IBM System/3 Model 6 Halt Guide

GC21-7541-4
File No. S3-20

		A	AB	ABC	ABCD	ABD	AC	ACD	AD	B	BC	BCD	BD	C	CD	D	
		13	30		50	63	88	101				136	151	164	171		
1	1		30	40	50		89	101	113	119	127	136		164		183	1
2	1	14	31	40	51			102	114	120	128	136	152	165	172	184	2
3		15	31		51	63		102			128	137	152		172	184	3
4	1	16	31	40	52			102	114		128		153	165	172		4
5		18	31	41		64		103			129	138	153	165		185	5
12	2	17	32	41	52	65	89	103	115		129		154			185	12
13	2	18	32	42	53	65		103	115			138	154	166	173	185	13
14	7		32	42	53			104	116	120	130	139	155			186	14
15	7		33	42		65	89	104		120	130	140	155			186	15
23		20	33	43	54	71	90	104	116	121			155	166	173	186	23
24	7		33	43	54	77	90	105	116	121	130	140	156				24
25	8	20	34	43	55	77	91	105	117	121		140	156		173		25
34		21	34	43	55		91	106		121		141	156	167	173		34
35		21	34		56			106			131	141	157	167	174	187	35
45	8	21		44	56	77	91	107	117				157		174		45
123	8	22		44		78	92	107		122	131		158	167			123
124		22	34	45		78	92	107		122	131	142	158			187	124
125	9	23	35	45	56	78		107	118	123	132	143	158	168		192	125
134		23	35	45	57	78	93		118					168	178	193	134
135	9	24	36	46	58	81	93	109					159	168	179	193	135
145	10	24	36	47	58		94	109	119	123	133		159		179		145
234	10	27	36	47	59		94	109		123		144	159	169	179	194	234
235	11	27	37	47	59	82	94	110		124			160	169	180	195	235
245		28	38		59	83	98	110			134	145	160			196	245
345	11	28			60	83	98	110			134	145	161			197	345
1234			38	47	61	87	98	111		125	134	146	161	170	180	197	1234
1235	11	28	38	48	62	87	99	111		125	135	147	161	170	181	198	1235
1245	12		39	48		87	99	112		126	135		162	170	181		1245
1345	12	29	39	49		88	100	112		126		148	162	171	182	199	1345
2345	13		39	49	62	88	100	112	119		135	148	162	171		199	2345
12345	13	30	39	49	63	88	100	113		127		148	163		183		12345
		A	AB	ABC	ABCD	ABD	AC	ACD	AD	B	BC	BCD	BD	C	CD	D	

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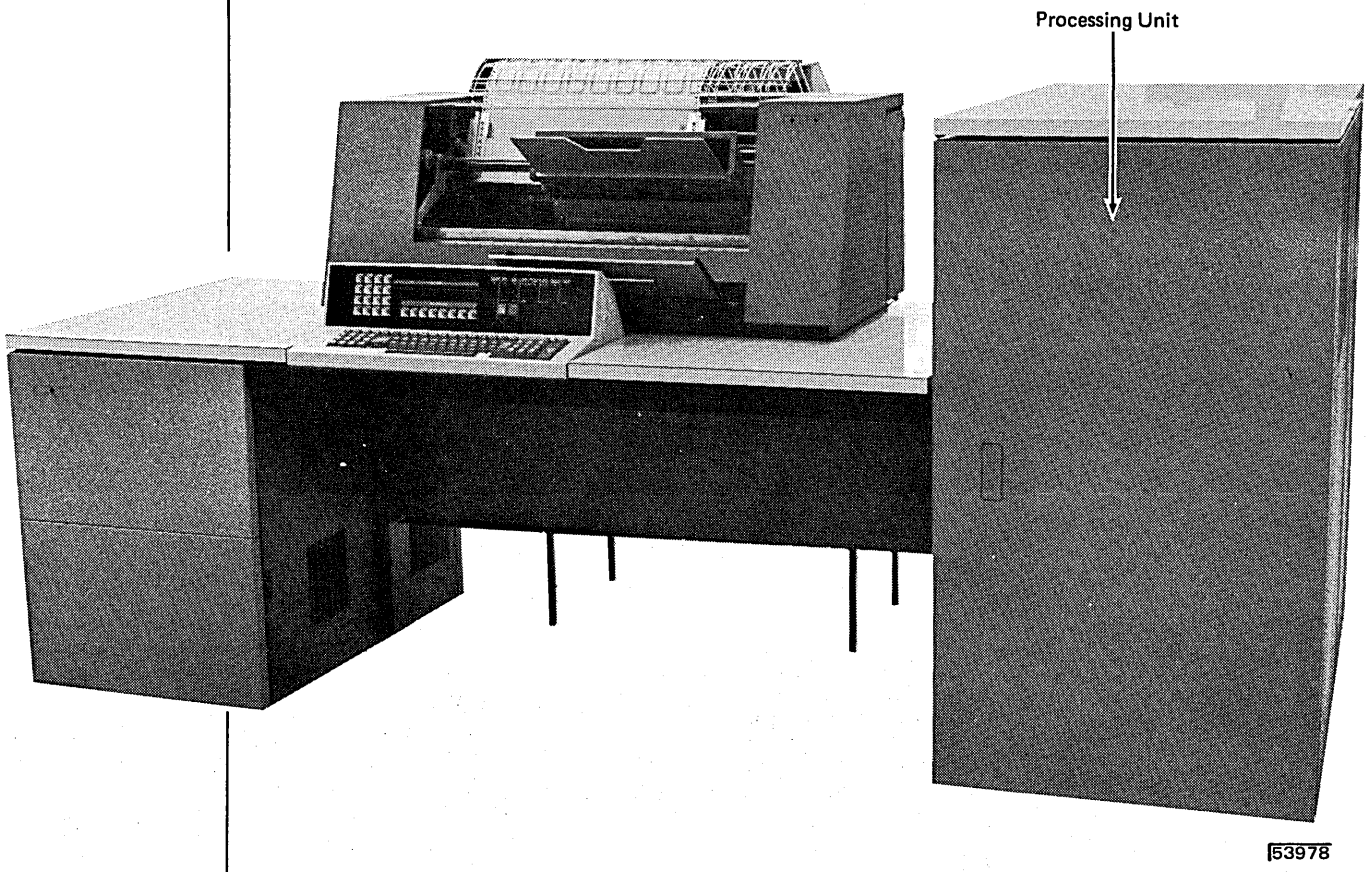
IBM 5406 PROCESSING UNIT

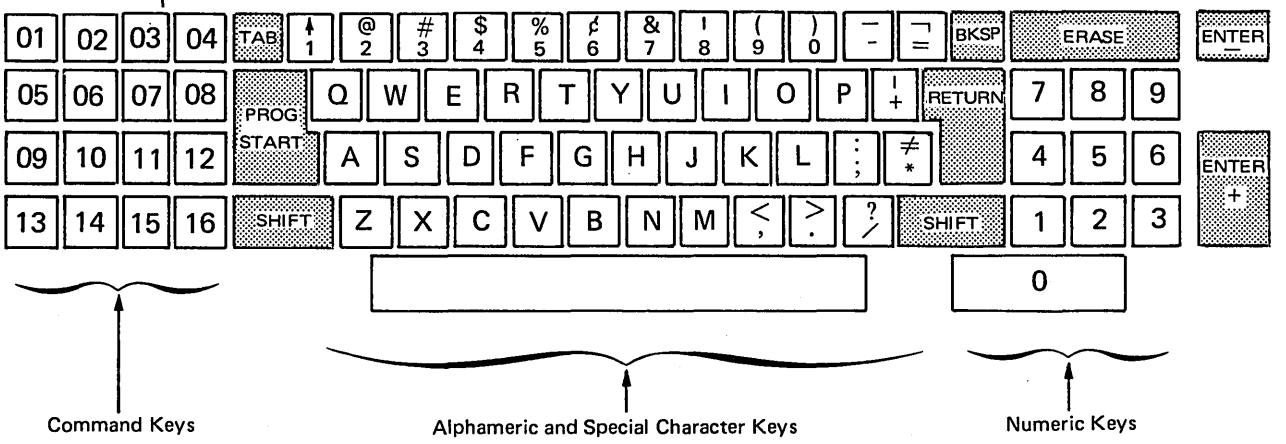
The processing unit provides the control, arithmetic, and logical functions for the system, as well as storage for instructions and data.



The basic unit of storage is the *byte.* Each byte will store one alphabetic character, one special character, or two numeric digits of information. Bytes may be handled separately or grouped together to form *fields.*

All processing of data is carried out in the processing unit under control of the program instructions. The processing unit controls all input/output (I/O) devices attached to the system. The I/O operations performed and devices used are specified by program instructions.

Operator Keyboard



The operator keyboard is the device the operator uses most often for entering information into the Model 6. The operator can enter:

- Operation control language (OCL) and utility control statements
- RPG II source programs
- Disk Sort specifications
- Input data to user or system programs

The keyboard uses *keys* to perform certain functions such as spacing and backspacing. There are four groups of keys:

Command Keys. These keys allow the operator to control operations performed by RPG II programs and the Model 6 conversational utility programs.

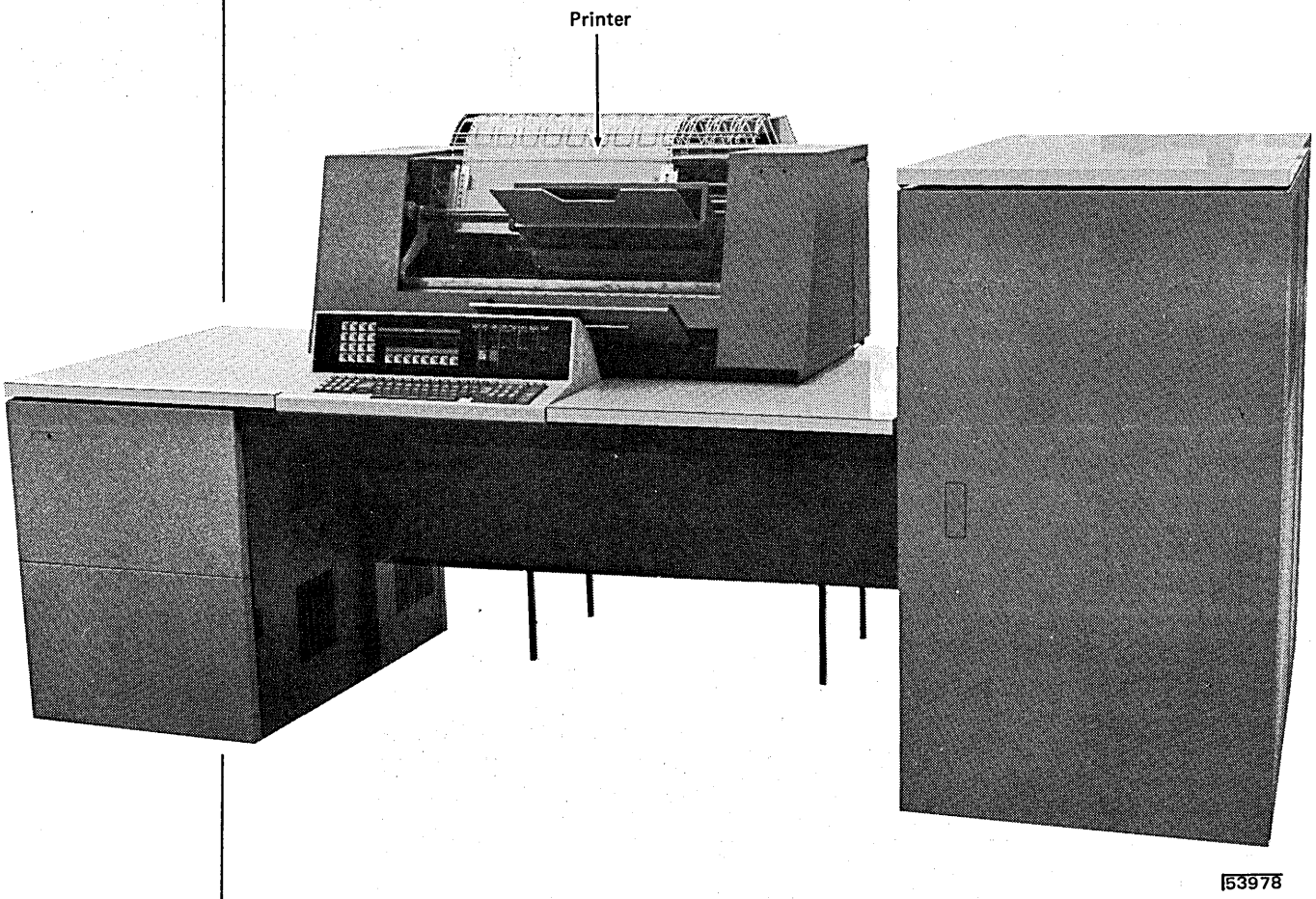
Function Keys. These keys allow the operator to control certain printer operations and to perform required program functions, such as designating the end of a keying operation or erasing fields from storage. (The end-of-statement keys discussed in *Chapter 2. End-of-Statement Keys* in *Part II* of this manual are an example of function keys.)

Alphameric and Special Character Keys. These keys allow the operator to enter alphameric data or control information into the system.

Numeric Keys. These keys allow the operator to enter numeric data into the system. They are used when the data to be keyed in is primarily numeric.

IBM 5213 PRINTER

The 5213 printer is a serial printer which has all printer operations controlled by the program in storage. The operator's instructions to the system are printed as he keys them. The system's reply is also printed, providing easy reference for the operator. The printer also provides output of the results of a program in the form of printed reports controlled by the program instructions.



Tracks

Each disk is divided into circles called *tracks*. Depending upon the model of the IBM 5444 you have, you can record data on 200 to 400 tracks or 100 to 200 cylinders. Corresponding tracks from each side of the same disk are called *cylinders.* Each track is divided into 24 *sectors.* Each sector has its own unique address and can contain 256 characters of data. Six tracks (tracks 2-7) are used as alternate tracks. Tracks 0 and 1 are used only by the system.

Disk Organization

In order for your program to process data, you must store it somewhere on disk. Each piece of data (date, customer number, product number, etc.) is a *field.* Fields are grouped together to form a *record.* A *file* is a group of related records. There are five types of files for the Model 6:

Input Files. Input files are records that a program uses as a source of data. The program reads data from an input file and processes it.

Output Files. Output files are records written, punched, or printed by a program. The data in these has been processed.

Update Files. Update files are disk files from which a program reads a record, updates fields in the record, and writes the record back in the location from which it was read.

Combined Files. Combined files (ledger card files) are both input and output files. The program processes input data in this file and puts data that has been processed in the same file.

Display Files. A display file allows you to print the contents of up to two fields used in your program on the IBM 2265 Display Station.

Libraries

Not only can you store data on disk, but you can also store your programs on disk where they will be available for repeated use. The area on disk reserved for this is called a *library.* There are two libraries for your programs:

Source Library. The source library contains procedures and source statements.

Object Library. The object library contains object programs and routines. (When you indicate that you will include system programs in the object library, the system reserves space for a scheduler work area. The *scheduler work area* is a work area for one of the system programs, the Scheduler.)

The OCL for the Model 6 is called *conversational OCL* because a question and answer procedure is used. The system prints the question called a *keyword,* and the operator supplies the answer called a *response.* The keyword tells the operator the type of information required by the system. For example, the keyword FILE NAME indicates that the name of one file used in the program must be supplied. By printing a keyword, the system is *prompting* the operator for a response.

The operator responds to each keyword that applies to the job by typing in the relevant information. (When the system prompts FILE NAME, for example, the operator types the name of one file that the job uses.) If the system prompts a keyword that doesn't apply to the job, the operator bypasses the response.

REMEMBER. . .

