ended for device number "*uuuu*". "*startend*" is STARTED or ENDED. Note that a "JOIN" task may not print either message if it was started for a potential swap but determined that a swap was not actually occurring on the target device. If the MONITOR task was started as an external started task, "**STC=**" appears, documenting the name of the FDRPAS PROC (usually PASPROC) and the name of the started task; if the MONITOR task was started as an internal subtask, this does not appear. If a MONITOR task ended with an error condition, the additional text "**WITH ERRORS**" appears.

FDRERASE STARTED ERASE TASK FOR UNIT=*uuuu* **CU=***mfrseral***/***ssid-diskid*

Reason: In this form of the **FDR238** message, FDRERASE started an internal erase subtask for the indicated disk device. "*mfr*" is the disk subsystem manufacturer (e.g., IBM), "*seral*" is the subsystem serial number, "*ssid*" is the subsystem ID (SSID), and "*diskid*" is the internal disk identification, if it can be determined, or the device address, if not.

FDRINITV STARTED INITV TASK FOR UNIT=*uuuu* **CU=***mfrseral***/***ssid-diskid*

Reason: In this form of the **FDR238** message, FDRINITV started an internal VTOC initialization subtask for the indicated disk device. "*mfr*" is the disk subsystem manufacturer (e.g., IBM), "*seral*" is the subsystem serial number, "*ssid*" is the subsystem ID (SSID), and "*diskid*" is the internal disk identification, if it can be determined, or the device address, if not.

FDR239 *nnnnnnn* **TRACKS UPDATED BY** *systemid*

nnnnnnn TOTAL UNIQUE TRACKS UPDATED IN PASS *ppppp*

- RE-COPYING UPDATED TRACKS

Reason: Once FDRPAS has completed the initial copy phase during a swap of a volume, it re-copies any tracks that were updated on that volume during that phase. If additional tracks are updated during that re-copy pass, those tracks may be copied again during an additional pass.

The first form of the **FDR239** message shows the number of updated tracks that were reported by the MONITOR or SWAP task on the indicated system during one pass. One message is printed per system participating in the swap if the number reported by that system is non-zero.

The second form of the **FDR239** message shows the total tracks that were updated and must be re-copied during the pass; this may be less than the total of the tracks reported by each system if the same tracks were updated by more than one system.

Action: These messages repeat, and the pass number increments, until the total number of tracks to be re-copied falls below a threshold, at that point FDRPAS completes the swap.

- CONFIRMSWAP IN EFFECT

Reason: If this additional text is displayed, CONFIRMSWAP=YES is in effect for the volume.

Action: When the number of tracks to be re-copied falls below the threshold, these messages repeat, and the pass number increments, until you indicate that FDRPAS is to complete the swap via the FDRPAS ISPF interface (see Section 310.31 "FDRPAS ISPF Interface") or a TYPE=CONFIRMSWAP batch job (see Section 310.7 "MONITOR CONFIRM Statement").

- CFW/CC DELAY IN EFFECT

Reason: If this additional text is displayed, FDRPAS detected that some job is using Cache Fast Write (CFW) or Concurrent Copy (CC) on the volume.

Action: If the volume is swapped while Cache Fast Write (CFW) or Concurrent Copy (CC) is in use, the CFW/CC job may fail, so FDRPAS delays the swap up to 2 minutes to see if the CFW/CC user finishes. Note that if no Cache Fast Write (CFW) or Concurrent Copy (CC) I/O is issued for a few minutes, FDRPAS may think it is done, or may never detect the CFW/CC usage at all, so it is still possible for the job to fail after the swap is complete.

- WAIT FOR HYPERSWAP DISABLE

- WAIT FOR AUTOSWAP DISABLE

Reason: If this additional text is displayed, CONFIRMSWAP=YES was specified so FDRPAS allowed a swap of a volume enabled for IBM HyperSwap or EMC AutoSwap to proceed. However, it waits before the final swap until HyperSwap or AutoSwap is disabled on the disk.

Action: Disable HyperSwap or AutoSwap. See Section 320.5 "FDR Extended MCS Software Console (FDREMCS)" through Section 320.8 "FDRPAS and EMC AutoSwap" for further information.

- WAIT FOR PAV DISABLE

Reason: If this additional text is displayed, ALLOWPAV=YES was specified so FDRPAS did not disable Parallel Access Volume (PAV) aliases until just before the actual swap of the volume. The disabling of the aliases caused a slight delay. This condition should be transient.

Action: If this message appears more than once for a given volume, contact INNOVATION DATA PROCESSING.

- *systemid* NOT RESPONDING

Reason: If this additional text is displayed, the indicated system did not respond at the end of a phase 3 copy pass when the number of tracks to be re-copied was below the threshold. FDRPAS recopies any updated tracks reported by the responding systems and waits some extra time, it then tries again to communicate with all of the monitors. If this condition persists for a number of tries, FDRPAS fails the SWAP.

Action: Check whether the indicated system has adequate resources (e.g. LPAR weight or capping) to participate in the SWAP.

SWAP OF VOL=*vvvvvv* DELAYED DUE TO DYNAMIC CONFIGURATION ON *system*

Reason: This form of the **FDR239** message is issued when a dynamic I/O re-configuration (the console ACTIVATE command) is in progress. The final swap of the volume cannot be done until the ACTIVATE function completes, so FDRPAS delays until the ACTIVATE is done.

Action: If this condition persists for more than a few minutes, the ACTIVATE command completion may be delayed for some reason. You should investigate the delay and resolve the cause so that FDRPAS swaps can continue.

FDR240   **SWAP FOR VOL=*vvvvvv* WAS ABNORMALLY TERMINATED BY *systemid***

SWAP FOR VOL=*vvvvvv* WAS CANCELLED BY OPERATOR ON *systemid*

Reason: The swap of volume "*vvvvvv*" was terminated by an action, either an abnormal termination of FDRPAS or a request to terminate, on the indicated system. "CANCELLED" appears only if the swap was terminated via the FDRPAS ISPF interface. Check the listing of the MONITOR task from that system for the reason.

FDR241   **FDRPAS SUCCESSFULLY COMPLETED SWAP OF VOL=*vvvvvv* TO UNIT=*uuuu* ON *systemid***

Reason: FDRPAS has completed the swap of volume "*vvvvvv*" to unit "*uuuu*" on the indicated system. This message prints in the MONITOR task output on each system, and the message from each system also prints in the SWAP task output.