- You must supply information in the form of OCL statements that the system needs to run the job.
- The IBM System/3 Model 6 uses conversational OCL which consists of keywords and responses.

The following shows how you (the programmer), the operator, and the system would interact using the LOAD cycle:

You, as the programmer, fill out an Operator's OCL Guide (see *Appendix A*) telling the operator to use the LOAD cycle for the job and how to respond to each keyword in the cycle.

Operator responds to all the keywords in the LOAD cycle.

System loads the LOAD cycle OCL statements in the processing unit and runs the job.

Will you ever want to run the job again?

YES

Save the old Operator's OCL Guide for the operator.

THE BUILD CYCLE

When you use a BUILD cycle, you're telling the system:

1. Here are the LOAD cycle OCL statements for job xxxx.
2. Store the LOAD cycle statements on disk so that they can be used whenever I want to run the program.
3. Do not run the program now.

Once the set of OCL statements is written on a disk, the set of statements is referred to as a *procedure.* The process of writing the statements on the disk is referred to as *building a procedure.* You use the BUILD cycle to build a procedure.

Although the BUILD cycle is the longest of all the OCL cycles in terms of operator time required, it doesn't run a job. Its function is to save the OCL statements for a job by writing them on one of the disks. The advantage of the BUILD cycle is that once the OCL statements are stored on disk, the program can be run using them rather than by keying all the required statements.

THE CALL CYCLE

CALL is the shortest OCL cycle, having only four keywords. When you use a CALL cycle, you're telling the system:

The BUILD Cycle

After the operator finishes responding to the keywords in the BUILD cycle, the system writes the LOAD cycle OCL statements on disk. Remember that after the OCL statements have been written on the disk, they're referred to as a procedure.

The CALL Cycle

As the operator responds to each keyword in the CALL cycle, the system loads the statement into the processing unit.

The system then looks for the procedure identified by the CALL statements. When they system finds the procedure, it loads the OCL statements into the processing unit and runs the job.

THE BUILDC CYCLE

When you use a BUILDC cycle, you're telling the system:

1. I want to prepare a procedure to run a series of jobs which are always executed one after the other with no interruption.

2. The OCL statements for each job in the group are in procedures stored on disk.

3. Here are the names and disk drive locations of the procedures for each job in the group.

4. Build a chained procedure, establishing a sequence in which the individual procedures are run.

A *chained procedure* is a list of the procedures for each job in a group, in the order you want to run them. The list contains:

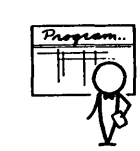
1. The name of the procedure for each job.

2. The disk drive on which the procedure is located.

The process of writing the list on a disk is referred to as *building a chained procedure.* BUILDC stands for build chained.

THE INTERRELATIONSHIP OF THE BUILD, BUILDC, AND CALL CYCLES

The following chart shows how you, the operator, and the system interact using the BUILD, BUILDC, and CALL cycles:



You, as the programmer, fill out an Operator's OCL Guide telling the operator to use the BUILD cycle and how to respond to each keyword in the cycle.

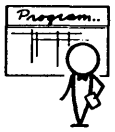
Operator responds to all the keywords in the BUILD cycle.

System writes the procedure on one of the disks.

Is there another job in the group?

NO

YES



You fill out an Operator's OCL Guide telling the operator to use the BUILDC cycle and how to respond to each keyword in the cycle.

Operator responds to all the keywords in the BUILDC cycle.

System writes the chained procedure on one of the disks.

When you want to run the group of jobs, you fill out an Operator's OCL Guide telling the operator to use the CALL cycle and how to respond to each keyword in the cycle.

B

Operator responds to all the keywords in the CALL cycle.

System loads the CALL cycle OCL statements in the processing unit.

A

The BUILD Cycle

After the operator finishes responding to the keywords in the BUILD cycle, the system writes the OCL statements on disk. You use one BUILD cycle for each job in the group.

The BUILDC Cycle

You use the BUILDC cycle to build a chained procedure which consists of the name of the procedure and the unit on which it is located for each job in the group. Procedures are run in the order you enter the procedure information in the chained procedure.

The CALL Cycle

As the operator responds to each keyword in the CALL cycle, the system loads the CALL cycle statement into the processing unit. The statements tell the system:

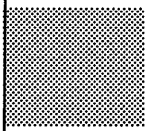
- You want to run a group of jobs.
- The name of BUILDC procedure and the disk unit on which it is located.

The system looks for the BUILDC procedure, finds it, and loads it into the processing unit. The BUILDC procedure tells the system the name and disk unit of the first procedure to be run. The system then finds that procedure, loads it into the processing unit, and runs the job.

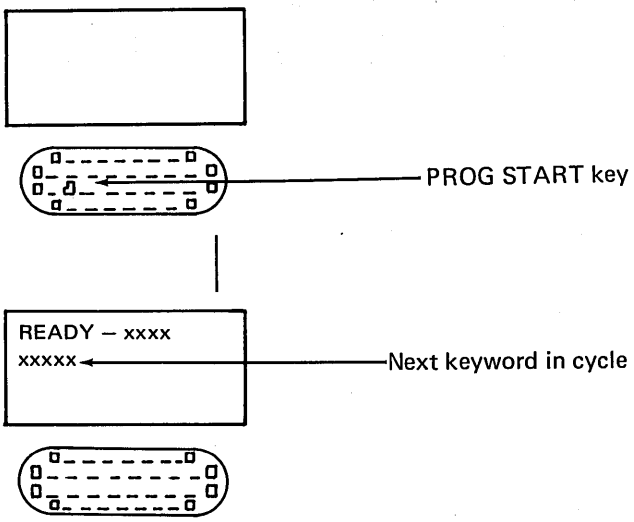
When the first job is complete, the system goes back to the chained procedure to see if there's another job in the group. If there is, the system finds the procedure for that job, loads it into the processing unit, and runs the job. This continues until every job in the group has been run.

REMEMBER. . .

- There are four OCL cycles: LOAD, BUILD, BUILDC, and CALL.
- You should choose the cycle based on frequency of program use and whether the program will be run alone or with a group of programs.



If you want to test yourself on the material in this chapter, see the self-test questions in Part V of this manual.



3. After typing in the name of the OCL cycle you want to use for the job, the operator presses the PROG START key.

4. As soon as the operator presses the PROG START key, the system prompts the next keyword in the cycle.

REMEMBER. . .

The READY statement tells the system:

- What OCL cycle you want to use for your job.
- You want to change the logging device.

LOAD CYCLE

LOAD NAME

When the system prompts LOAD NAME, it's asking for the name of the program you want to load into the processing unit.

UNIT After LOAD NAME

When the system prompts UNIT after LOAD NAME, it's asking for the unit on which this program is located. There are four possible responses to UNIT:

- R1 — The removable disk on the first disk drive.
- R2 — The removable disk on the second disk drive.
- F1 — The fixed disk on the first disk drive.
- F2 — The fixed disk on the second disk drive.

DATE

When the system prompts DATE, it's asking what date you want to use for your job. Your response determines what date goes on the printed output for the job. This date is also used as the file date for any files created by running this job.

If you want to use the system date for your job, the operator should respond to DATE by pressing the PROG START key. (The system date is always established at IPL time.)

If you don't want to use the system date, the operator should respond to DATE by typing in a new date before pressing the PROG START key. This new date changes the system date for the one job only. When your job is finished, the system date will automatically revert to its IPL setting.

SWITCH

When the system prompts SWITCH, it's asking whether you want to change the setting of the eight external indicators. (Only RPG II programs use external indicators.)

If you don't want to change the setting, or if the program you want to run doesn't use external indicators, the operator should respond to SWITCH by simply pressing the PROG START key.

If you do want to change the setting of the external indicators, the operator should respond by typing in a new setting before pressing the PROG START key. (The *IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual,* GC21-7516 gives more detailed information about responding to the program keywords.)

CALL CYCLE

CALL NAME

When the system prompts CALL NAME, it's asking for the name of the procedure you want to use to run your job.

UNIT After CALL NAME

When the system prompts UNIT after CALL NAME, it's asking for the unit on which the procedure (or chained procedure) you want to use to run your job is located. See *LOAD Cycle* in this chapter for the possible responses to UNIT.

USING END-OF-STATEMENT KEYS WITH THE PROGRAM KEYWORDS

The ENTER- key may be used after LOAD NAME and UNIT in both the LOAD and BUILD cycles and after CALL NAME and UNIT in the BUILDC cycle. ENTER- is used after LOAD NAME and UNIT in the LOAD cycle to prompt MODIFY. It is used if you don't want to use any files for a program. ENTER- is used after LOAD NAME and UNIT in the BUILD cycle to prompt the compile keywords. In the BUILDC cycle it is used after CALL NAME and UNIT when all the procedure names have been entered to prompt MODIFY. After the rest of the program keywords PROG START is the only valid response.

REMEMBER...

- Each OCL cycle has a group of program keywords specifying particular information about the program you want to run.
- The following chart lists the program keywords and what each is asking for:

Program Keyword	Asks
LOAD NAME	Name of the program you want to load into processing unit.
BUILD NAME	What you want to name the procedure you're building.
BUILDC NAME	What you want to name the chained procedure you're building.
CALL NAME	Name of the procedure (or chained procedure) you want to use to run your job.
UNIT	Disk drive (R1, R2, F1, or F2) on which the program (or procedure) prompted by the preceding keyword is located.
DATE	Date you want to use for your job.
SWITCH	Whether you want to change the setting of the external indicators.

If you want to test yourself on the material presented in chapters 5 and 6, see the self-test questions in Part V of this manual.

If you use the CALL cycle to compile your RPG II source program by running the IBM-supplied procedure named RPG, the system will pause while printing the procedure to prompt the three compile keywords:

Keyword	Response	Comments
READY	CALL	
CALL NAME	RPG	Name of the IBM-supplied procedure to run the RPG II Compiler
UNIT	XX	Disk drive (R1, R2, F1, or F2) on which the procedure is stored
System prints out first part of procedure		
COMPILE OBJECT	XX	Disk drive (R1, R2, F1, or F2) on which you want the system to write the object program after compilation
SOURCE	YYYYY	Name of the RPG II program you want to compile
UNIT	XX	Disk drive (R1, R2, F1, or F2) on which the RPG II source program is stored
System prints out remainder of procedure		
MODIFY	RUN	

Compile Keywords

For every file a job uses, the operator must respond to the series of file keywords. If a job uses several files, the operator must respond to several series of file keywords. The first time the system prompts the file keywords, the operator responds with information about one file. The second time the system prompts the file keywords, the operator responds with information about a second file. The system continues to prompt the series of file keywords until the operator has described all the files the job uses.

RESPONDING TO THE FILE KEYWORDS

When the system prompts a file keyword, it's asking for specific information about one of the files used in your job. For every file a job uses, you must provide a response for the first three file keywords: FILE NAME, UNIT, and PACK.

FILE NAME

FILE NAME asks for the name of one file that the job uses. For a file used in an RPG II customer program, the response to FILE NAME is the name in columns 7-14 of the RPG II File Description Specifications Sheet. Also, a predefined file name is used for certain Model 6 programs. (The *IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual,* GC21-7516 lists these programs.)

UNIT

UNIT asks for the disk drive (R1, R2, F1, or F2) containing the file.

PACK

PACK asks for the name of the disk containing the file. The name of the disk is the name assigned by the user to the pack when the pack was initialized.

LABEL

LABEL asks for the name by which the file can be identified when it is stored on disk. You respond to this prompt as follows:

1. If the identifying name and the previous response to FILE NAME are the same, no response is required. The operator presses PROG START. The system will assume that the two entries should be the same.

2. If the disk file identifying name and the previous response to FILE NAME aren't the same, the operator types the identifying name and then presses PROG START.

DATE

DATE asks for the date when an input or update file was created. This date is stored with the identification information for the file on disk, and is the same as the system date that was in effect when the file was created. The only time you must supply a response to DATE is when you're running a job which might have as input one of two or more files stored on the same disk pack whose identifying names (LABEL) are the same. In this case, the only way the system can determine which file to use is by verification of the file creation date. If no date is specified and two or more files exist with the same file name, the file with the latest date will be chosen. (The *IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual,* GC21-7516 discusses the file keywords in detail.)

KEYWORDS FOR MULTIVOLUME FILES

If you have a file that can't be contained on one disk, you may continue it on one or more subsequent disks. This type of file is called a *multivolume file.* There are certain additional considerations in responding to a file keyword for multivolume files. (See the *IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual,* GC21-7516 for additional information on multivolume files.)

List Requirements

Some of the FILE statement parameters require lists when used for multivolume files. A list consists of a single quote, responses to the parameter separated by commas, and another single quote:

```
UNIT  -  'R1,R2'
```

The PACK parameter always requires a list while UNIT may require a list. LOCATION, TRACKS, HIKEY, and RECORDS require a list if they are stated.

FILE NAME

See *FILE NAME* in this chapter for single volume files.

KEY LENGTH

If the operator presses the ENTER-key after responding with a file name to FILE NAME, an indexed multivolume file has been indicated. ENTER- prompts the file keyword KEY LENGTH, which asks for the length of the key field. If you respond to KEY LENGTH, another keyword (HIKEY) for indexed files is prompted. If you press PROG START after KEY LENGTH, HIKEY is bypassed.

HIKEY

HIKEY asks for the highest key field for a volume. You must respond to the HIKEY parameter for each volume, and that response (which specifies length) must equal the response to KEY LENGTH. The keyword applies to indexed multivolume files only.

USING END-OF-STATEMENT KEYS WITH THE FILE KEYWORDS

Following your response to the first two file keywords (FILE NAME and UNIT), the only valid end-of-statement key for single volume files is PROG START. An ENTER- response to FILE NAME prompts KEY LENGTH for indexed multivolume files. As a response to the rest of the file keywords, you can use either the PROG START or ENTER- key, depending on what you want the system to do. Pressing the PROG START key after your typed response tells the system to prompt the next keyword. Pressing the ENTER- key after your typed response tells the system to skip the rest of the file keywords and prompt FILE NAME again. If the operator doesn't type in a response but merely presses the PROG START key after FILE NAME, the system will skip all the file keywords and prompt MODIFY. This indicates that all files have been described and you are ready to run the job (see Chapter 8 for a discussion of MODIFY).

DELAYED RESPONSE

Responding to a keyword with a question mark is referred to as a *delayed response.* Delayed responses are only valid for the BUILD cycle, but can be used for all the file keywords in that cycle. Two things happen when a delayed response is given:

- The system reprompts the keyword during the CALL cycle.
- The operator is forced to respond to the keyword when it is reprompted. (The CALL cycle won't continue until the operator uses a valid response.)

REMEMBER. . .

- Your responses to the file keywords give the system information about the files you're using in your job.
- In a job situation you (the programmer), the operator, and the system interact in the following manner:

- Some keywords always require a response, some require a response only when a certain type is being used, and some do not require a response.

File Keyword	Single *	Multivolume *
FILE NAME	■	■
KEY LENGTH **		■
HIKEY **		■
UNIT	■	■
PACK	■	■
LABEL		
RECORDS ***	■	■
TRACKS ***	■	■
LOCATION		■
RETAIN		
DATE		

* Shaded blocks indicate which responses are required.

** Not required unless indexed multivolume.

*** You must respond to only one of these when you're creating a file.

- The possible responses to keywords for single and multivolume files are as follows:

File Keyword	Response*					
	Single			Multivolume		
	Press PROG START	Type a response, press PROG START	Type a response, press ENTER—	Press PROG START	Type a response, press PROG START	Type a response, press ENTER—
FILE NAME	■	■		■	■	■
KEY LENGTH **				■	■	
HIKEY **					■	
UNIT		■			■	
PACK		■	■		■	■
LABEL		■	■		■	■
RECORDS		■	■		■	■
TRACKS		■	■		■	■
LOCATION		■	■		■	■
RETAIN		■	■		■	■
DATE		■	■		■	■

* Shaded blocks indicate which responses can be made to a file keyword.

** Indexed multivolume.

■ If you want to test yourself on the material presented in chapters 7 and 8, see the self-test questions in Part V of this manual.

CORRECTING AND DELETING OCL STATEMENTS

Not every statement in every cycle may be corrected or deleted. To show which statements may be corrected or deleted, the system outlines them with a border of asterisks.

```
READY              -LOAD

**********************************

001    STATEMENT
002    STATEMENT
003    STATEMENT

**********************************

MODIFY
```

These statements may be corrected or deleted.

After the system prompts MODIFY, the operator can correct or delete any of the statements within the border of asterisks. He does this by typing the statement number of the statement he wants to correct. The statement number is the 3-digit number to the left of each statement inside the border of asterisks.

```
READY                          -LOAD

***********************************

010   LOAD NAME                -PAYROL
011        UNIT                -R1
020   DATE (12/02/71)          -
030   SWITCH (11111111)        -
040   FILE NAME                -

***********************************

MODIFY

011   (PROG START)             -R2
```

Tells the system the operator is going to work with statement 011.

Tells the system to replace R1 with R2 in statement 011.

Correcting an OCL Statement

When the operator sees a mistake in one of the statements within the asterisk border, he can use a MODIFY statement to correct it. He waits until the system prompts MODIFY, types the 3-digit number of the incorrect statement, then presses the PROG START key. Pressing the PROG START key moves the printer to the response column where the operator can type the response he wants.

To enter a comment statement, the operator responds to the keyword MODIFY by typing an * followed by the comment.

Note: The operator doesn't have to wait for the system to prompt MODIFY before he enters a comment statement. Comment statements can be entered anywhere in the OCL cycle. The *IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual,* GC21-7516, contains complete instructions for entering comment statements earlier in the cycle.

Comment from Operator

The operator might enter a comment to explain to you why he modified one of your statements.

```
READY                          -LOAD

**********************************

010   LOAD   NAME             -PAYROL
011          UNIT             -F1
020   DATE   (12/06/71)       -
030   SWITCH(01011111)        -
040   FILE   NAME             -EMPMAS
041          UNIT             -R2
042          PACK             -VOL06
050   FILE   NAME             -

**********************************

MODIFY

041                            -R1

*   R2 DOWN 12/6.   VOL06 MOVED TO R1
```

Comment statement from operator explaining why statement 041 was changed.

INCLUDING INSTRUCTIONS FOR ONE OF THE SYSTEM PROGRAMS

Most OCL cycles contain only OCL statements. The BUILD cycle, however, can also contain instructions for some of the system programs.

The Model 6 system programs available from IBM which can use instructions included during a BUILD cycle are the Disk Utility programs and the Disk Sort program.

When you have two programs you always run together, and one requires program control statements, you can save both system and operator time by including the instructions for the system program in the OCL cycle for that program. Information on writing the program instructions for the system programs is given in the referenced manuals.

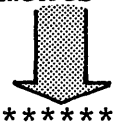
System Program	Manuals
Disk Utility programs	Part III of this manual
	IBM System/3 Model 6 Operation Control Language and Disk Utility Programs Reference Manual, GC21-7516
Disk Sort program	*IBM System/3 Disk Sort Reference Manual,* SC21-7522

To include instructions for a system program in a BUILD cycle, the operator responds to the keyword MODIFY by typing INCLUDE. The MODIFY-INCLUDE statement tells the system the operator is entering instructions for a system program. All that's left for the operator to do is type in the instructions.

The keyword MODIFY is prompted twice during a BUILD cycle that includes system program instructions. The first MODIFY applies to the OCL statements; the second applies to the included statements (the system program instructions).

```
READY                    - BUILD
000 BUILD NAME           - INITRI
001       UNIT           - F1
**********************************
```

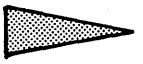
```
   OCL Statements for LOAD Cycle
```



```
**********************************
MODIFY
INCLUDE
**********************************
ENTER UTILITY CONTROL STATEMENTS
```

```
      System Instructions
```

```
RUN
**********************************
MODIFY
```



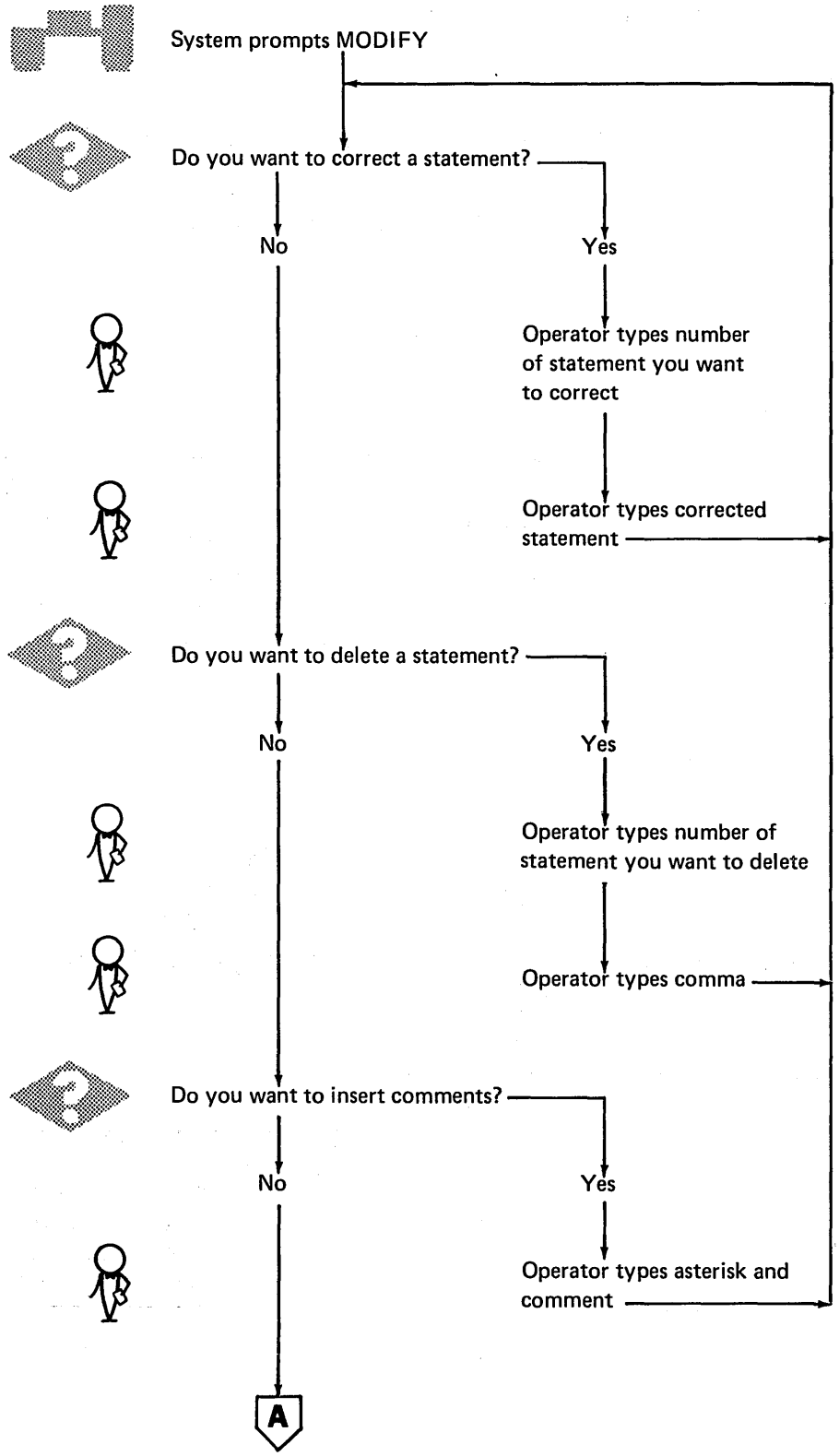
This MODIFY keyword applies to the OCL statements.

This MODIFY keyword applies to the system instructions.

When you use the CALL cycle to run the two programs, the system prompts MODIFY twice. The first MODIFY applies to the OCL statements in the procedure; the second applies to the included statements.

REMEMBER. . .

- In a job situation using the MODIFY statement, you (the programmer), the operator, and the system interact in the following manner:



The CALL cycle will have two MODIFY-RUN statements when the procedure you're calling contains included statements in addition to its OCL statements. For example, if you've built a procedure to sort your updated payroll master file and have included instructions for the Disk Sort program, your CALL cycle might look like this:

```
READY          - CALL

CALL NAME      - Name of procedure

     UNIT      - What disk procedure is on

(System prints out the OCL statements in the procedure.)

MODIFY         - RUN  ------>  Tells system the OCL statements are
                              complete and correct.

INCLUDED STATEMENTS

(System prints out your instructions for the Disk Sort program.)

MODIFY         - RUN  ------>  Tells system the included statements
                              are complete and correct.
```

REMEMBER...

- The MODIFY-RUN statement tells the system to run the job.
- The definition of running the job is different for each OCL cycle.
- The CALL cycle has two MODIFY-RUN statements when instructions for a system program have been included in the procedure you're calling.

REMEMBER...

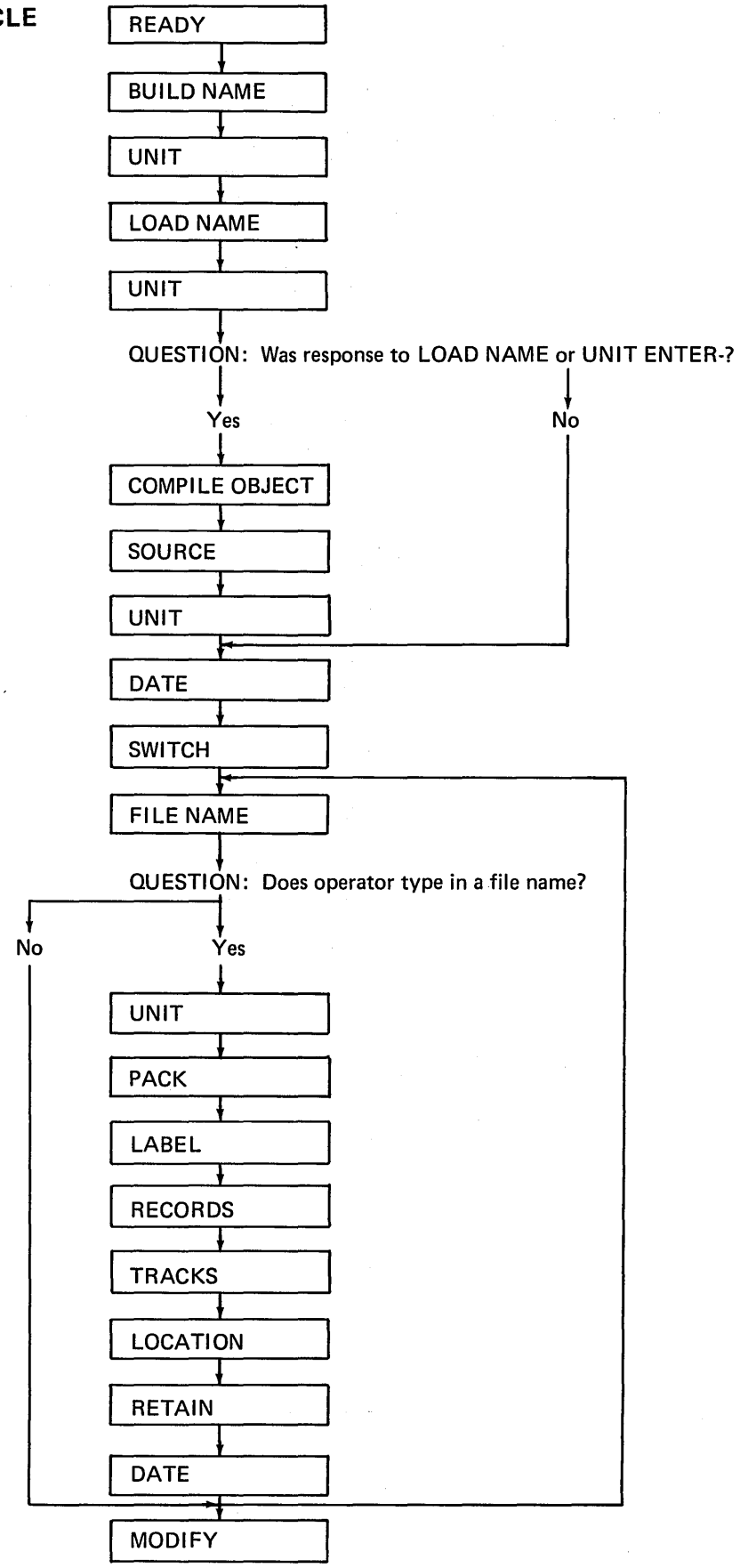
- The system checks each OCL statement for errors.
- If a statement contains an error, the system prints an error message directly below the statement specifying what is wrong with the statement.
- After the system prints an error message, it either reprompts the keyword or cancels the job.

If you want to test yourself on the material presented in chapters 10 and 11, see the self-test questions in Part V of this manual.

The CALL cycle is being used in this example to call the IBM-supplied compile procedure RPGB. Statements 010-043 are the procedure used to compile your RPG II program. LOAD NAME - $RPG tells the system you want to use the RPG II Compiler. You must respond to only SOURCE and UNIT for the compile keywords. The object program is to be placed on R1. The program to be compiled, PAYROL, is located on R2. The files required by the compiler ($WORK, $SOURCE) are defined for you. All other responses are included in the procedure. You may modify the procedure in the manner specified in *Chapter 9. MODIFY.*

If you had used the IBM-supplied procedure RPG, the compile keywords wouldn't have been in the procedure. The object program would automatically be placed on the same unit as the compiler. The source statements would come from the system input device. (This procedure is normally used only when an IBM 5496 Data Recorder is attached to the Model 6 as the system input device.)

THE BUILD CYCLE



OPTIONS

The Disk Initialization program allows you the following options:

- You may choose one of three types of initialization: primary, secondary, or clear.
- You may initialize up to three disks during the same program run.
- During primary initialization, you may decide whether to erase alternate track assignments already on the disk or leave them assigned.
- You may use up to ten characters, in addition to the disk name, to further identify a disk.
- You may specify the number of times you want the program to do surface analysis.

You specify the options you want in control statements (see *Control Statements* in this chapter).

Type of Initialization

The program offers three types of initialization: primary, secondary, and clear. The type you choose determines the portion of the disk that will be initialized. The portions of a disk that can be initialized depend on the data-storage capacity of your disk drive.

Disk drives of differing storage capacities are available for your system. All drives use the same type of disks. The only difference is the number of tracks the drives can use. The larger the drive capacity, the more tracks the drive can use.

If you increase the capacity of your disk drives, more tracks on your disks become available for use. These additional tracks must be initialized before being used. The three types of initialization allow you the following options according to type.

- Primary or clear—initializing all tracks corresponding to the new capacity, including any that were previously initialized.
- Secondary—initializing only the additional tracks made available by the increased capacity.

Primary Initialization

In primary initialization, all disk tracks corresponding to the specified drive capacity are initialized. Tracks previously initialized are reinitialized. Any data on the tracks is destroyed.

Primary initialization is required for new disks. You may also use it for disks that have been initialized before, provided they contain no libraries, temporary data files, or permanent data files. You must delete libraries using the allocate function of the Library Maintenance program and delete permanent and temporary data files using the File Delete program.

Secondary Initialization

Secondary initialization is used only for disks that were initialized on disk drives of lesser capacity then the ones you are now using. It's normally used for disks containing information in the previously initialized area, such as libraries, temporary files, and permanent files that you want to keep.