FDRERASE SUCCESSFULLY COMPLETED *function* OF VOL=*vvvvvv* ON UNIT=*uuuu*

Reason: In this form of the **FDR241** message, FDRERASE has finished erasing (ERASE) or emptying (EMPTY) volume "*vvvvvv*" (which may be blank or asterisks if the volser is unknown) on unit "*uuuu*".

FDRINITV SUCCESSFULLY COMPLETED INITV OF VOL=*vvvvvv* ON UNIT=*uuuu*

Reason: In this form of the **FDR241** message, FDRINITV has finished initializing volume "*vvvvvv*" on unit "*uuuu*".

FDR242   ADDRESS SPACE CREATE TO JOIN FAILED FOR UNIT=*uuuu* [COMP=*cccc*]

Reason: If an FDRPAS MONITOR task is monitoring more than one potential target device, it must start a separate FDRPAS MONITOR task when it detects a swap is beginning on one of those devices. However, the address space creation for a "join" task for unit "*uuuu*" failed with return code "*cccc*". If "**COMP=*cccc***"is not displayed, one possible reason is that you have not placed the PASPROC JCL member required in an appropriate system procedure library, or you have renamed it and not updated the name in the FDR Global Options Table (see Section 380.16 "FDRPAS and FDRERASE Options (Panel A.I.4.14)"). A return code of 52 indicates that the system was unable to create an address space for the "join" task, because of system resource limitations or the system-wide limit on address spaces is exceeded.

Action: Check SYSLOG for messages to determine the cause. If possible, correct the error and re-submit the FDRPAS request.

FDR243   SWAP OF UCB ADDRESSES FAILED VOL=*vvvvvv* COMP=*ccccc*

Reason: FDRPAS has invoked a system service to swap the Unit Control Blocks (UCBs) of the indicated source volume and its target device, but that service failed with return code "*ccccc*". If this failure occurs on a system running an FDRPAS MONITOR task, this message is printed only in the output of that MONITOR task, but the SWAP task prints a related message indicating the failure on this system.

Action: Check the output of the SWAP and MONITOR tasks on all systems. If the swap failed on all systems, then the swap was terminated and no harm was done. If the swap completed on one or more systems, then you should stop all usage of the volume on the failing systems, since updates are now being directed to the wrong device, and contact INNOVATION DATA PROCESSING immediately for assistance.

FDR244   *systemid* FAILED TO ACKNOWLEDGE SWAP COMPLETION VOL=*vvvvvv*

Reason: FDRPAS attempted to complete the swap operation, but the system indicated did not acknowledge that the swap was complete. This may indicate that system has become non-operational during the swap, or that the FDRPAS MONITOR task on that system has failed, but the most likely cause is that the indicated system is a low-priority LPAR or the MONITOR task is running at low priority, so that it was not able to acknowledge the swap within two minutes. The swap may have completed on some systems. This message is printed in the output of the SWAP task.

Action: Check the messages from the FDRPAS MONITOR task on the indicated system(s). If the messages indicate that the swap was completed on all systems, then the swap was successful and no action must be taken. In the unlikely situation that the swap did not complete or the MONITOR task was terminated prematurely on one or more systems, then you should stop all usage of the volume on the failing systems, since updates are now being directed to the wrong device, and contact INNOVATION DATA PROCESSING immediately for assistance.

FDR245   FDRPAS CONFIRMED THE SWAP OF VOL=*vvvvvv*

Reason: A MONITOR TYPE=CONFIRMSWAP or CONFIRMSPLIT was submitted for one or more volumes. When all the specified volumes are ready for completion, FDRPAS completes the SWAP or SWAPDUMP and issues the FDR245 message for each volume.

FDR246   SWAP NOT ACTIVE FOR CONFIRM OF VOL=*vvvvvv*

Reason: A MONITOR TYPE=CONFIRMSWAP or CONFIRMSPLIT was submitted for one or more volumes, but the volume indicated was not currently involved in a SWAP or SWAPDUMP operation with CONFIRMSWAP=YES or CONFIRMSPLIT=YES specified.

Action: Correct the list of volumes specified on the MOUNT statements to include only those actively being swapped and re-submit the job.

FDR247   UNABLE TO CATALOG SWAP HISTORY RECORD COMP=X'*FFFF00001111*'

Reason: After a swap, FDRPAS attempted to catalog a history record to document the swap, but the catalog request failed. COMP contains the catalog return codes from registers R15 (*FFFF*), R0 (*0000*), and R1 (*1111*). The swap was successful but it was not recorded for historical and reporting purposes.

Action: The history record is cataloged into the system catalog with an alias equal to the value of PASINDEX (see "PASINDEX" in Section 380.16). The catalog may be full. If so, run the example "Display and Purge History for All Volumes Example" in Section 310.25 to purge some old history records. If you can not find any problem with the catalog, contact INNOVATION DATA PROCESSING for assistance.

UNABLE TO CATALOG SWAP HISTORY RECORD - NO ALIAS FOR PASINDEX

Reason: This form of the **FDR247** message indicates that after a swap, FDRPAS attempted to catalog a history record to document the swap, but there was no alias defined in the master catalog of this system matching PASINDEX (see "PASINDEX" in Section 380.16). The swap was successful but it was not recorded for historical and reporting purposes.

Action: If you wish history records to be recorded on this system, define a user catalog (if necessary) and associated an alias matching PASINDEX with that catalog.

UNABLE TO CATALOG SWAP HISTORY RECORD - CATALOG ON VOLUME BEING SWAPPED

Reason: This form of the **FDR247** message indicates that after a swap, FDRPAS attempted to catalog a history record to document the swap, but the catalog pointed to by the alias matching PASINDEX (see "PASINDEX" in Section 380.16) was on the volume being swapped, so FDRPAS is unable to record this swap. The swap was successful but it was not recorded for historical and reporting purposes.

UNABLE TO CATALOG SWAP HISTORY RECORD - USER BYPASSED HISTORY

Reason: This form of the **FDR247** message indicates that the user requested that FDRPAS not cut a history record. The swap was successful but it was not recorded for historical and reporting purposes.

FDR248   NO OFFLINE UNITS LEFT TO MONITOR

Reason: An FDRPAS MONITOR task discovered that all of the offline units it was monitoring are now online or are otherwise ineligible for monitoring. This may occur if FDRPAS SWAP tasks have swapped volumes to all of those offline units.

Action: The MONITOR task terminates normally.

FDR249   WARNING: *type* VOLUME SWAPPED TO NON-*type* VOL=*volser*

Reason: You requested that volume "*volser*" be swapped, but FDRPAS detected that the source volume is currently being mirrored by a hardware facility such as PPRC, but the target volume does not have the same sort of mirroring. Currently FDRPAS checks for PPRC mirroring and PPRC-compatible facilities.

Action: The swap continues, but this message warns you that after the swap completes, the volume is no longer protected by a remote mirror. If your disaster recovery plan or other needs require that this volume be remotely mirrored, you need to re-establish remote mirroring after the swap is complete.

FDR250   CYL=*ccccccc xxxx xxxx … xxxx*

Reason: Internal message showing each cylinder and track updated on this system during a Phase 3 pass; it appears only if PRINT=ALL is specified on the SWAP or MONITOR statement. "*ccccccc*" is a cylinder number in decimal. "*xxxx*" displays a set of 16 bits in hex; the first 15 bits show which tracks were updated. The first "*xxxx*" is for cylinder "*ccccccc*", the next for cylinder "*ccccccc*"+1, etc., up to "*ccccccc*"+19, thus showing 20 cylinders in each **FDR250** message.

FDR251   **FDR UNBOUND PAV ALIASES FROM UNIT=*uuuu* [*text*]**

Reason: In this form of the **FDR251** message, unit "*uuuu*", which is the source or target device of a swap, had Parallel Access Volume (PAV) aliases bound to it. FDRPAS has unbound the aliases and disabled PAV on the device during the swap.

FDR RE-ENABLED PAV FOR UNIT=*uuuu* [*text*]

Reason: In this form of the **FDR251** message, unit "*uuuu*", which is the source or target device of a swap, has Parallel Access Volume (PAV) re-enabled. If it had static PAV aliases assigned, they have been rebound to the base device. This is done only if both the source and target devices in a swap were enabled for PAV before the swap.

In either form of the **FDR251** message, it may be followed by the text "**FAILED COMP=**" to indicate that the IBM service that was called for PAV has failed with the indicated return codes.

FDR252   **FDR SWAPPED IPLABLE UNIT=*uuu1* TO *uuu2* YOU MUST UPDATE YOUR HARDWARE MANAGEMENT CONSOLE**

Reason: Unit "*uuu1*", which is the source volume of a swap, is an IPLable volume, meaning that it had IPL text or an IODF data set on it. This may mean it was the system residence (SYSRES) volume for a z/OS system, or it may mean it contained an IPLable utility such as ICKDSF, DFSMSdss, SADMP, INNOVATION DATA PROCESSING's Stand Alone Restore (SAR), or NewEra Software's SAE. It has been swapped to unit "*uuu2*". This message is issued as a non-scrollable console message as well as printed in the FDRPAS output.

Action: If it was a SYSRES, you must update the IPL or IODF address in the system startup parameters on the Hardware Management Console (HMC) or hardware console for that system. If it contained an IPLable utility, you should update appropriate documentation with the new IPL address.

FDR253   **REASON=*reason***

Reason: An error occurred when FDRPAS was trying to activate or de-activate its I/O intercepts on a source volume. This message is issued only as a WTO to the operator but it also appears in the job log of the FDRPAS job. Reason codes include:

1	**PASV ID ERROR –** Internal installation error. Contact INNOVATION DATA PROCESSING.
2	**PAS DDT FIND ERROR –** Internal installation error. Contact INNOVATION DATA PROCESSING.
3	**GETMAIN ERROR –** An error occurred doing a GETMAIN for storage in ECSA for the intercepts.
4	**NO DCE ERROR –** The source volume UCB does not point to a DCE (Device Class Extension). This should not be possible for an online disk.
5	**DCE LENGTH ERROR –** The DCE (Device Class Extension) pointed to by the UCB of the source volume is not at least 48 bytes in length. This should not be possible.
6	**DCEALCYL INVALID ERROR –** Number of alternate cylinders in the DCE (Device Class Extension) of the source volume is not valid. This may indicate that the source volume is on an old control unit not supported by FDRPAS.
7	**XTID VALIDATION ERROR –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.
8	**NAME/TOKEN NOT FOUND –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.
9	**NAME/TOKEN CREATE ERROR –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.
A	**NAME/TOKEN DELETE ERROR –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.
B	**TOKEN ERROR=0 –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.
C	**NAME/TOKEN RETRVE ERROR –** Internal validation or coordination error. Contact INNOVATION DATA PROCESSING.

D	**LOAD ERROR –** An error occurred loading the intercept module FDRPASXT.
E	**BLDL ERROR –** An error occurred during a BLDL on the intercept module FDRPASXT.
F	**UCBDDT CHANGED ERROR –** The pointer to the DDT (Device Descriptor Table) in the UCB of the source volume changed unexpectedly.
F	**UCB ERROR, UNIT SWAPPED BY OTHER –** The source volume was swapped by Hyperswap.
G	**UCB BUSY OR IOSLEVEL NOT RAISED –** Either the IOSLEVEL function failed to raise the IOS level of the source volume, or the source volume was continuously busy for 2 seconds.
H	**ABNORMAL EXIT ADDR NOT RESET –** Internal installation error. Contact INNOVATION DATA PROCESSING.
I	**DDT NOT WITHIN IGGDDT* –** Internal installation error. Contact INNOVATION DATA PROCESSING.
J	**UNABLE TO FIND MATCHING MIHB –** For either the source volume or target device, FDRPAS was unable to find an entry in the MIHB (MIH table) with a key value matching the UCBMIHKY value in the associated UCB. Since this would cause a failure when the volume is swapped, the swap is not attempted. You may be able to use the console command "SET IOS=*xx*" to rebuild the MIHB and retry the swap.
K	**MIDAW MISMATCH –** On a System z processor (or beyond), both the source and target devices must support MIDAWs (Modified IDAWs) or both must not. All IBM disk subsystems support MIDAWs but some non-IBM subsystems may not. In order to swap, you must shut down MIDAW support with the console command: SETIOS MIDAW=NO.

Action: The swap is terminated. Contact INNOVATION DATA PROCESSING for assistance.

FDR254   INDEXED VTOC BUILD COMPLETE

Reason: A SWAPBUILDIX function completed successfully. This form of the **FDR254** message is issued by the SWAPBUILDIX task.