In secondary initialization, only the additional tracks made available by the increased capacity are initialized. The remainder of the disk isn't disturbed.

Clear Initialization

Clear initialization is used only on disks which can't be used because they have invalid pack labels or some other unrecoverable disk error. All tracks corresponding to the drive capacity are initialized, and previously initialized tracks are reinitialized. All libraries, temporary data files, and permanent data files are destroyed. Therefore, you should avoid using this type of initialization.

EXAMPLE

As an example, suppose you wanted to reinitialize two disks because you no longer needed the information stored on them. The following example shows how you would use the Disk Initialization program to do this.

```
READY                          - LOAD
*******************************
010   LOAD NAME          -  $INIT
011         UNIT         -  F1
020   DATE (XX/XX/XX)    -
030   SWITCH (00000000)-
040   FILE NAME          -
*******************************
MODIFY
RUN
   ENTER '//' CONTROL STATEMENT
// UIN UNIT-'F2,R2',TYPE-PRIMARY,ERASE-YES
   ENTER '//' CONTROL STATEMENT
// VOL PACK-INVOIC,ID-013077
   ENTER '//' CONTROL STATEMENT
// VOL PACK-3333
   ENTER '//' CONTROL STATEMENT
// END
```

OCL LOAD Sequence

Keywords for which no responses are shown are the ones bypassed. If you press ENTER- after responding to UNIT, the DATE, SWITCH, and FILE NAME keywords are not prompted. (Circled areas are operator responses.)

Message printed by Disk Initialization program.

Control statement supplied by operator.

Sequence repeats until operator enters // END.

Type of Assignment

The program offers three types of assignment: conditional, unconditional, and cancel prior. The three types of assignment allow you the following options according to type.

- Conditional—testing the condition of a track and assigning an alternate if it is defective.
- Unconditional—assuming a track is defective and assigning an alternate.
- Cancel prior—canceling an alternate track assignment.

Conditional Assignment

Conditional assignment is the normal use of the Alternate Track Assignment program. When conditional assignment is specified, a track is tested for errors (surface analysis). If the track is defective an alternate is assigned. Prior to surface analysis, the program transfers the data from the suspected track to the alternate track that is used if the suspected track is found defective.

Unconditional Assignment

Unconditional assignment is used when the program has attempted to use conditional assignment, but the suspected track was not found to be defective even though it had caused occasional reading or writing errors. For this reason you should assign an alternate track using unconditional assignment. Alternate tracks are assigned without first testing the condition of the tracks suspected of being defective. (A conditional assignment is forced after an unconditional request to check any other tracks that previously caused errors.)

Cancel Prior Assignment

Cancel prior assignment is used to free an alternate track for use with another track if there are no other alternates available. Canceling an assignment involves transferring the data from an alternate track back to the track to which the alternate was assigned. Prior to transferring the data back to the original track, the Alternate Track Assignment program tests the condition of the original track. If the track is found defective, the program stops and one of three options is taken:

- You leave the assignment as it is but continue checking other assignments (if there are any), or the program ends.
- You cancel the assignment regardless of the condition of the original track.
- You test the track again.

You must run the File and Volume Label Display program to determine to what tracks alternates are assigned.

CONTROL STATEMENTS

You must supply the following control statements to specify the program options you want:

1. *REBUILD statement*—indicates the name of the disk containing incorrect data, the track and sectors to be corrected, and the position and number of characters to be replaced. A REBUILD statement is needed for each group of characters to be corrected. The substitute data follows each REBUILD statement.

2. *END statement*—indicates the end of control statements.

File Information Only

You may request information for specific files. You may want this information to find out file names, file designations, or disk areas reserved for files. You may also use it to determine the relationship of multivolume files.

Number of File Names

When you specify a file name, you must use the name that identifies the file in the VTOC. You are allowed to specify up to 20 file names in one program run.

CONTROL STATEMENTS

You must supply the following control statements to specify the program options you want:

1. *DISPLAY statement*—indicates whether you want the entire VTOC or specific file information from the VTOC. It also indicates the unit of the disk containing VTOC information.

2. *END statement*—indicates the end of control statements.

Removing a File

When you remove a file from a disk, you are removing the file reference from the VTOC. You may also erase the file from the disk, leaving its area available for use by other files.

Scratching a File

The File Delete program allows you to scratch a file if you find you may need to reference it later. When you scratch a file, the VTOC reference is not removed but changed to designate a scratch file. You can use the file until a permanent file is created in its place.

Number of Files

You may remove some or all files on a disk. If a file name applies to more than one file, all the files with that name are deleted. You can keep this from happening by identifying the files with both name and date.

Number of File Names

You may specify as many file names as the control statement will allow. If you specify more, you must use more than one statement. However, you are only allowed to specify 52 file names in one job.

CONTROL STATEMENTS

1. *REMOVE statement*—indicates the name and unit of the disk, what files are to be removed, and whether or not you are erasing the data for the file.

2. *SCRATCH statement*—indicates the name and unit of the disk and what files you wish to scratch.

3. *END statement*—indicates the end of control statements.

OPTIONS

The Disk Copy/Dump program allows you the following options:

- You may copy an entire disk or a file.
- You may print part or all of a file.
- You may delete records from a file.
- You may reorganize a file.

You specify the options you want in control statements (see *Control Statements* in this chapter).

Copying and Printing

You may specify any of the following copy or print combinations:

- Copy an entire disk.
- Copy a data file.
- Copy and print a data file.
- Copy a data file, but print only part of the file.
- Print an entire data file.
- Print only a part of a data file.

Deleting Records

If you wish to delete records from a file while copying or printing, you must indicate the type of record you wish to omit. To do this, you must specify the *identifying character* (any of the standard System/3 character set except commas, apostrophes, and blanks) and the position of the character in the records (maximum position 999). The records that are deleted are printed. When the records of a file are being printed, the deleted records are indicated.

Reorganizing a File

When you are copying an indexed file you can reorganize it. The records in the data portion are put in the same order as their index keys leaving the original of the file you are copying unaffected. If you are both copying and printing an indexed file, you must specify reorganization.

CONTROL STATEMENTS

You must supply the following control statements to specify the program options you want:

1. *COPYPACK statement*—indicates that an entire disk is to be copied. It contains the unit of the disk to be copied and the disk to which the copying is being done.
2. *COPYFILE statement*—indicates that all or part of a data file is being copied or printed or both, whether the file is to be reorganized, and whether any records are to be deleted. It also allows you to specify if you want a work area.
3. *SELECT KEY statement*—indicates, according to record keys, which part of an indexed file you want printed.
4. *SELECT RECORD statement*—indicates, according to relative record numbers, which part of a file you want printed.
5. *END statement*—indicates the end of control statements.

Using a Work Area. You must use a work area when you want to create a source library, but there is not enough available space preceding the object library. The object library entries are temporarily stored in the work area while that library is being moved to make space available for the source library.

Changing the Size of Libraries

Changing the size of a library involves:

- Moving the object library when increasing the source library.
- Moving the object library when decreasing the source library.
- Moving the object library when increasing or decreasing the object library.
- Reorganizing the libraries.

Moving the Object Library when Increasing the Source Library. The object library immediately follows the end position of the source library. If an object library is present, therefore, the source library cannot be increased in size without moving the object library. The object library must be moved to a work area temporarily while the source library is increased. When moved back from the work area, the object library immediately follows the new end position of the source library.

Moving the Object Library when Decreasing the Source Library. When the source library is decreased in size, its end location moves. If there is an object library it is moved so that it immediately follows the source library. The space that results from the decrease in size of the source library is shifted to follow the object library.

Moving the Object Library when Increasing or Decreasing the Object Library. The end location of the object library is moved when the object library increases or decreases in size. If the object library decreases, additional space is made available for file usage following the object library.

Reorganizing the Libraries. Any time you change the size of one of your libraries, the program reorganizes the library. See *Reorganizing Libraries* in this chapter.

Deleting Libraries

When you delete a library, you are making the area occupied by the library available for other use.

You are restricted in deleting object libraries. You can't delete object libraries containing system programs that control program loading. Also, you can't delete the object library from which the Library Maintenance program was loaded.

Note: It is important to remember that when you delete a source library, the object library is not moved. When you create a source library after deleting it, the same space may not be used for the source library. The object library (if there is one) must be moved to make space available for the source library.

Reorganizing Libraries

Reorganizing a library involves:

- Relocating source library entries.
- Relocating object library entries.
- Using a work area.

Delete

Deleting an entry involves:

- Identifying the location of an entry.
- Identifying an entry.

Identifying the Location of an Entry. The entry to be deleted is contained on disk.

Identifying an Entry. Entries are identified by their type and name. Entries that can be deleted include source library and object library entries. A name identifies the particular entry being deleted. You can also further identify an entry by designating whether it is temporary or permanent.

Rename

The rename function of the Library Maintenance program allows you to change the name of a library entry. Renaming an entry involves identifying the disk location of the entry to be renamed.

OPTIONS

The Library Maintenance program gives you the following options. You can:

- Assign as many tracks to the source library or object library as are available on the disk.
- Include system programs in the object library.
- Specify any of a number of types of entries to be copied, deleted, or renamed.
- Specify up to six characters for an entry name.
- Specify specific entries by name for the copy and delete uses of this program.

You specify the options you want in control statements (see *Control Statements* in this chapter).

Library Size

The maximum library size is the number of tracks in the available disk area. The minimum size for the source library is one track. The minimum size of the object library depends on whether it is to contain a minimum system. (A *minimum system* is made up of those system programs necessary to load and run programs.) If the object library contains a minimum system, the library can be no smaller than 30 tracks. Otherwise, the minimum is three tracks.

System Programs

You can include system programs in the object library. If you do, three tracks must be assigned to the library directory, and space must be assigned for a scheduler work area. (The *scheduler work area* is a work area for one of the system programs, the Scheduler.) The scheduler work area immediately precedes the object library. The Library Maintenance program automatically assigns this space.

Types of Entries

For the copy function of the Library Maintenance program, you can specify source statements, procedures, object programs, routines, and system directory entries.

You can delete or rename source statements, procedures, object programs, and routines.

Length of Name

The name you specify for an entry must not exceed six characters. It can be any of the System/3 characters except blanks and periods. The first

CONTROL STATEMENTS

You must supply the following control statements to specify the program options you want:

1. *ALLOCATE statement*—indicates whether you wish to create, change the size of, delete, or reorganize the source or object library. It also indicates the unit of the disk you are using, how many tracks you want to assign to the object library directory, and where the work area is (if you use one). You can't use more than four ALLOCATE statements per job.

2. *COPY statement*—indicates whether you wish to add, replace, copy, print, or punch entries. It also indicates what entries are to be used, on what unit the entries are located, their destination, their designation, and a new name if you wish the copy to have a different name.

3. *DELETE statement*—indicates what entries are to be deleted, the unit they are on, and their designation.

4. *RENAME statement*—indicates what entries are to be renamed, the unit they are on, and the new name you wish to give to them.

5. *END statement*—indicates the end of control statements.

SAMPLE JOB 1. INITIALIZE DISK

You're going to use the Disk Initialization program (located on the fixed disk on drive one) to initialize the removable disk on drive one. You want to:

- Initialize the entire disk pack.
- Do surface analysis only once.

The name of the new disk will be 12345.

Here are the OCL and utility control statements for the job.

```
READY-                                          LOAD (P/S)
*****************************************************************************
010 LOAD                NAME-                   $INIT (P/S)
011                     UNIT-                   F1 (ENTER-)
*****************************************************************************
MODIFY

RUN (P/S)
   ENTER '// ' CONTROL STATEMENT
// UIN UNIT-R1,TYPE-PRIMARY (P/S)
   ENTER '// ' CONTROL STATEMENT
// VOL PACK-12345 (P/S)
   ENTER '// ' CONTROL STATEMENT
// END (P/S)
```

SAMPLE JOB 2. COMPILE AN RPG SOURCE PROGRAM

You're going to use the IBM-supplied procedure RPGB (located in the source library on the fixed disk on drive one) to compile a source program INVUPD (an inventory update) located on R1. The RPG II Compiler (the program to compile RPG II source programs) is also located on R1. You want to put the compiled program in the object library on R1. Here are the OCL statements for the job.

```
READY-                                          CALL (P/S)
000 CALL              NAME-                     RPGB (P/S)
001                   UNIT-                     F1 (P/S)
*****************************************************************************
010 LOAD              NAME-$RPG
011                   UNIT-R1
020 COMPILE        OBJECT-F1
021                SOURCE-                      INVUPD (P/S)
022                   UNIT-R1
030 FILE              NAME-$WORK
031                   UNIT-F1
032                   PACK-F1F1F1
033                TRACKS-20
034                RETAIN-S
040 FILE              NAME-$SOURCE
041                   UNIT-F1
042                   PACK-F1F1F1
043                TRACKS-20
044                RETAIN-S
*****************************************************************************
MODIFY

020 (P/S)                                       R1 (P/S)

RUN (P/S)
```

SAMPLE JOB 3. PROCESS CUSTOMER PROGRAM "INVUPD"

You're going to run the customer program INVUPD, compiled in SAMPLE JOB 2 and located on the removable disk on drive one. The job uses one file, INV, located on R2. The name of the disk which contains the file INV is 123456. Here are the OCL statements for the job.

```
READY-                                          LOAD (P/S)
**********************************************************************
010 LOAD                NAME-                   INVUPD (P/S)
011                     UNIT-                   R1 (P/S)
020 DATE    (12/08/70)   -                      (P/S)
030 SWITCH (00000000)    -                      (P/S)
040 FILE                NAME-                   INV (P/S)
041                     UNIT-                   R2 (P/S)
042                     PACK-                   123456 (P/S)
043                    LABEL-                   (ENTER-)
050 FILE                NAME-                   (P/S)
**********************************************************************
MODIFY

RUN (P/S)
```

SAMPLE JOB 4. COPY FILE DISK TO DISK

You're going to copy an employee master file from R1 to R2. The second file will serve as a back-up in case the original file is damaged in some way, such as a track becoming defective or a portion of the file being overlayed. When the master file was created, you:

1. Responded to FILE NAME with EMASTFIL.
2. Responded to PACK with VOL06.
3. Responded to LABEL with EMPMAST.
4. Responded to TRACKS with 15.

These responses caused the system to put the name EMPMAST in the VTOC on VOL06.