INDEXED VTOC REFRESHED

Reason: A SWAPBUILDIX function completed successfully. This form of the **FDR254** message is issued by the MONITOR tasks participating in the function to indicate that the indexed VTOC information has been updated on this system.

INDEXED VTOC BUILD FAILED - CHECK IXSYSPRT

Reason: A SWAPBUILDIX function failed.

Action: An IXSYSPRT DD statement was dynamically allocated to SYSOUT; check it for messages from ICKDSF.

ICKDSF MSG=ICK516I *uuuu* I/O ERROR DETECTED DURING VTOC CONVERSION: ERROR CODE= 5

Reason: A FDRPAS function failed because there was insufficient space for the indexed VTOC.

Action: A 3390-27 requires a minimum of (2) tracks for the Indexed VTOC. A 3390-54 and a 3390-A EAV require a minimum of (4) tracks for the Indexed VTOC. Ensure the minimum sizes exist before running the FDRPAS function.

FDR255   *function* **TERMINATED TARGET UNIT** *uuuu* **CONTAINS DATA SETS FIRST DSN=**dsname

Reason: CHECKTARGET=YES was specified, and the offline target disk designated for a SWAP, SWAPDUMP, ERASE, or INITV was not empty. It contained at least one data set other than the VTOC, VTOCIX, and VVDS. The first data set name encountered in the VTOC is listed. If the volume was formatted by z/VM (with a dummy VTOC), "*dsname*" is "**VM VOLUME**".

Action: Check the target disk to see if it contains data that must be preserved; you may need to vary the disk online in order to list its VTOC. If so, choose another target for the swap or erase. If not, remove the CHECKTARGET=YES operand (or specify CHECKTARGET=NO) to overlay the disk.

function TERMINATED TARGET UNIT *uuuu* **VOL=**vvvvvv **DOES NOT MATCH CHKTVOL**

Reason: This form of the **FDR255** message is issued when CHECKTARGETVOL= is specified on a MOUNT, and the offline target disk designated for a SWAP, SWAPDUMP, or ERASE does not have the specified volume serial. "*vvvvvv*" is the volume serial actually found on the disk.

Action: Check the target disk to see if it is actually the disk you want to erase or use as an FDRPAS target. If so, remove the CHECKTARGETVOL= operand or specify the actual volume serial to overlay the disk.

FDR256   **REPORT FROM SYSPRIN**x

Reason: MAXTASKS= was specified. Messages from swap subtasks are written to SYSPRIN*x* DD statements, but they are also echoed in SYSPRINT with this header when each swap terminates.

FDR257   **DYNAMIC PACE DELAY CHANGED TO** *sss.ss* **SEC - I/O DELAY** *mmmmm* **MSEC**

Reason: PACING=DYNAMIC was specified. Every 15 seconds FDRPAS may issue this message to indicate that the I/O pacing value was changed to "*sss.ss*" seconds because the average I/O delay, as determined by an internal FDRPAS algorithm, has changed to "*mmmmm*" milliseconds.

FDR258   *e-mail error text*

Reason: The FDREMAIL DD statement was provided to invoke the FDR e-mail facility, but an error occurred preventing an e-mail from being sent. The message is printed on SYSPRINT and is also sent via a WTL (Write-To-Log) macro, so it appears in the job log of the FDRPAS job, and may appear on a system console. The message text defines the error condition. It may contain TCP/IP error codes that can be found in IBM Communication Server manuals.

Action: FDRPAS continues if it has more volumes to process. Correct the error for future jobs.

FDR259   **EMAIL MESSAGE(S) SENT**

Reason: The FDREMAIL DD statement was provided to invoke the FDR e-mail facility, and one or more e-mail messages were successfully sent to the mail server you specified. Note that this is no guarantee that the messages are delivered if e-mail addresses are invalid or other errors occur after the mail server accepts the message.

FDR260   **VARY ONLINE FAILED CODE=***cccc rrrr ssss message*

Reason: FDRPAS called the IBM service IEEVARYD to initialize system control blocks for the
target device, and the VARY failed with the codes and/or message shown.

"*cccc*" is the return code from IEEVARYD. If it is 0004, then "*rrrr ssss*" are additional
return and reason codes that are documented in the IBM macro IEEZB834. If
IEEVARYD returned additional message text, it is displayed at the end.

If "*cccc rrrr*" is **0016 0032**, this is a code generated by FDRPAS to indicate that the
IEEVARYD function was terminated because it took an excessive amount of time.

Action: Despite the error, the target device is online and usable. Contact INNOVATION DATA
PROCESSING for assistance in determining if there are any considerations due to the error.

VARY ONLINE FAILED UNIT=*uuuu*

Reason: This form of the **FDR260** message indicates that a MONITOR TYPE=VARYONLINE or
RESETVOL was executed but either the requested device was not eligible (already
online or does not have a volume label set by FDRPAS) or, if the additional text
"VOLSER ALREADY ONLINE" appears, the new volume serial requested by NVOL=
is already online on another device.

Action: Verify that VARYUNIT= specifies the address of an offline disk that was a SWAP source volume
or a SWAPDUMP target device. If the volser was already online, modify the NVOL= to create a
unique volser or run the function on a system where the volume is not online.

FDR261   **UNIT=***uuuu* **VOL=***vvvvvv* **WAS** *function*

VARY FAILED COMP=*nn* **CODE=***cc* **CHECK MVS LOG [PENDING OFFLINE]**

Reason: This message can be issued by an FDRPAS MONITOR, by FDRERASE, or by
FDRINITV. "*function*" can be "**VARIED ONLINE**", **"VARIED OFFLINE"**, or **"RESET"**.

The second form of this message can also indicate that a VARYON or VARYOFF failed.

FDR262   **MODULE ICKDSF NOT FOUND OR INSUFFICIENT AUTHORITY ABEND=S***cde-rc*

Reason: LARGERSIZE=OK or SMALLERSIZE=OK was coded. FDRPAS needs to call ICKDSF to
rebuild the indexed VTOC when a volume is swapped to a larger or smaller disk, so a test
LOAD of ICKDSF was done to be sure that it is available and this job is authorized to use
it. The load failed with the system ABEND code (*cde*) and reason code (*rc*) indicated.

Action: The FDRPAS step terminated with an U0502 ABEND. Authorize the FDRPAS job to use
ICKDSF or correct other errors. If the target devices are all the size as their source
volumes, those operands are not required and can be removed to avoid the error.

FDR263   **CSA/SQA SHORTAGE DELAY IN EFFECT**

Reason: FDRPAS detected that available below-the-line SQA and CSA storage has fallen below
a threshold, possibly due to IOS/EXCP control blocks in SQA created by the I/Os
issued by FDRPAS to copy data.

Action: FDRPAS reduces its rate of I/O until the CSA/SQA available storage rises again. If this
message occurs frequently, you may need to reduce the number of concurrent
FDRPAS operations or increase the size of your below-the-line SQA.

FDR264   FDR {DISABLED|RE-ENABLED} FLASHCOPY UNIT=*uuuu* [FAILED COMP=*nnnn*]

Reason: Unit "*uuuu*", which is the source volume of a swap, was capable of FlashCopy. The DISABLED form of the message is issued to indicate that FDRPAS has disabled FlashCopy at the beginning of the swap, since FDRPAS cannot detect tracks updated by FlashCopy. The RE-ENABLED form is issued at the end of the swap to indicate that FlashCopy has been re-enabled. Either form of the message may be followed by the text "**FAILED COMP=**" to indicate that the IBM service that was called for FlashCopy has failed with the indicated return codes.

Action: Any attempt to initiate a FlashCopy to the FDRPAS source volume during the swap fails. Most products that implement FlashCopy revert to normal read/write I/O if FlashCopy cannot be used; this includes FDRCOPY.

FDR265   STOP COMMAND ACCEPTED WAITING ACTIVE TASK TERMINATION

STOP COMMAND ACCEPTED DUE TO STOPAFTER TIME EXPIRED

STOP COMMAND ACCEPTED DUE TO STOPINACTIVE TIME EXPIRED

Reason: A console STOP (P) command was issued for an FDRPAS, FDRMOVE, or FDRERASE job or started task or the time limit specified in either the STOPINACTIVE= or STOPAFTER= operand has been reached.

Action: A MONITOR task that is STOPPED terminates within a few seconds if it is not participating in any active swaps; otherwise, it terminates when the active swaps have completed; no new swaps are started. If a SWAP task is STOPPED, it terminates when all active swaps have completed; no new swaps are started. FDRERASE stops when all active erases have completed.

FDR266   SWAP BYPASSED DUE TO STOP COMMAND VOL=*vvvvvv*

Reason: A console STOP (P) command was issued for an FDRPAS job or started task. This documents that a swap for volume "*vvvvvv*" was bypassed because of the STOP (P).

ERASE BYPASSED DUE TO STOP COMMAND UNIT=*uuuu*

Reason: This form of the **FDR266** message indicates that a console STOP (P) command was issued for an FDRERASE job. This documents that an erase for disk device "*uuuu*" was bypassed because of the STOP (P).

FDR267   CANCEL PROTECTION IN EFFECT - WAITING FOR TASK END - ISSUE 2ND CANCEL FOR IMMEDIATE TERMINATION

Reason: A console CANCEL (C) command was issued for an FDRPAS job or started task and cancel protection (CANCELPROT=YES) was in effect. Cancel protection is the default for MONITOR tasks.

Action: With cancel protection active, a CANCEL (C) acts like a STOP (P) command; see message FDR265 above for details. If any swaps are active, it waits for them to complete. If you need to immediately terminate the task, enter a CANCEL (C) command again.

FDR268   VOL=*vvvvvv* ERROR - *reason text*

Reason: An FDRPAS license report (LICENSE TYPE=SWAP) encountered an error determining the size or the free space on the indicated volume. "*reason text*" details the error.

Action: The volume is not included in the license report.

FDR302   CONTROL STATEMENT ERROR NEAR REL LOCATION *nn* -- REASON *x* -- JOB TERMINATED

Reason: An error was encountered during the processing of a user-supplied control statement. If **"NEAR REL LOCATION *nn*"** appears, the keyword or operand causing the error is at or near column "*nn*" on the input statement.

The error is defined by the reason code within the message. The failing statement is displayed immediately above.

NOTE: The expression "SELECT statement" in the reason codes below refers to MOUNT and EXCLUDE statements.

The reason "*x*" can be:

1 –   A MOUNT statement did not specify any operands. Control statement was blank after the Command name.

2 –   Command name on the first control statement was incorrectly specified. It must be SWAP, SWAPDUMP, or MONITOR.

3 –   Operand on the first control statement was incorrectly specified.

4 –   Operand did not end with a blank or comma.

5 –   SYSIN data set was empty.

6 –   Expected continuation statement was not found. The previous statement ended with a comma and a blank.

7 –   One of the following:
- ▸   On the first control statement, invalid or incompatible operands were specified.
- ▸   The TYPE= operand was omitted on SWAP, SWAPDUMP, or MONITOR statement.

8 –   An operand on a MOUNT statement specified a blank or comma after the equal sign.

9 –   On the control statement printed above, one of the options exceeded its maximum length. On a MOUNT statement for MONITOR, more than 255 addresses or address masks were specified.

C –   Maximum number of MOUNT and EXCLUDE statements was exceeded. The limit is 250 or the value specified for MAXCARDS=.

F –   An operand that requires numeric data (e.g., MAXCARDS=) specified non-numeric characters, or an operand that requires hexadecimal data (e.g., SWAPUNIT=) specified non-hex characters.

G –   An operand did not end with a blank or comma or exceeded 15 digits (e.g., MAXCARDS=).

I –   Keyword is invalid under the operation indicated.

J –   Control statement was completely blank. You can enter comment lines by placing an * (asterisk) in column 1.

K –   A required operand was not specified on the preceding statement.

Q –   Keyword exceeded maximum value or was negative.

R –   TYPE=*xxx* was specified multiple times.

S –   An operand on the MOUNT statement was specified multiple times or was mutually exclusive with another operand.

U –   The TYPE=*xxx* operand was missing or invalid on the first statement. This operand is required.

Action: Correct error and resubmit job. If you do not understand the error after reviewing the relevant sections of this manual, call INNOVATION DATA PROCESSING for assistance.

HINT: *If the control statements look good and you can't see any obvious reason for the error, check the JCL to be sure you are executing the right program for the statements you provided (PGM=FDRPAS).*

FDR302   SERVICE CLASS CHANGED TO *classname* **FAILED REASON=***retcode-reasoncode*

Reason: FDRPAS encountered an error when it attempted to reset its service class. "*retcode*" is the return code and "*reasoncode*" is the reason code from the IWMRESET macro, as documented in the appropriate IBM manual, such as *MVS Programming: Workload Management Services*. The most likely error is 000C-*xxxx*0C28, indicating that the SRVCLASS=*classname* parameter specified a service class that is not defined.