Here are the OCL and utility control statements you will use to copy the master file from R1 to R2.

```
READY-                                          LOAD (P/S)
**************************************************************************
010 LOAD              NAME-                     $COPY (P/S)
011                   UNIT-                     F1 (P/S)
020 DATE    (12/08/70)  -                       (P/S)
030 SWITCH (00000000)   -                       (P/S)
040 FILE              NAME-                     COPYIN (P/S)
041                   UNIT-                     R1 (P/S)
042                   PACK-                     VOL06 (P/S)
043                  LABEL-                     EMPMAST (ENTER-)
050 FILE              NAME-                     COPYO (P/S)
051                   UNIT-                     R2 (P/S)
052                   PACK-                     VOL07 (P/S)
053                  LABEL-                     EMPMAST2 (P/S)
054                RECORDS-                     (P/S)
055                 TRACKS-                     15 (P/S)
056               LOCATION-                     (P/S)
057                 RETAIN-                     P (ENTER-)
060 FILE              NAME-                     (P/S)
**************************************************************************
MODIFY

RUN (P/S)
     ENTER '// ' CONTROL STATEMENT
// COPYFILE OUTPUT-DISK (P/S)
     ENTER '// ' CONTROL STATEMENT
// END (P/S)
```

SAMPLE JOB 5. MULTIFILE BUILD

Each day the customer runs a daily transaction job which creates a daily transaction file. Each day's file has a different name and date. You are going to build a procedure to use these daily files to create a weekly transaction file (WKLYTR). The weekly transaction program is located in the object library of F1.

```
READY-                                  BUILD (P/S)
000 BUILD              NAME-            WTR (P/S)
001                    UNIT-            R2 (P/S)
*************************************************************************
010 LOAD               NAME-            WKYRUN (P/S)
011                    UNIT-            F1 (P/S)
020 DATE                  -             (P/S)
030 SWITCH (00000000)     -             (P/S)
040 FILE               NAME-            MONTR          MONDAYS FILE  (P/S)
041                    UNIT-            F1 (P/S)
042                    PACK-            PACK08 (P/S)
043                   LABEL-            (P/S)
044                 RECORDS-            (P/S)
045                  TRACKS-            (P/S)
046                LOCATION-            (P/S)
047                  RETAIN-            (P/S)
048                    DATE-            ? (P/S)
050 FILE               NAME-            TUETR          TUESDAYS FILE (P/S)
051                    UNIT-            F1 (P/S)
052                    PACK-            PACK08 (P/S)
053                   LABEL-            (P/S)
054                 RECORDS-            (P/S)
055                  TRACKS-            (P/S)
056                LOCATION-            (P/S)
057                  RETAIN-            (P/S)
058                    DATE-            ? (P/S)
060 FILE               NAME-            WEDTR          WEDNESDAYS FILE (P/S)
061                    UNIT-            F1 (P/S)
062                    PACK-            PACK08 (P/S)
063                   LABEL-            (P/S)
064                 RECORDS-            (P/S)
065                  TRACKS-            (P/S)
066                LOCATION-            (P/S)
067                  RETAIN-            (P/S)
068                    DATE-            ? (P/S)
070 FILE               NAME-            THUTR          THURSDAYS FILE (P/S)
071                    UNIT-            F1 (P/S)
072                    PACK-            PACK08 (P/S)
073                   LABEL-            (P/S)
074                 RECORDS-            (P/S)
075                  TRACKS-            (P/S)
076                LOCATION-            (P/S)
077                  RETAIN-            (P/S)
078                    DATE-            ? (P/S)
080 FILE               NAME-            FRITR          FRIDAYS FILE (P/S)
081                    UNIT-            F1 (P/S)
082                    PACK-            PACK08 (P/S)
083                   LABEL-            (P/S)
```

SAMPLE JOB 6. MULTIFILE CALL

You are going to run the procedure you built in sample job 5. However, this week Thursday was a holiday so there are only four input files. You can still use the same procedure if you delete an input file at MODIFY time.

```
READY-                                          CALL (P/S)
000 CALL                NAME-                   WTR (P/S)
001                     UNIT-                   R2 (P/S)
**************************************************************************
010 LOAD                NAME-WKYRUN
011                     UNIT-F1
020 FILE                NAME-MONTR
021                     UNIT-F1
022                     PACK-PACK08
023                     DATE-                   4/5/71 (P/S)
030 FILE                NAME-TUETR
031                     UNIT-F1
032                     PACK-PACK08
033                     DATE-                   4/6/71 (P/S)
040 FILE                NAME-WEDTR
041                     UNIT-F1
042                     PACK-PACK08
043                     DATE-                   4/7/71 (P/S)
050 FILE                NAME-THUTR
051                     UNIT-F1
052                     PACK-PACK08
053                     DATE-                   4/8/71 (P/S)
060 FILE                NAME-FRITR
061                     UNIT-F1
062                     PACK-PACK08
063                     DATE-                   4/9/71 (P/S)
070 FILE                NAME-WKLYTR
071                     UNIT-R1
072                     PACK-PACK04
073                   RECORDS-500
074                    RETAIN-P
**************************************************************************
MODIFY

050, (P/S)

*       THURSDAYS FILE DELETED BECAUSE OF HOLIDAY, NO RUN THAT DAY (P/S)

RUN (P/S)
```

Chapters 7 and 8

1. What keyword calls for the disk unit on which an object program is to be written after compilation?
2. What are the three file keywords for which a response must be given prior to running a job?
3. You would respond to the prompt_____ if you want the system to calculate how much space is required for your file.
4. Why would you not respond to the prompt LOCATION?
5. In which cycle is a delayed response valid?
6. MODIFY is prompted when the operator presses PROG START after the _____prompt.

Chapter 9

1. What are the two methods used to cancel a job?
2. How does the system indicate which statements may be corrected or deleted?
3. Additional operator instructions are provided by_____statements.
4. The LOAD cycle allows you to include instructions for a system program. True or false?

Chapters 10 and 11

1. What response to MODIFY tells the system to run the job?
2. Some CALL cycles will have two MODIFY statements. True or false?
3. What indication does the operator have that there is an error in an OCL statement?
4. How many times will the system reprompt a keyword following an error?

Chapters 7 and 8

1. COMPILE OBJECT
2. FILE NAME, UNIT, and PACK
3. RECORDS
4. You wouldn't respond if you don't wish to determine where your file should be stored on disk. The system will then determine where the file is to go.
5. BUILD cycle
6. FILE NAME

Chapter 9

1. a) You can respond with CANCEL to the MODIFY prompt.
   b) You can respond with /* after any prompt.
2. The system outlines them with a border of asterisks.
3. comment
4. false

Chapters 10 and 11

1. RUN
2. true
3. The system prints an error message directly below the statement.
4. Until the operator gives a valid response.

What part of the OCL Guide you fill out depends on what cycle you're using for the job. For LOAD cycles, you use the right-hand side of the Response section. For BUILD cycles, you use the left-hand side of the Response section. For the two short cycles, BUILDC and CALL, you use the blank area at the bottom of the guide. (For the BUILDC and CALL cycles you must fill in *both* the keywords and the responses.)

IBM

International Business Machines Corporation

System/3 Model 6

GX21-9126-0
Printed in U.S.A.

Job _____

Date _____

OPERATION CONTROL LANGUAGE (OCL) GUIDE

Programmer _____

Keywords	Responses		Considerations
READY	BUILD	OR LOAD	
000 BUILD NAME			Procedure Name
001 UNIT			F1, R1, F2 or R2
010 LOAD NAME			Columns 75-80 of RPG Control Card or System Program Name
011 UNIT			F1, R1, F2 or R2
020 DATE			mmddyy or ddmmyy
030 SWITCH			1-On, 0-Off, X-No Change
040 FILE NAME			Columns 7-14 of RPG File Description Specifications or Predefined Filename
041 UNIT			F1, R1, F2 or R2
042 PACK			Disk Name (Assigned by Disk Initialization Program)
043 LABEL			VTOC File Name (if different than response to FILE NAME)
044 RECORDS			1-999999 (Maximum Number of Records in File)
045 TRACKS			1-398 (Maximum Number of Tracks for this File)
046 LOCATION			8-405 Location of First Track of File
047 RETAIN			S-Scratch, T-Temporary, P-Permanent
048 DATE			mmddyy or ddmmyy
050 FILE NAME			Columns 7-14 of RPG File Description Specifications or Predefined File Name
051 UNIT			F1, R1, F2 or R2
052 PACK			Disk Name (Assigned by Disk Initialization Program)
053 LABEL			VTOC File Name (if different than response to FILE NAME)
054 RECORDS			1-999999 (Maximum Number of Records in File)
055 TRACKS			1-398 (Maximum Number of Tracks for this File)
056 LOCATION			8-405 Location of First Track of File
057 RETAIN			S-Scratch, T-Temporary, P-Permanent
058 DATE			mmddyy or ddmmyy
MODIFY			MODIFY OPTIONS 1. Enter RUN 2. Enter CANCEL 3. Correct Statement Enter Statement number Retype or delete (,) response 4. Create new Statement INCLUDE, LOG, FORMS, *(For Comments)

For BUILD cycle

For LOAD cycle

For BUILD C and CALL cycles

Other Possible Entry (Lines 020-058)
? for Delayed Response

FILLING OUT THE OCL GUIDE FOR BUILD CYCLE

When you use a BUILD cycle, cross out the LOAD response in the first line and enter your responses in the BUILD column. Here's how you would fill out the sheet to build a procedure named WKBILL (weekly billing) to produce a weekly billing report. Assume you want to put the procedure on R1. To produce the report you run the program BILLING (billing) which is on F1. The program uses two files: CUSTFILE (customer file) and ORDFLE (order file). Both files are on R1. The name of the disk is VOL05.

IBM

International Business Machines Corporation
System/3 Model 6

GX21-9126-0
Printed in U.S.A.

Job Weekly Billing Procedure

Date 06/01/71

Programmer S. Smith

OPERATION CONTROL LANGUAGE (OCL) GUIDE

Keywords	Responses		Considerations
READY	BUILD	~~ORLOAD~~	
000 BUILD NAME	WKBILL		Procedure Name
001 UNIT	R1		F1, R1, F2 or R2
010 LOAD NAME	BILLNG		Columns 75-80 of RPG Control Card or System Program Name
011 UNIT	F1		F1, R1, F2 or R2
020 DATE			mmddyy or ddmmyy
030 SWITCH			1-On, 0-Off, X-No Change
040 FILE NAME	CUSTFLE		Columns 7-14 of RPG File Description Specifications or Predefined Filename
041 UNIT	R1		F1, R1, F2 or R2
042 PACK	VOL05		Disk Name (Assigned by Disk Initialization Program)
043 LABEL			VTOC File Name (if different than response to FILE NAME)
044 RECORDS			1-999999 (Maximum Number of Records in File)
045 TRACKS			1-398 (Maximum Number of Tracks for this File)
046 LOCATION			8-405 Location of First Track of File
047 RETAIN			S-Scratch, T-Temporary, P-Permanent
048 DATE			mmddyy or ddmmyy
050 FILE NAME	ORDFLE		Columns 7-14 of RPG File Description Specifications or Predefined File Name
051 UNIT	R2		F1, R1, F2 or R2
052 PACK	VOL05		Disk Name (Assigned by Disk Initialization Program)
053 LABEL			VTOC File Name (if different than response to FILE NAME)
054 RECORDS			1-999999 (Maximum Number of Records in File)
055 TRACKS			1-398 (Maximum Number of Tracks for this File)
056 LOCATION			8-405 Location of First Track of File
057 RETAIN			S-Scratch, T-Temporary, P-Permanent
058 DATE			mmddyy or ddmmyy
~~MODIFY~~			MODIFY OPTIONS
060 FILE NAME	P/S		4. Create new Statement INCLUDE, LOG, FORMS, *(For Comments)
MODIFY	RUN		

Other Possible Entry (Lines 020-058): ? for Delayed Response

The sheet has preprinted keywords for two files per cycle. You write in the third FILE NAME prompt.

FILLING OUT THE OCL GUIDE FOR MORE THAN TWO FILES

Several of your jobs may use more than two files. By using both sides of the Response section, you can indicate responses for the keywords for four files. (This applies only when you're using either a LOAD or BUILD OCL cycle.)

IBM

International Business Machines Corporation

System/3 Model 6

GX21-9126-0
Printed in U.S.A.

Job _____

Date _____

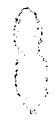
OPERATION CONTROL LANGUAGE (OCL) GUIDE

Programmer _____

Keywords	Responses		Considerations
READY	BUILD	OR LOAD	
000 BUILD NAME			Procedure Name
001 UNIT			F1, R1, F2 or R2
010 LOAD NAME			Columns 75-80 of RPG Control Card or System Program Name
011 UNIT			F1, R1, F2 or R2
020 DATE			mmddyy or ddmmyy
030 SWITCH			1-On, 0-Off, X-No Change
040 FILE NAME			Columns 7-14 of RPG File Description Specifications or Predefined Filename
041 UNIT			F1, R1, F2 or R2
042 PACK			Disk Name (Assigned by Disk Initialization Program)
043 LABEL			VTOC File Name (if different than response to FILE NAME)
044 RECORDS	FILE	FILE	1-999999 (Maximum Number of Records in File)
045 TRACKS			1-398 (Maximum Number of Tracks for this File)
046 LOCATION			8-405 Location of First Track of File
047 RETAIN			S-Scratch, T-Temporary, P-Permanent
048 DATE			mmddyy or ddmmyy
050 FILE NAME			Columns 7-14 of RPG File Description Specifications or Predefined File Name
051 UNIT			F1, R1, F2 or R2
052 PACK			Disk Name (Assigned by Disk Initialization Program)
053 LABEL			VTOC File Name (if different than response to FILE NAME)
054 RECORDS	FILE	FILE	1-999999 (Maximum Number of Records in File)
055 TRACKS			1-398 (Maximum Number of Tracks for this File)
056 LOCATION			8-405 Location of First Track of File
057 RETAIN			S-Scratch, T-Temporary, P-Permanent
058 DATE			mmddyy or ddmmyy
MODIFY			MODIFY OPTIONS 1. Enter RUN 2. Enter CANCEL 3. Correct Statement Enter Statement number Retype or delete (,) response 4. Create new Statement INCLUDE, LOG, FORMS, *(For Comments)

Other Possible Entry (Lines 020-058)
? for Delayed Response

Scheduler — Program that provides job-to-job transition.
Scheduler work area — Work area for the Scheduler.
Scratch file — A file used only by the current program which may be overwritten.
Sector — Section of a disk track. There are 24 for each track.
Source library — Contains procedures and source programs.
Source library directory — Information concerning each library entry.
Source statements — Program instructions that have not been compiled.
System directory — Information concerning the libraries and their directories.
Temporary file — A file with short term usefulness which may be overwritten.
Track — Concentric circles on a disk.
Utility programs — Maintenance programs.
VTOC — (volume table of contents) Area on disk containing information about the contents of the disk.



IBM System/3
Model 6
Halt Guide

GC21-7541-4
File No. S3-20

This manual provides information the system operator needs to recover from program halts issued by the IBM System/3 Model 6, Program Number 5703-SC1. Information on how to use the manual is provided.

Halts for the following program products are included:

5703-FO1	FORTRAN Compiler
5703-RG1	RPG II Compiler
5703-RG1, Feature 6000/6002	RPG II BSCA
5703-RG1, Feature 6008/6009	RPG II Auto Report
5703-SM1	Disk Sort
5703-UT1	Conversational Utilities
5703-UT2	1255 Utility

The following manual is recommended for additional information:

IBM System/3 Model 6 Operator's Guide, GC21-7501

System/3 Model 6 uses nine lights on the operator's panel (ABCD12345) to display programmed primary halts and subhalts. These halts indicate incorrect program operation, machine errors, and in some cases, information or instructions. All primary halts and subhalts require operator action.

The programmer should be notified if halts occur during the running of his job. You can list the halts in the comments section of the Program Run Sheet.

EXPLANATION OF SUBHALTS

Subhalts appear in the halt lights when log is off and when you respond to the primary halt by pressing the PROG START or ENTER+ key. When the subhalt appears, you key one of its recovery options.

Note: If you key option 4, the primary halt reappears in the halt lights. You press PROG START or ENTER+ to return to the subhalt.

Figure 1 shows primary halt ACD1235 with subhalts B45, CD14, and CD124. If halt ACD1235 appears when log is off, press PROG START or ENTER+. Either B45, CD14, or CD124 appears in the halt lights. If B45 or CD124 appears, select option 3. If CD14 appears, select option 1 or 3.

When log is on, subhalts are not displayed. Either CIA CD123 501 or CIA CD123 502 is logged to specify the reason for the halt.

EXPLANATION OF HALT LIST

The following is a description of the headings in the halt list:

HALT/SUBHALT — Lists the displays that can appear in the halt lights.

LOG — Lists the error codes that can be printed on the log device if log is on. Some primary halts have more than one error code that can be logged. The one logged depends on the program that initiates the halt. You may have to use the logged error code to determine the exact reason for the halt. Note that some programs, such as Conversational Utilities, require the printer as a dedicated device and consequently will log only if the log device is the CRT.