Action: Specify a service class name that is defined to the active workload manager policy.

FDR303   CARD IMAGE - *control statement image source*

Reason: An input control statement is displayed by this message. "*source*" may be:

> **blank –**   From SYSIN.
> **PARM ENTRY –** From the JCL PARM= operand.

FDR303   SERVICE CLASS CHANGED TO *srvclass*

Reason: The service class was changed to "*classname*" for the MONITOR or SWAP task.

FDR311   FDR MOVED DSN=*dsname status*
              ON VOLSER=*volser* **UNIT=***device* **STORCLAS=***sc*
              MGMTCLAS=*mc* **DATACLAS=***dc*
              CLUSTER=*cluster* **NEWC=***newcluster*

Reason: The non-VSAM data sets or VSAM component "*dsname*" was MOVED. The "*status*" also includes:

> **ALLOCATED –** The data set was allocated by FDRMOVE.
> **CATALOGED –** The data set was cataloged by FDRMOVE.
> **INSTANT –** A hardware facility was used to quickly copy data. This occurs only if you are licensed for FDRINSTANT or FDRMOVE. On an IBM Shark or DS8000 or HDS with the FlashCopy feature, FlashCopy was used. On an EMC Symmetrix, an internal EMC copy function was used. Both the input and output volumes must be in the same subsystem (EMC, HDS, or IBM).

"*volser*" defines the volume serial of the disk where it was moved, and "*device*" identifies the disk type and model (e.g., 3390-3). If the output data set is SMS-managed, the SMS classes assigned to the data set are displayed (management class and data class may be "(NULL)" if not assigned).

For a VSAM component, the line containing "*cluster*" is displayed to identify the cluster to which the component belongs.

FDR313   *fff* TERMINATED BY OPEN EXIT ON VOL= *vvvvvv*

Reason: The locally-written FDR volume open exit has terminated processing of the volume "*vvvvvv*".

FDR314   FDRMOVE *data set* **SCRATCHED FROM VOL=***vvvvvv*

Reason: FDRMOVE documents that one non-VSAM data set, VSAM component, or VSAM cluster was scratched.

FDR316   FDR DID NOT FIND REQUESTED MOUNT SWAP VOL=*vvvvvv*

Reason: A MOUNT statement was specified for the indicated volume, but that volume was not online to the system were FDRPAS was run.

Action: Correct the MOUNT statement and resubmit, if necessary.

FDR319   **FDR OPERATION ABNORMALLY TERMINATED VOL=*vvvvvv* COMP CODE=S*sss***
               U*uuuu* [*WILL RETRY WITH MAXTASKS REDUCED*]

Reason: An internal FDR subtask failed on volume "*vvvvvv*".

               If "*sss*" is non-zero (in hex), the task failed with a System S*sss* ABEND. Consult IBM documentation for the meaning of the ABEND. S*x*13/S*x*14 ABENDs are OPEN/CLOSE errors and are accompanied by an explanatory message in the joblog of the FDR job.

               If "*uuuu*" is non-zero (in decimal), the task failed with a User U*uuuu* ABEND. The ABEND is probably generated by FDRPAS.

Action: If the problem cannot be determined from the ABEND code, call INNOVATION DATA PROCESSING for technical assistance. If the ABEND produced a storage dump, have it available.

               If "***WILL RETRY WITH MAXTASKS REDUCED***" is appended to the message, the S87--10 ABEND was intercepted and the task was rerun with the MAXTASKS value reduced. The job successfully moves all the data sets when this form of the message is given.

FDR320   **UNABLE TO *function* REASON=*x*--DSNAME=*dsname***

Reason: FDR was unable to RESTORE, COPY, or MOVE the data set specified in the message. The reason code "*x*" may be:

1 –	The FDR restore subtask restoring this data set from a backup failed; see message FDR319, other FDR messages may also appear.
3 –	I/O error reading a Format 2 or Format 3 DSCB from the output disk.
6 –	Data set enqueue failed for this data set. DSNENQ=NONE overrides this check.
B –	Data set is unmovable.
C –	Data set not found on the backup file. The user may have misidentified the backup (the backup does not contain the data set), or it may be due to:

   ▸ The same dsname was specified on more than one control statement or the dsname is a component of previously requested VSAM cluster.

   ▸ For VSAM clusters, can occur if there was more than one VVR for a component of the cluster in the VVDS of the original disk when dumped (this is an error).

D –	Data set has an F3 DSCB, but it could not be found on the backup.
E –	Data set was being restored to a new name and the FDR security checking option (ALLCALL) is enabled but:

   ▸ The user does not have READ authority to the original data set.

   ▸ The original data set is not protected by your security system (this is considered an error since the data set may have been backed up on another system where it was protected).

G –	Unable to locate data set's F3 DSCB on target volume or F2 DSCB found for a non-ISAM data set.
J –	Data set was RACF or password protected when it was backed up, but user has pre-allocated it without protection, or vice versa.
K –	Data set has not reached its expiration date, and the operator replied "NO" to the **FDRW03** message.
O –	PRESTAGE was specified. Data set restore bypassed since data set was found.
P –	Characteristics of the input data set and the pre-allocated output data set do not match. Examples of this:

   ▸ VSAM to non-VSAM

   ▸ PDSE to non-PDSE

   ▸ HFS to non-HFS

   ▸ Extended Format SMS to non-EF

   ▸ And vice-versa in each case. Other combinations also cause errors.

S –	A data set that must be SMS-managed (such as Extended Format (EF)) is being restored to a non-SMS volume.

T –	FDRCOPY COPY/MOVE detected a copy/move of a data set on top of itself (same volser, same data set name).
U –	Error updating ISAM Format 2 DSCB, or VSAM component in the VTOC but not in the VVDS.
V –	VSAM cluster is being restored to a VSAM cluster that has different options or characteristics. Message FDR152 or FDR159 details the error.
W –	Catalog inaccessible. Possible causes are:

  ‣ When restoring a catalog, the JCL contained a STEPCAT or JOBCAT DD statement. This is not supported.

  ‣ When restoring a catalog, the catalog being restored was defined in the master catalog, but it was not usable (probably did not actually exist on disk). You must remove the entry for the old catalog, probably by IDCAMS EXPORT DISCONNECT.

X –	Data set security exit rejected this data set.
Y –	NEWINDEX= failure or duplicate data set name generated. It may be that the new data set name does not meet IBM standards, or that the resulting name is greater than 44 characters.
Z –	One or more data sets failed to restore using ALLDSN or DSN=mask. Check the subtask listing for errors.

Action: Take appropriate action and/or contact INNOVATION DATA PROCESSING for assistance.

FDR332 *function* **SCRATCH BYPASSED ON DSN=***dsname*

Reason: An attempt to delete the source data set was BYPASSED by the FDRMOVE operation. The scratch was not attempted for this data set because of an earlier error, such as a catalog error, which is described by another message.

FDR334 **FDR FAILED TO CATALOG** *comp* **DSN=***dsname status*

Reason: FDRMOVE allocated and moved the non-VSAM data set "*dsname*", but could not catalog it.

If "*comp*" is printed, it is **COMP=X'*FFFF00001111*'** that contains the catalog return codes from registers R15 (*FFFF*), R0 (*0000*), and R1 (*1111*).

If the register 15 value is X'FF14', then the code was generated by FDR, and indicates either that the data set was currently cataloged on zero volumes or more than 255 volumes, or that the volume sequence number of the current piece of the data set was higher than 255; the R0 value is the number of volumes currently in the catalog entry (in hex). FDR supports cataloging of multi-volume data sets up to a maximum of 255 volumes.

If the register 15 value is X'FF98', then the code was generated by FDRMOVE, and indicates that the operating system failed to correctly update the catalog Generation Data Group (GDG) extension records. IBM APAR OA24960 corrects this problem.

If the register 15 value is X'FF99', then the code was generated by FDRMOVE, and indicates either that the data set was currently cataloged to an indirect volser or is not cataloged to the input volume. FDRMOVE does not move this data set because it cannot update the catalog.

If the register 15 value is X'5*xxx*', then the code was generated by FDRMOVE, and indicates that "*xxx*" is a VVDS MANAGER return code while trying to update/add an NVR to a VVDS.

If "*status*" is **ALREADY CATALOG VOL=***vvvvvv* then RECAT was not specified, and the output data set was already cataloged to a volume "*vvvvvv*" other than the output volume (or the input volume for a MOVE). For a multi-volume data set, "*vvvvvv*" is the volume in the catalog entry that corresponds to the volume sequence number of the portion of the data set that has just been processed.

If "*status*" is **NAME IS AN ALIAS** then the data set name being cataloged was an alias of another data set in the catalog so FDR did not update it.

Action: FDRMOVE may or may not have moved the data set. Determine the cause of the error and take appropriate action. If desired, contact INNOVATION DATA PROCESSING for assistance.

FDR336   DYNAMIC ALLOCATION ERROR COMP=*cc*, CODE=*nnnn*, INFO=*iiii*, DDNAME=*ddname*

Reason: FDRPAS attempted to dynamically allocate (DYNALLOC) a disk volume but the allocation failed. "*cc*" is the return code in R15, "*nnnn*" is the dynamic allocation reason code, and "*iiii*" is the dynamic allocation information code. For z/OS, these codes are documented in the IBM manual *z/OS V1R12.0 MVS Authorized Assembler Services Guide (SA22-7608)*. They can also be found in Appendix A of the ISPF online HELP.

Action: This volume is bypassed.

FDR341   VTOC CONVERT ROUTINE ERROR COMP=*ccc*

Reason: When swapping to a larger or smaller disk, FDRPAS attempted to allocate a dummy data set with the DOS flag set in the VTOC in order to invoke the DOS VTOC conversion routine to recalculate the free space on a volume. This allocation failed with decimal return code "*ccc*"; these codes are documented under "allocate" in the IBM z/OS *DFSMSdfp Diagnosis GY27-7618-13*. A "*ccc*" of 172 indicates that your security system rejected the dummy data set (that begins with "FDRABR.V*volser*"). A "*ccc*" of 176 or 180 indicates that a user-provided DADSM exit rejected the request.

Action: The volume free space may not be accurate. You must allocate a data set to correct the free space.

  If the volume had an active Indexed VTOC (VTOCIX) you must run ICKDSF BUILDIX to rebuild it.

FDR343   SMS CONSTRUCT ERROR VOL=*vvvvvv* STORGRP=*storgrp* REASON=*reason*

Reason: FDRMOVE tried to get information about an SMS storage class) but the request failed.

  "*vvvvvv*" is the volume involved (if known)

  "*reason*" is the error text:

  SMS ERROR COMP=*xxxx* CODE=*ccccc* – The IBM SMS interface failed the query with return code "*xxxx*" (usually 0008) and SMS reason code "*ccccc*". You can interpret the reason code by looking up IBM message **IGD*ccccc*** in IBM message manuals.
  STORGRP CONSTRUCT NOT FOUND – The specified storage group name was not found by SMS.
  STORGRP NOT FOUND OR NO VOLUMES – The storage group is inactive or contains no active volumes. Determine which storage groups and volumes are available using ISMF or the operator command:
      D SMS,STORGRP(ALL),LISTVOL.
  STORGRP CONTAINS NO ONLINE VOLUMES – The specified storage group contains no volumes online to the operating system.

Action: FDRMOVE fail with a control statement error.

FDR345   FILTER ERROR REASON=G - ALL ENTRIES EXCLUDED OR DUPS - ENTRY=*dsname*

Reason: No data sets on the searched volumes matched the selection criteria of one or more SELECT statements. This can also occur if all the data sets in question are already at the target location; usually from a MOVE operation being run twice with the same selection criteria.

FDR346   FILTER SELECTED *nnnnnnnn* ENTRIES in *sssss.ss* SECONDS

Reason: A filter was used to select entries from the system catalogs. This form of the message documents the number of entries selected by the filter and the elapsed time in seconds required to complete the search.

FDR378   **RENAME FAILED COMP=***cccc* **CODE=***code* **FROMDSN=***tempname*
         NEWDSN=*permname* **CLUSTER=***clusname*

Reason: On an FDRCOPY MOVE or RESTORE of a VSAM cluster to the same name, the output cluster and its components were initially created with temporary names (an index level starting with "T" is inserted). After the input data set was deleted, FDRCOPY attempted to ALTER the temporary names back to the original cluster and component names but an error occurred. "*cccc*" is the return code and "*code*" is the reason code from ALTER; look up these codes under IBM message IDC3009I in the IBM message manuals.