Halt/Subhalt	Log	Options	Reason and Recovery
A CD123 5			REASON- REQUESTED SOURCE PROGRAM NOT FOUND ON DISK SPECIFIED BY THE COMPILE STATEMENT. PROBABLE USER ERROR.
B 45	CIA CD123 501	3	REASON- SOURCE PROGRAM NOT FOUND ON THE FIXED DISK SPECIFIED BY THE COMPILE STATEMENT. RECOVERY- 3-- IMMEDIATE CANCEL.
CD1 4	CIA CD123 502	13	REASON- SOURCE PROGRAM NOT FOUND ON THE REMOVABLE DISK SPECIFIED BY THE COMPILE STATEMENT. RECOVERY- 1--RETRY AFTER MOUNTING THE CORRECT PACK. 3-- IMMEDIATE CANCEL.
CD12 4	CIA CD123 503	3	REASON- A PERMANENT DISK ERROR HAS OCCURRED WHILE WRITING TO THE $SOURCE FILE. RECOVERY- 3-- IMMEDIATE CANCEL.

Figure 1. Example of a Primary Halt with Subhalts.

Option	General Meaning	Results if Selected During OCL Processing	Results if Selected During Object Program Execution	Effect on Files/Libraries
0	Select this option to continue the job.	If log is on, no halts will occur for errors found on OCL statements. Error codes will be logged for each OCL statement error encountered. When the processing of OCL statements for the job is complete and errors have been found, an AC45 halt is displayed and CRMN is logged. This halt indicates that OCL statement errors were found, and that the job cannot be run. Option 0 should be selected for the halt if there are no data cards for this job (the next statement in the data recorder is an OCL statement for the next job).		
1	Select this option to retry an operation or reread a card and continue the job.		During the execution of an object program, the 1 option is invalid if either of the following are true: • A 2 option has already been taken for any other halt that has occurred for this job. • The object program being executed is in end-of-job processing.	
2	Select this option to give control to the user's program to cancel the job.	If in conversational mode (OCL statements are being entered via the keyboard) and option 2 is selected, READY is prompted. If OCL statements are being read via the data recorder and if log is off, a halt will occur for each OCL statement error as it is found. Option 2 should be selected if the remaining OCL statements are to be read and checked for errors with the job not executed. The remaining OCL statements are read until a RUN statement is read. Halt ABCD12345 then appears. Any data statements or OCL statements preceding a /&, LOAD, or CALL statement and following the RUN statement are read but not processed. The system will stop reading cards and be ready to run the next job when: • A /&, LOAD, or CALL statement is read. Any of these statements indicate the beginning of the next job. • There are no more cards to read (the DATA RCRDR light is on). The data recorder should then be readied for the next job.	During execution of an object program, the 2 option should not be taken if either of the following are true: • A 2 option has already been taken for any other halt that has occurred for this job. • The object program being executed is in end-of-job processing. If the 2 option is selected following either of the above two conditions, LR calculations and LR output will not be done, and the tables will not be stored. The files will be closed after the 2 option is selected. The 2 option should also not be taken for any halt that occurs during the execution of the RPG II CLOSE routine.	If you select option 2 for a halt that occurs while a disk file is being created or updated, the contents of the last record in the file may be changed. Therefore, it is advisable that the file be displayed using a COPYFILE OUTPUT-PRINT statement to determine if the last record is correct. If the 2 option is selected for a ledger card device halt, no further ledger card operations are performed for the job. In addition, any last record output for files specified after the ledger card file is not done. If the 2 option is selected for a halt which occurs during a $MAINT run, the library or library entries involved in the function may be destroyed.

Figure 3 (Part 1 of 2). Recovery Options

Halt/Subhalt	Log	Options	Reason and Recovery
A 23 5		3	REASON- SPACE NOT AVAILABLE ON DISK OR DISK IS NOT INITIALIZED. PROBABLE USER ERROR.
	EGA 23 5		SPACE NOT AVAILABLE ON R1 OR F1 DISK. DELETE UNNECESSARY FILES.
	UCA 23 5AF		ACTIVE FILES OR SYSTEM EXISTS ON OUTPUT DISK.
	UCA 23 5BD		PACK NOT INITIALIZED.
	UCA 23 5SP		IF WORK-YES HAS BEEN SPECIFIED FOR A COPYFILE FROM R1 TO R1, THERE IS NOT ENOUGH SPACE ON F1 FOR THE WORK FILE. F1 MUST CONTAIN 20 CONSECUTIVE TRACKS OF STORAGE. DELETE UNNECESSARY FILES. RECOVERY- 3-- IMMEDIATE CANCEL. DELETE UNNECESSARY FILES.

Figure 4. Error Codes with the Same Recovery Options

Halt/Subhalt	Log	Options	Reason and Recovery
D1 345			REASON- PACK SPECIFIED THAT IS NOT INITIALIZED. PROBABLE USER ERROR.
	EL D1 345UN	03	REASON- RPGII LINKAGE EDITOR DETECTED AN ATTEMPT TO CATALOG A MODULE ON A PACK THAT WAS NOT INITIALIZED. RECOVERY- 0-- CATALOG ATTEMPT IS IGNORED. MODULE IS PUNCHED. 3-- IMMEDIATE CANCEL.
	EO D1 345UN	03	REASON- OVERLAY LINKAGE EDITOR DETECTED AN ATTEMPT TO CATALOG A MODULE ON A PACK THAT WAS NOT INITIALIZED. RECOVERY- 0-- CATALOG ATTEMPT IS IGNORED. MODULE IS PUNCHED. 3-- IMMEDIATE CANCEL.
	LM D1 345UN	13	REASON- LIBRARY MAINTENANCE PROGRAM DETECTED AN ATTEMPT TO USE AN UNINITIALIZED PACK. RECOVERY- 1-- EITHER MOUNT AN INITIALIZED PACK OR CHANGE UNIT SPECIFIED ON CONTROL STATEMENT AND RE-ENTER. 3-- IMMEDIATE CANCEL.

Figure 5. Error Codes with Different Recovery Options

Locate a halt in the halt list as follows:

1. Separate the alphabetic and numeric portions of the halt (either portion may be blank).

2. Using the alphabetic portion, find the sequence of letters in the top or bottom row of the matrix.

3. Using the numeric portion, find the sequence of numbers in the left or right column of the matrix.

4. The entry you find in the matrix at the point where the column and row cross is the sheet number where the halt is located.

For example, suppose the halt ABC1 appears in the halt display. Using the partial matrix in Figure 7, you locate the halt in the halt list in the following manner:

1. Locate the alphabetic portion of the halt (ABC) in the top row of the matrix.

2. Locate the numeric portion of the halt (1) in the left column of the matrix.

3. Move to the right in this row until you are aligned with ABC. The halt is located on sheet 37.

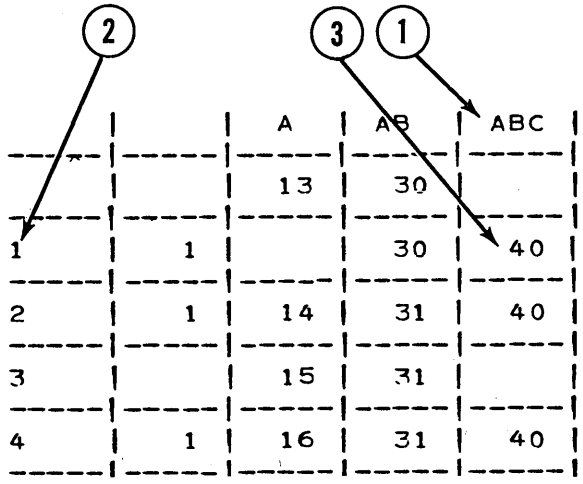


Figure 7. Example of Locating a Halt. The explanation of halt ABC1 is on sheet 37.

CHECKING THE HALT INDICATORS

It is recommended that the halt indicators be tested when the system is turned on. Do this by opening the operator's panel above the keyboard (the panel swings out and down) and pressing the LAMP TEST key. ABCD12345 should be displayed in the halt lights. If the test shows that a light is not working, replace the bulb before continuing.

If, during system operation, a halt occurs which is not in the halt list, check the halt lights with the LAMP TEST key. If the halt lights are working properly, see *Using the Error Log Sheet* in the *IBM System/3 Model 6 Operator's Guide*, GC21-7501.

STAND-ALONE HALTS

Stand-alone halts are halts that have no options (0, 1, 2, or 3) and no logged error codes. These halts do not occur very often. When they do, however, a serious error condition exists, and the job cannot be completed or cancelled. Most stand-alone halts request that core storage be dumped before continuing. End-of-job (ABCD12345) is a stand-alone halt when the system is in Data Recorder mode.

BYPASSED HALTS

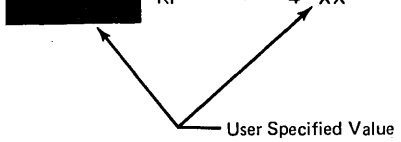
The halts LM D12 NF for the Library Maintenance Delete function and UF BCD 12 4 NF for the File Delete and File and Volume Label Display programs may be bypassed.

To bypass a halt, you must turn on, or leave on, external indicator U8 with a SWITCH statement for the program. The halts will not be bypassed if a SWITCH statement is not supplied for the program; if the external indicator U8 is off; if the log device is off; or if the log device is allocated to the program. It should be noted that a subsequent program may require external indicator U8 to be set off.

When a halt is bypassed, it is logged without any options and the 0 option is assumed for the response.

		A	AB	ABC	ABCD	ABD	AC	ACD	AD	B	BC	BCD	BD	C	CD	D	
		13	30		50	63	88	101				136	151	164	171		
1	1		30	40	50		89	101	113	119	127	136		164		183	1
2	1	14	31	40	51			102	114	120	128	136	152	165	172	184	2
3		15	31		51	63		102			128	137	152		172	184	3
4	1	16	31	40	52			102	114		128		153	165	172		4
5		18	31	41		64		103			129	138	153	165		185	5
12	2	17	32	41	52	65	89	103	115		129		154			185	12
13	2	18	32	42	53	65		103	115			138	154	166	173	185	13
14	7		32	42	53			104	116	120	130	139	155			186	14
15	7		33	42		65	89	104		120	130	140	155			186	15
23		20	33	43	54	71	90	104	116	121			155	166	173	186	23
24	7		33	43	54	77	90	105	116	121	130	140	156				24
25	8	20	34	43	55	77	91	105	117	121		140	156		173		25
34		21	34	43	55		91	106		121		141	156	167	173		34
35		21	34		56			106			131	141	157	167	174	187	35
45	8	21		44	56	77	91	107	117				157		174		45
123	8	22		44		78	92	107		122	131		158	167			123
124		22	34	45		78	92	107		122	131	142	158			187	124
125	9	23	35	45	56	78		107	118	123	132	143	158	168		192	125
134		23	35	45	57	78	93		118					168	178	193	134
135	9	24	36	46	58	81	93	109					159	168	179	193	135
145	10	24	36	47	58		94	109	119	123	133		159		179		145
234	10	27	36	47	59		94	109		123		144	159	169	179	194	234
235	11	27	37	47	59	82	94	110		124			160	169	180	195	235
245		28	38		59	83	98	110			134	145	160			196	245
345	11	28			60	83	98	110			134	145	161			197	345
1234			38	47	61	87	98	111		125	134	146	161	170	180	197	1234
1235	11	28	38	48	62	87	99	111		125	135	147	161	170	181	198	1235
1245	12		39	48		87	99	112		126	135		162	170	181		1245
1345	12	29	39	49		88	100	112		126		148	162	171	182	199	1345
2345	13		39	49	62	88	100	112	119		135	148	162	171		199	2345
12345	13	30	39	49	63	88	100	113		127		148	163		183		12345
		A	AB	ABC	ABCD	ABD	AC	ACD	AD	B	BC	BCD	BD	C	CD	D	

HALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
1		3	REASON- THE LENGTH OF A NUMERIC FIELD SPECIFIED BY A USER PROGRAM IS GREATER THAN 15. RECOVERY- 3-- IMMEDIATE CANCEL.
2		03	REASON- RECORDS WITH DUPLICATE KEYS HAVE BEEN PUT INTO AN INDEXED FILE. EACH DUPLICATE KEY WAS PRINTED ON LOG DEVICE FOLLOWED BY HALT 2345. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE. INDEX WILL CONTAIN DUPLICATE KEYS. THE FILE SHOULD BE RELOADED AFTER ELIMINATING THE DUPLICATE RECORDS. 3-- IMMEDIATE CANCEL. THE FILE CANNOT BE USED AND SHOULD BE RELOADED.
	DD 2		
4			REASON- A FORTRAN STOP OR PAUSE STATEMENT HAS BEEN EXECUTED. THIS STATEMENT SPECIFIES THE SUBHALT THAT WILL APPEAR WHEN THE PROG START OR ENTER+ KEY IS PRESSED.
[redacted]	RF 4 XX		RECOVERY- 0-- CONTINUE. THIS OPTION CANNOT BE SELECTED IF A STOP STATEMENT HAS BEEN EXECUTED. 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL.



HALT/SUBHALT LOG		OPTIONS	REASON AND RECOVERY
1 3 CONTINUED)			3-- IMMEDIATE CANCEL. NOTE- REDUCE THE SIZE OF THE PROGRAM BY SUBDIVIDING IT INTO SUBPROGRAMS OR BY ELIMINATING UNNECESSARY PARTS, OR INCREASE THE PROGRAM PARITION SIZE.
B	RF	1 3 04 23	REASON- FORTRAN ONLY. ONE OF THE FOLLOWING HAS OCCURRED 1. $$STCP OR $$SYSG COULD NOT BE FOUND IN THE OBJECT LIBRARY ON THE SYSTEM PACK. 2. ONE OF THE COMPILER PHASES IS MISSING FROM THE OBJECT LIBRARY ON THE PROGRAM PACK. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL.
CD12 5	RF	1 3 05 23	REASON- FORTRAN ONLY. THE COMPILER HAS RUN OUT OF SPACE ON THE $WORK FILE WHILE WRITING THE OBJECT PROGRAM. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL. NOTE- INCREASE THE SIZE OF THE $WORK FILE.
ABC 1 45	RF	1 3 10 23	REASON- FORTRAN ONLY. THERE IS NO MATCH FOR A UNIT NUMBER IN THE UNITS TABLE, OR THERE ARE NO ENTRIES IN THE TABLE. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL.
ABCD 45	RF	1 3 11 23	REASON- FORTRAN ONLY. AN ATTEMPT HAS BEEN MADE TO EXECUTE A STATEMENT REQUIRING OUTPUT, AND THE PRINTER IS NOT AVAILABLE. THE //NOPRINTER STATEMENT HAS BEEN SPECIFIED. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL.
ABC 1 4	RF	1 3 12 23	REASON- FORTRAN ONLY. A FORTRAN SUBPROGRAM REQUIRES I/O OPERATIONS, HOWEVER IT HAS NOT BEEN CALLED BY A FORTRAN MAIN PROGRAM. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL.
ABC 12 4	RF	1 3 13 23	REASON- FORTRAN ONLY. THE PROGRAM NAMED IN AN INVOKE STATEMENT COULD NOT BE LOADED BECAUSE IT COULD NOT BE FOUND IN THE SYSTEM LIBRARY.