If "*cccc*" is 04*nn*, then "*nn*" is the return code from a RENAME SVC; if it is 05*nn*, then it is a return code from the SMS RENAME service.

"*tempname*" is the temporary cluster or component name, which FDRCOPY was trying to rename back to "*permname*". "*clusname*" is the original name of the cluster if the rename failed on a component.

Action: If an **FDR378** was not issued for the cluster itself, it was renamed successfully and the cluster can be used under its original name.

If an **FDR378** was issued for the cluster, the cluster was not renamed. It can be used under its temporary name "*tempname*", but you probably want to check the error codes and ALTER the cluster to its original name if possible.

If **FDR378** messages were issued for one or more components, those components were not renamed. The cluster is usable, but you may want to check the error codes and ALTER the component to its original name if possible.

If needed, contact INNOVATION DATA PROCESSING for assistance.

FDR990   **INSTALLED INNOVATION TRIAL WILL EXPIRE ON** *yyyy.ddd*

Reason: The expiration date of a trial version of FDRPAS has been extended successfully. It now expires on date "*yyyy.ddd*".

Required JCL:

```
//EXTEND   EXEC PGM=FDREXTND,PARM=xxxx
//STEPLIB  DD DISP=SHR,DSN=fdrpas.loadlib
//SYSLIB   DD DISP=SHR,DSN=fdrpas.loadlib
//SYSDIAG  DD SYSOUT=*
```

The PARM= is supplied by INNOVATION DATA PROCESSING.

FDR997   *subtask* **ABNORMALLY TERMINATED VOL=***vvvvvv*

Reason: This FDR subtask has encountered an error from which it cannot continue. A user ABEND is being issued.

Action: A message detailing the error is printed.

FDR998   **FDRPAS COMPLETED WITH ERRORS VOL=***vvvvvv*

Reason: FDRPAS completed but there were diagnostic messages.

Action: Previous message(s) describe the error; see those messages for further details.

FDR999   **FDRPAS SUCCESSFULLY COMPLETED**

Reason: FDRPAS ran to completion without errors.

390.4   **ABEND CODES**

Any of the programs and utilities in the FDR family may ABEND (abnormally end) with any of the following user ABEND codes. In many cases, a diagnostic message is printed before the ABEND, so look up any error messages that were printed first. If no message was printed that relates to this ABEND, then read the explanation below. Call INNOVATION DATA PROCESSING if you need assistance understanding or resolving the error.

U0100   OPEN ERROR TRYING TO OPEN A DASD DCB

Reason: Usually proceeded by an **FDR324** message. Check the job log for IBM messages that may indicate the reason for the error.

U0101   MAXIMUM I/O ERRORS EXCEEDED ON A DIRECT-ACCESS DEVICE

Reason: A disk I/O error has occurred during the FDRPAS copy. The swap is terminated.

U0103   DISK DEVICE TYPE NOT SUPPORTED OR VTOC TOO BIG

Reason: The type of disk being backed up or restored is not among those supported by FDRPAS or an internal table was exceeded because the VTOC is too large.

U0105   FDRPAS I/O INTERCEPTS FAILED TO INSTALL

Reason: A time-out occurred while trying to install the FDRPAS I/O intercepts on a source volume.

U0107   IEEVARYD DID NOT COMPLETE

Reason: FDRPAS invoked the IBM service IEEVARYD for the target device after a swap, but it did not complete. Contact INNOVATION DATA PROCESSING for assistance.

U0108   STORAGE FRAGMENTATION

Reason: When processing a disk with more than 10017 cylinders, FDRPAS could not find a contiguous storage area for a control record. Contact INNOVATION DATA PROCESSING for assistance.

U0300   MAXIMUM FOR COUNT FIELD ERRORS ON DIRECT-ACCESS DEVICE EXCEEDED

Reason: Possibly invalid data was encountered on an FDRPAS source volume. The swap is terminated.

U0301   MAXIMUM FOR INVALID RECORD ZEROS ON A DIRECT-ACCESS DEVICE EXCEEDED

Reason: Possibly invalid data was encountered on an FDRPAS source volume. The swap is terminated.

U0401   SYSIN DD STATEMENT ERROR

Reason: SYSIN DD statement missing or incorrectly specified or I/O error on SYSIN data set.

U0402   SYSPRINT/SYSPRIN*n*/ABRMAP/SYSMAP DD STATEMENT ERROR

Reason: One of the above DD statements is missing or incorrectly coded or I/O error occurred processing the data set. There must always be a SYSPRINT DD statement, and there must be a SYSPRIN*n* DD statement for each backup TAPE*n* DD statement when using ATTACH or ABR.

U0502   ONE OR MORE CONTROL STATEMENTS ARE IN ERROR

Reason: One or more of the control statements specified are not recognized by the program being executed.

U0600   REQUIRED DD STATEMENT IS MISSING OR IN ERROR

Reason: A message is always printed with the DDNAME and reason.

U0609   DYNAMIC ALLOCATION ERROR

Reason: Message FDR336 shows the specific cause.

U0612   EXIT ERROR

Reason: A parameter passed back by a user-written security exit was invalid.

U0650   DISK*xxxx* DD STATEMENT OPEN FAILED

U0802   INVALID COMPLETION CODE FROM A USER EXIT

Reason: A parameter passed back by a user security exit was invalid.

U0888   A NON-TERMINATING ERROR OCCURRED

Reason: One or more FDRPAS operations abnormally terminated or ended with diagnostic messages, but the errors were not severe enough to prematurely terminate the entire step. This ABEND is issued to call attention to the errors. Examine the printout for the error messages causing this ABEND.

U0901   ERROR EXECUTING THE FDR TRIAL EXTENSION PROGRAM, FDREXTND

U0902   ERROR EXECUTING THE FDR TRIAL EXTENSION PROGRAM, FDREXTND

U0995   ABEND ESTAE *timeout*

Reason: When the SWAP task of an FDRPAS execution ABENDs (including because of a CANCEL (C) command), the ESTAE routine activates cancel protection for two minutes to allow time for proper cleanup. During this time, if a second CANCEL (C) command is entered, it is ignored. After two minutes, if termination has not completed, the CANCEL (C) command is re-enabled; also, the particular subtask that was in the process of terminating is ended with an immediate **U0995** ABEND.

U0996   *Diagnostic* ABEND

Reason: This is an intentional ABEND activated by a debugging feature (ABENDM=).

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