(HALT CONTINUED ON NEXT PAGE)

1 3
(CONTINUED)

1. AN I/O ERROR HAS OCCURRED WHILE PROCESSING A READ REQUEST AND NO ERROR HANDLING ROUTINE IS SPECIFIED IN THE READ STATEMENT.
2. AN I/O ERROR HAS OCCURRED DURING WRITE OR FILE POSITIONING.
3. A WRONG-LENGTH-RECORD ERROR HAS OCCURRED DURING A READ.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

C 12 4 RF 1 3 26 23

REASON- END-OF-FILE HAS OCCURRED AND THE FORTRAN I/O STATEMENT DOES NOT SPECIFY A ROUTINE TO HANDLE THE CONDITION.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

C 12 5 RF 1 3 28 23

REASON- FORTRAN ONLY. ONE OF THE FOLLOWING HAS OCCURRED:

1. UNFORMATTED I/O IS REQUESTED FOR A FIXED LENGTH RECORD FILE.
2. FORMATTED I/O IS REQUESTED FOR A VARIABLE LENGTH RECORD FILE.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

123 5 RF 1 3 31 23

REASON- FORTRAN ONLY. ONE OF THE FOLLOWING INVALID OPERATIONS HAS BEEN SPECIFIED FOR THE 5496:

1. AN ATTEMPT HAS BEEN MADE TO WRITE AFTER READING.
2. AN ATTEMPT HAS BEEN MADE TO READ AFTER WRITING.
3. AN ATTEMPT HAS BEEN MADE TO USE THE DEVICE WITHOUT DEFINING IT WITH A DEVICE OPTIONS STATEMENT AT COMPILE TIME.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

23 RF 1 3 32 23

REASON- FORTRAN ONLY. AN ATTEMPT HAS BEEN MADE TO USE FORTRAN I/O AFTER USING A COMMERCIAL SUBROUTINE.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

1 3 , RF 1 3 33 23

REASON- FORTRAN ONLY. THE OPERATION SPECIFIED FOR THE PRINTER IS NOT A WRITE OPERATION.

(HALT CONTINUED ON NEXT PAGE)

HALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
1 4		3	REASON- THE SYSTEM CANNOT FIND THE REQUESTED PROGRAM ON DISK.
VF	1 4		RECOVERY- 3-- IMMEDIATE CANCEL.
			NOTE- IF LOG IS ON, THE PROGRAM NAME IS LOGGED IN THE FOLLOWING FORMAT- O OR R XXXXXX P OR S, WHERE O IS OBJECT, R IS RELOCATABLE, XXXXXX IS THE PROGRAM NAME, P IS PROGRAM PACK, AND S IS SYSTEM PACK.
			NOTE- IT IS RECOMMENDED THAT A CORE STORAGE DUMP BE OBTAINED, RATHER THAN SELECTING OPTION 3. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL.
			CONTACT IBM FOR PROGRAMMING SUPPORT.
1 5		0	REASON- KEY NOT ALLOWED.
			PROBABLE USER ERROR.
C	1 5		RECOVERY- 0-- RETRY WHEN KEYBOARD ENABLED.
2 4		13	REASON- DEVICE DESIGNATED AS SYSTEM INPUT DEVICE HAS AN ERROR CONDITION.
CS	2 4		RECOVERY- 1-- RETRY. CORRECT ERROR CONDITIONS AND READY DEVICE.
			3-- IMMEDIATE CANCEL.

12 5 23 REASON- DATE PARAMETER MISSING OR INVALID.

PROBABLE USER ERROR.

CR 12 501 DATE SPECIFIED INCORRECTLY.

CR 12 502 DATE PARAMETER MISSING.

RECOVERY- 2-- REMAINING OCL WILL BE READ AND SCANNED, BUT JOB WILL NOT BE EXECUTED.

3-- IMMEDIATE CANCEL.

---

1 3 5 REASON- A TERMINAL ERROR HAS OCCURRED FOR ONE OF THE FOLLOWING REASONS-

1. PERMANENT DISK ERROR WHEN THE SYSTEM WAS TRYING TO READ. THIS COULD MEAN THAT THERE IS A BAD TRACK IN ONE OF THE LIBRARIES OR DIRECTORIES.

2. AN ATTEMPT IS BEING MADE TO LOAD A PROGRAM OUTSIDE OF THE ALLOCATED CORE FOR THE PROGRAM.

3. THE SYSTEM HAS ENCOUNTERED AN UNEXPECTED CONDITION. IF THE JOB IS ALLOWED TO CONTINUE, UNEXPECTED RESULTS COULD OCCUR.

NOTE- IF THIS HALT OCCURS AFTER SELECTING AN OPTION OF THE ABCD145 HALT, IT IS CALLED A SECONDARY HALT. IT INDICATES THAT A DISK PACK SHOULD BE MOUNTED ON R1.

RECOVERY----- PERFORM ONE OF THE FOLLOWING--

1. WHEN THIS HALT OCCURS, IT IS RECOMMENDED THAT THE FOLLOWING BE PERFORMED-

RECORD THE CONTENTS OF THE ARR AS FOLLOWS-

A. PRESS SYSTEM STOP.
B. SET LSR DISPLAY SELECTOR ON CE PANEL TO ARR.
C. SET REGISTER DISPLAY UNIT TO LSR HI LSR LO.
D. RECORD CONTENTS.
E. SET LSR DISPLAY SELECTOR ON CE PANEL TO NORMAL.

AFTER RECORDING THE CONTENTS OF THE ARR, TAKE A CORE STORAGE DUMP.

(HALT CONTINUED ON NEXT PAGE)

ALT/SUBHALT	LOG		OPTIONS	REASON AND RECOVERY
23 5			3	REASON- SYSTEM ERROR DURING FILE TERMINATION. THE FILE LABEL CANNOT BE FOUND IN THE SYSTEM WORK AREA.
	DD	23 5		RECOVERY- 3-- IMMEDIATE CANCEL. CONTACT IBM FOR PROGRAMMING SUPPORT.
345			23	REASON- PERMANENT DISK I/O ERROR OCCURRED WHILE SORTING INDEX AFTER OUTPUT TO AN INDEXED FILE.
	DD	345		RECOVERY- 2-- CONTROLLED CANCEL. DATA IN THE FILE IS CORRECT AND MAY BE PROCESSED SEQUENTIALLY.
				3-- IMMEDIATE CANCEL.
123 5			23	REASON- INVALID HIKEY PARAMETER IN FILE STATEMENT.
				PROBABLE USER ERROR.
	CR	123 5IP		A NON-ZONED NUMERIC CHARACTER WAS ENCOUNTERED IN A HIKEY-P PARAMETER.
	CR	123 5KL		PARAMETER NOT SAME LENGTH AS FIRST PARAMETER IN SUBLIST.
	CR	123 5LC		HIKEY LENGTH GREATER THAN 29 CHARACTERS.
	CR	123 5PL		THE HIKEY-P LENGTH IS GREATER THAN 15 ZONED NUMERIC CHARACTERS.
	CR	123 5SQ		HIKEY PARAMETER NOT IN ASCENDING SEQUENCE.
				RECOVERY- 2-- CONTROLLED CANCEL.
				3-- IMMEDIATE CANCEL.

2345 03 REASON- DUPLICATE KEYS ENCOUNTERED AFTER OUTPUT TO AN INDEXED FILE. THE DUPLICATE KEY IS PRINTED ON LOG DEVICE.

PROBABLE USER ERROR.

DD 2345 RECOVERY- 0-- CONTINUE. HALT WILL RECUR FOR ANY SUBSEQUENT DUPLICATE KEYS, THEN HALT '2' WILL OCCUR.

3-- IMMEDIATE CANCEL. THE FILE CANNOT BE USED AND SHOULD BE RELOADED.

12345 0 REASON- INVALID PARAMETER ON READER OR PUNCH STATEMENT.

PROBABLE USER ERROR.

CR 12345ID INVALID DEVICE SPECIFIED.

CR 12345ND NO PARAMETER SPECIFIED.

RECOVERY- 0-- CONTINUE. SYSTEM INPUT OR OUTPUT DEVICE IS NOT CHANGED.

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012 REASON- ALTERNATE TRACK ASSIGNMENT ERROR.

UAA IU INVALID REQUEST. TRYING TO UNASSIGN A TRACK THAT IS NOT ASSIGNED AN ALTERNATE.

UAA NA NO MORE ALTERNATE TRACK ASSIGNMENTS CAN BE MADE. ALL SIX ALTERNATES ARE ASSIGNED. CANCEL PRIOR ASSIGNMENT IF POSSIBLE TO FREE ALTERNATE FOR USE.

NOTE- A LIST OF TRACK NUMBERS MAY BE PRINTED OUT BEFORE THIS HALT. THESE ARE THE TRACKS THAT-

1. WERE NOT ASSIGNED AND WERE IN THE ASSIGN PARAMETER OR,
2. WERE IN THE SUSPECTED DEFECTIVE TRACK LIST AS RECORDED BY ERROR LOGGING.

IF THE TRACK NUMBER LISTED IS ALREADY ASSIGNED, THIS IS AN INDICATION THAT THE ALTERNATE TRACK ASSIGNED HAS A PERMANENT ERROR. IN THIS CASE, YOU MAY ATTEMPT TO CANCEL THE PRIOR ASSIGNMENT OF THE PRIMARY TRACK AND CONDITIONALLY ASSIGN THIS PRIMARY TRACK TO ANOTHER ALTERNATE. IF THE HALT OCCURS AGAIN, IT IS PROBABLE THAT NO MORE ALTERNATE TRACK ASSIGNMENTS CAN BE MADE.

UAA PA ATTEMPTING TO ASSIGN AN ALTERNATE TRACK THAT HAS BEEN PREVIOUSLY ASSIGNED.

NOTE- IF YOU WERE ATTEMPTING TO ASSIGN THIS TRACK TO A DIFFERENT ALTERNATE USING

(HALT CONTINUED ON NEXT PAGE)

2
ONTINUED)

IF THE STATEMENT IS A CONTINUATION, ALL STATEMENTS BACK TO AND INCLUDING THE LAST // VOL STATEMENT MUST BE RE-ENTERED.

CARD INPUT- CORRECT CARD IN ERROR AND PLACE AHEAD OF CARDS IN HOPPER.

NOTE-FOR UIA2V3, DO NOT PERFORM THE ACTION INDICATED IN RECOVERY 1. DO RECOVERY 1 DIRECTLY. THE LAST VOL STATEMENT IS IGNORED.

NOTE-FOR UIA2VS, DO NOT PERFORM THE ACTION INDICATED IN RECOVERY 1. DO RECOVERY 1 DIRECTLY. THE VOL STATEMENT IS IGNORED AND THE NEXT STATEMENT IS READ.

3-- IMMEDIATE CANCEL. IF THE ERROR STATEMENT IS IN A PROCEDURE ON DISK, THE PROCEDURE MUST BE REBUILT.

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3 3 REASCN- END OF FILE.

PROBABLE USER ERROR.

LAA	3	INVALID END OF FILE. // LOAD *, // RUN FOLLOWED BY A /* OR /&.
LMA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT.
UAA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT.
UCA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT.
UFA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT. WARNING- IF RUNNING FILE DELETE, ANY FILES THAT HAVE BEEN SPECIFIED ON PREVIOUS CONTROL STATEMENTS FOR THIS JOB WILL NOT BE REMOVED OR SCRATCHED FROM VTOC. IF DATA-YES WAS USED, THE DATA FOR PREVIOUS FILES HAS ALREADY BEEN DELETED.
UIA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT.
URA	3	END OF FILE STATEMENT FOUND BEFORE // END STATEMENT.

RECOVERY- 3-- IMMEDIATE CANCEL.

5			13	REASON- TRYING TO REBUILD TRACK WITH NO ALTERNATE TRACK ASSIGNED. PRIMARY TRACK NUMBER WAS PRINTED BY ALTERNATE TRACK ASSIGMENT PROGRAM. PROBABLE USER ERROR.
	URA	5AA		RECOVERY- 1-- CORRECT CONTROL STATEMENT AND RE-ENTER CONTROL STATEMENT AND DATA STATEMENT. 3-- IMMEDIATE CANCEL.

12			13	REASON- ERROR IN COPYFILE STATEMENT. PROBABLE USER ERROR.
	UCA	12	CE	TOO MANY COPYFILE STATEMENTS. ONLY ONE IS ALLOWED.
	UCA	12	CX	CONTINUATION IS INDICATED ON THE CONTROL STATEMENT BUT A CONTINUATION IS NOT VALID.
	UCA	12	D1	PARAMETER FOR DELETE OR OMIT KEYWORD MISSING.
	UCA	12	D2	PARAMETER FOR DELETE OR OMIT KEYWORD INVALID.
	UCA	12	DK	DUPLICATE KEYWORDS.
	UCA	12	IC	COMBINATION OF FUNCTIONS REQUESTED IS INVALID.
	UCA	12	IK	INVALID KEYWORD.
	UCA	12	NP	NO KEYWORDS OR PARAMETERS IN STATEMENT.
	UCA	12	01	OUTPUT KEYWORD MISSING, OR PARAMETER MISSING FROM OUTPUT KEYWORD.
	UCA	12	02	PARAMETER FOR OUTPUT KEYWORD INVALID. MUST BE DISK, BOTH, OR PRINT.
	UCA	12	R1	PARAMETER FOR REORG KEYWORD MISSING.
	UCA	12	R2	PARAMETER FOR REORG KEYWORD INVALID. MUST BE YES OR NO.
	UCA	12	RS	ATTEMPTING AN INTERMEDIATE COPY AND R1 IS THE SYSTEM PACK OR PROGRAM PACK.
	UCA	12	SE	FORMAT OR PUNCTUATION ERROR.
	UCA	12	W1	PARAMETER FOR WORK KEYWORD IS MISSING.
	UCA	12	W2	PARAMETER FOR WORK KEYWORD INVALID. MUST BE YES OR NO.
				RECOVERY- 1-- CORRECT STATEMENT AND RE-ENTER. CARD INPUT- CORRECT CARD IN ERROR AND

(HALT CONTINUED ON NEXT PAGE

1 5
ONTINUED)

1. FILE TYPE NOT INDEX SEQUENTIAL FOR SELECT KEY OR SELECT PKY OPERATION
2. FILE LABEL IN VOLUME TABLE OF CONTENTS INDICATES AN INVALID FILE TYPE.
3. THE INPUT FILE DOES NOT EXIST.
4. THE FILE LABEL MAY NOT EXIST.

UCA 1 5IR — INVALID SPECIFICATION-

1. REORG-NO WAS GIVEN WITH OUTPUT-BOTH FOR AN INDEXED FILE, OR
2. NO REORG PARAMETER WAS SPECIFIED WITH OUTPUT-BOTH FOR AN INDEXED FILE, OR
3. REORG-YES WAS NOT GIVEN WHEN TRYING TO COPY A WHOLE MULTIVOLUME INDEXED FILE.

UCA 1 5IU — INVALID UNIT, COPYFILE. IF A WORK PACK F1 IS REQUESTED, UNIT MUST BE R1.

UCA 1 5IW — R1 WAS SPECIFIED AS THE UNIT ON THE COPYIN AND FILE STATEMENTS BUT THE PACK NAMES ARE DIFFERE WORK-YES WAS NOT SPECIFIED.

UCA 1 5KD — THE LOCATION SPECIFIED ON THE // KEY STATEMENT IS GREATER THAN THE RECORD LENGTH.

UCA 1 5ND — ATTEMPTING TO COPY ONE VOLUME OF A MULTIVOLUME FILE WITH NO DISK OUTPUT REQUESTED.

UCA 1 5KR — ATTEMPTING TO SUPPLY A SELECT KEY OR PKY STATEMENT WITH NO FILE CR PRINT OUTPUT REQUESTED.

UCA 1 5KL — THE SELECT KEY LENGTH IS GREATER THAN THE FILE K OR THE SELECT PKY LENGTH IS NOT EQUAL TO THE FIL

UCA 1 5NK — ATTEMPTING TO SUPPLY A // KEY STATEMENT WITH NO DISK FILE OUTPUT REQUESTED.

UCA 1 5OF — NC COPYO FILE STATMENT WITH DISK OUPUT REQUESTED

UCA 1 5OK — ATTEMPTING TO SUPPLY A SELECT RECORD STATEMENT WHEN COPYING ONE VOLUME OF A MULTIVOLUME FILE.

UCA 1 5RS — ATTEMPTING TO SUPPLY A SELECT RECORD RATHER THAN SELECT KEY FOR AN INDEX SEQUENTIAL FILE WHILE ATTEMPTING TO REORGANIZE AN INDEX FILE WITH OUTPUT-BOTH.

UCA 1 5SR — ATTEMPTING TO SUPPLY A SELECT RECORD STATEMENT WITH NO FILE OR PRINT OUTPUT REQUESTED.

UCA 1 5SX — COPY/DUMP PROGRAM ERROR.

UCA 1 5WP — THE FILE TO BE COPIED IS NOT ON THE PACK, OR THE WRONG PACK IS MOUNTED.

RECOVERY- 3-- IMMEDIATE CANCEL.

NOTE- FOR MESSAGE LOG UCA15SX CONTACT IBM FOR PROGRAMMING SUPPORT.

34 013 REASON- FILE DELETE PROGRAM. WRONG PACK MOUNTED. IF LOG IS ON, SERIAL NUMBER OF NEEDED PACK IS LOGGED BEFORE HALT CODE.

UFA 34 WP RECOVERY- 0-- MOUNT CORRECT PACK AND CONTINUE.

1-- RETRY. CORRECT OCL AND REREAD.

3-- IMMEDIATE CANCEL.

WARNING- ANY FILES THAT HAVE BEEN SPECIFIED IN PREVIOUS CONTROL STATEMENTS FOR THIS JOB WILL NOT BE REMOVED OR SCRATCHED FROM VTOC. IF DATA-YES WAS USED, THE DATA FOR PREVIOUS FILES HAS ALREADY BEEN REMOVED.

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3 5 03 REASON- THIS PACK IS UNUSABLE. IF LOG IS ON, THE UNIT NUMBER IS LOGGED BEFORE THE HALT CODE.

PROBABLE USER ERROR.

UFA 3 5NI THE PACK IS NOT INITIALIZED.

UFA 3 5NU THIS PACK WAS USED AS THE TO PACK ON A COPYPACK JOB THAT REQUIRED EARLY TERMINATION. THIS PACK CAN ONLY BE USED AS A TO PACK FOR ANOTHER COPYPACK JOB OR MUST BE REINITIALIZED.

RECOVERY- 0-- CONTINUE. IF ANY DIFFERENT UNITS ARE LISTED, THOSE FILES WILL BE DISPLAYED.

3-- IMMEDIATE CANCEL.

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45 0123 REASON- THIS HALT OCCURS WHEN TRYING TO CANCEL THE PRIOR ASSIGNMENT OF AN ALTERNATE TRACK. IT INDICATES THAT THE PRIMARY TRACK IS STILL DEFECTIVE.

UAA 45EU RECOVERY- 0-- IGNORE THE DEFECTIVE PRIMARY TRACK AND FORCE THE UNASSIGN.

1-- RETRY THE OPERATION.

2-- BYPASS THIS REQUEST AND GO TO NEXT REQUEST ON THIS ALT STATEMENT OR NEXT ALT STATEMENT.

3-- IMMEDIATE CANCEL.

ALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
12 5		13	REASON- DISK I/O ERROR.
UAA	12 5DC		DISK ERROR DURING ALTERNATE TRACK ASSIGNMENT.
UCA	12 5FR		ERROR READING TEMPORARY SPACE ON F1 DURING AN INTERMEDIATE, R1 TO R1, COPY.
UCA	12 5FW		ERRCR WRITING TEMPORARY SPACE ON F1 DURING AN INTERMEDIATE, R1 TO R1, COPY.
UCA	12 5RW		ERROR ON R1 DURING THE OUTPUT OF A COPY FUNCTION.
			RECOVERY- 1-- RETRY.
			3-- IMMEDIATE CANCEL.
1 34		3	REASON- THE HALT HAS OCCURRED BECAUSE KEYS ARE OUT OF SEQUENCE, AN INVALID HIGH KEY IS SPECIFIED, OR THERE IS NOT ENOUGH SPACE TC COPY THE FILE OR A PERMANENT I/O ERROR HAS OCCURRED.
UCA	1 34 DE		A PERMANENT DISK I/O ERROR OCCURRED DURING A $KCOPY RUN.
UCA	1 34 DP		THE INPUT FILE CONTAINS DUPLICATE KEYS, OR A RECORD IS OUT OF SEQUENCE. PROBABLE USER ERROR.
UCA	1 34 HK		HIGH KEY SPECIFIED IN THE OUTPUT FILE STATEMENT DOES NOT EQUAL THE HIGH KEY OF THE INPUT VOLUME. PROBABLE USER ERROR.
UCA	1 34 XE		THE FILE BEING COPIED IS LARGER THAN THE AREA ALLOCATED FOR THE COPY. THIS HALT MAY ALSO OCCUR IF AN ATTEMPT IS MADE TO COPY A SINGLE VOLUME FILE TO A MULTIVOLUME FILE. IF THE FILE BEING COPIED IS TOO BIG, INCREASE THE FILE SIZE IN THE COPYO STATEMENT AND RERUN THE JOB. PROBABLE USER ERROR.
			RECOVERY- 3-- IMMEDIATE CANCEL.

ALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
A 1 45 CONTINUED)			PARAMETER MUST BE R1, R2, F1, OR F2.
UCA	1 45IC		ERROR IN COPYFILE STATEMENT. THE COMBINATION OF FUNCTIONS REQUESTED IS INVALID.
UCA	1 45IE		ERROR IN COPYFILE STATEMENT. THE INPUT PARAMETER IS MISSING OR INVALID.
UCA	1 45IK		INVALID KEYWORD SPECIFIED IN CONTROL STATEMENT.
UCA	1 45IL		ERROR IN COPYFILE STATEMENT. THE LENGTH KEYWORD PARAMETER IS MISSING OR INVALID.
UCA	1 45IR		ERROR IN SELECT STATEMENT. THE STATEMENT WAS NOT SELECT RECORD, SELECT KEY, OR SELECT PKY.
UCA	1 45LC		ERROR IN KEY STATEMENT. THE LOCATION KEYWORD PARAMETER IS MISSING OR INVALID. LOCATION MUST NOT BE GREATER THAN 65,535.
UCA	1 45LN		ERROR IN KEYSTATEMENT. THE LENGTH KEYWORD PARAMETER IS MISSING OR INVALID. LENGTH MUST NO BE GREATER THAN 29.
UCA	1 45NP		NO KEYWORDS OR PARAMETERS SPECIFIED IN CONTROL STATEMENT.
UCA	1 45NV		ERROR IN COPYFILE OR SELECT STATEMENT. IF $COPY IS BEING RUN, POSSIBLE ERRORS ARE: THE SELECT STATEMENT IS NOT VALID BECAUSE THE OUTPUT KEYWORD PARAMETER ON THE COPYFILE STATEMENT IS NOT BOTH OR PRINT. THE SELECT STATEMENT IS NOT VALID BECAUSE A COPYFILE STATEMENT WAS NOT FOUND. IF $KCOPY IS BEING RUN, POSSIBLE ERRORS ARE: THE SELECT STATEMENT IS NOT VALID BECAUSE NE SELECT FILE-YES NOR PRINTER OUTPUT WAS SPECI REORG-YES SPECIFIED BUT NO FILE OUTPUT. SELECT FILE-YES BUT NO FILE OUTPUT.
UCA	1 45OT		ERROR IN COPYFILE STATEMENT. OUTPUT KEYWORD OR OUTPUT KEYWORD PARAMETER IS MISSING.
UCA	1 45R1		ERROR IN COPYPACK STATEMENT. COPYPACK AND FROM KEYWORD PARAMETER WAS THE SAME AS THE TO KEYWORD PARAMETER, AND WAS NOT R1.
UCA	1 45RE		ERROR IN COPYFILE STATEMENT. PARAMETER FOR REORG KEYWORD IS MISSING OR INVALID. MUST BE YES OR NO.
UCA	1 45SE		FORMAT OR PUNCTUATION ERROR IN A DISK COPY/DUMP OR COPY/DUMP CONTROL STATEMENT.

(HALT CONTINUED ON NEXT PAGE)

234 3 REASON-FUNCTIONS REQUESTED ON COPYFILE STATEMENT REQUIRE MORE CORE STORAGE THAN IS AVAILABLE.

PROBABLE USER ERROR.

UCA 234 CS RECOVERY- 3-- IMMEDIATE CANCEL. TO REDUCE STORAGE REQUIRED, CONSIDER THE FOLLOWING-

A. IF YOU HAVE OUTPUT-BOTH, CHANGE IT TO OUTPUT DISK.
B. IF YOU HAVE REORG-YES, CHANGE IT TO REORG-NO.
C. IF YOU HAVE DELETE, CHANGE IT TO OMIT.

UCA 234 NF REASON- THE SYSTEM CANNOT FIND THE REQUESTED PROGRAM ON DISK.

NOTE- THE PROGRAM NAME IS LOGGED IN THE FOLLOWING FORMAT: R XXXXXX. R IS RELOCATABLE, XXXXXX IS THE PROGRAM NAME.

RECOVERY- 3-- IMMEDIATE CANCEL.

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23 5 3 REASON- SPACE NOT AVAILABLE ON DISK OR DISK IS NOT INITIALIZED.

PROBABLE USER ERROR.

EGA 23 5 SPACE NOT AVAILABLE ON R1 OR F1 DISK. DELETE UNNECESSARY FILES.

UCA 23 5AF ACTIVE FILES OR SYSTEM EXISTS ON OUTPUT DISK.

UCA 23 5BD PACK NOT INITIALIZED.

UCA 23 5SP IF WORK-YES HAS BEEN SPECIFIED FOR A COPYFILE FROM R1 TO R1, THERE IS NOT ENOUGH SPACE ON F1 FOR THE WORK FILE. F1 MUST CONTAIN 20 CONSECUTIVE TRACKS OF STORAGE. DELETE UNNECESSARY FILES.

RECOVERY- 3-- IMMEDIATE CANCEL. DELETE UNNECESSARY FILES.

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1 345 13 REASON- ERROR IN COPYPACK STATEMENT.

PROBABLE USER ERROR.

UCA 1 345CE A SECOND COPYPACK STATEMENT HAS BEEN READ.

UCA 1 345CX CONTINUATION IS INDICATED ON THE CONTROL STATEMENT BUT THE CONTINUATION IS NOT VALID.

UCA 1 345DK KEYWORD FROM OR TO APPREARED MORE THAN ONCE IN STATEMENT.

UCA 1 345F1 FROM KEYWORD, OR FROM KEYWORD PARAMETER MISSING.

UCA 1 345F2 FROM KEYWORD PARAMETER IS NOT R1, R2, F1, OR F2.

UCA 1 345IK KEYWORD FOUND THAT WAS NOT FROM OR TO.

UCA 1 345NP NO KEYWORDS OR PARAMETERS FOUND.

UCA 1 345R1 FROM KEYWORD PARAMETER WAS THE SAME AS THE TO KEYWORD PARAMETER, AND WAS NOT R1.

UCA 1 345SE FORMAT OR PUNCTUATION ERROR.

UCA 1 345T1 TO KEYWORD, OR TO KEYWORD PARAMETER MISSING.

UCA 1 345T2 TO KEYWORD PARAMETER IS NOT R1, R2, F1, OR F2.

UCA 1 345TS UNIT SPECIFIED IN TC PARAMETER OF COPYPACK STATEMENT IS THE SYSTEM PACK, OR THE PACK FROM WHICH THE DISK COPY/DUMP PROGRAM WAS LOADED, OR AN INTERMEDIATE COPY FROM R1 TO R1 IS BEING ATTEMPTED AND THE SYSTEM WAS LOADED FROM R1.

UCA 1 345US SYSTEM DOES NOT HAVE REQUESTED DISK UNIT ONLINE.

RECOVERY- 1-- RETRY. CORRECT AND RE-ENTER.
FOR UCA1345CE, ENTER AN END STATEMENT.
THE SECOND COPYPACK STATEMENT IS IGNORED.

3-- IMMEDIATE CANCEL.

HALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
2		023	REASON- RPG II INDICATOR H4 IS ON. RECOVERY- 0-- CONTINUE TO HALT ACD1245. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.
3		3	REASON- AN ATTEMPT IS BEING MADE TO COMPILE A SOURCE PROGRAM AND A // FILE STATEMENT WITH NAME $SOURCE HAS BEEN READ. THE SPACE SPECIFIED IN THE FILE STATEMENT IS TOO SMALL TO CONTAIN THE SOURCE PROGRAM. PROBABLE USER ERROR. RECOVERY- 3-- IMMEDIATE CANCEL.
	CIAB 3		
4		023	REASON- RPG II INDICATOR H3 IS ON. RECOVERY- 0-- CONTINUE TO HALT ACD1245. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.
5		023	REASON- RPG II INDICATOR H5 IS ON. RECOVERY- 0-- CONTINUE TO HALT ACD1245. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.

1 5 03 REASON- A FILE HAS BEEN REFERENCED AS AN OUTPUT OR ADD FILE AND THE FILE IS ALREADY ALLOCATED.

IF YOU ARE USING COPYFILE WITH WORK-YES, THE FILE NAMED COPYO HAS THE SAME LABEL, LOCATION, AND PACK NAME AS THE FILE NAMED COPYIN. ONE OF THE THREE PARAMETERS MUST BE DIFFERENT.

PROBABLE USER ERROR.

DDAB 1 5 RECOVERY- 0-- CONTINUE. THE SPECIFICATIONS FOR ANY SUBSEQUENT FILES USED BY THE SAME JOB WILL BE CHECKED FOR ERRORS, THEN HALT AB135 WILL OCCUR.

3-- IMMEDIATE CANCEL.

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23 03 REASON- NO FILE STATEMENT FOR REFERENCED FILE.

PROBABLE USER ERROR.

DDAB 23 RECOVERY- 0-- CONTINUE. THE SPECIFICATIONS FOR ANY SUBSEQUENT FILES USED BY THE SAME JOB WILL BE CHECKED FOR ERRORS, THEN HALT AB135 WILL OCCUR.

3-- IMMEDIATE CANCEL.

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2 4 023 REASON- RPG II INDICATOR H7 IS ON.

RECOVERY- 0-- CONTINUE TO HALT ACD1245.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

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12 5 — 3

REASON- ATTEMPTING TO REFERENCE A FILE THAT HAS AN INCORRECT DEVICE SPECIFICATION. ONE OF THE FOLLOWING MAY HAVE OCCURRED-

1. SYSTEM PROGRAM ERROR.
2. PROGRAMMING ERROR IN AN ASSEMBLER PROGRAM.

NOTE- IF THE CAUSE OF THE HALT CANNOT BE DETERMINED, OBTAIN A CORE STORAGE DUMP AND CONTACT IBM FOR PROGRAMMING SUPPORT. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL.

PROBABLE USER ERROR.

DOAB 12 5

RECOVERY- 3-- IMMEDIATE CANCEL.

---

1 34 — 3

REASON- AN ATTEMPT IS BEING MADE TO USE A DEVICE THAT HAS NOT BEEN ALLOCATED FOR THE CURRENT PROGRAM. ONE OF THE FOLLOWING MAY HAVE OCCURRED-

1. SYSTEM PROGRAM ERROR.
2. PROGRAMMING ERROR IN AN ASSEMBLER PROGRAM.

NOTE- IF THE CAUSE OF THE HALT CANNOT BE DETERMINED, OBTAIN A CORE STORAGE DUMP AND CONTACT IBM FOR PROGRAMMING SUPPORT. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL.

DDAB 1 34

RECOVERY- 3-- IMMEDIATE CANCEL.

23 5 | 3 | REASON- A PERMANENT DISK I/O ERROR OCCURRED DURING ONE OF THE FOLLOWING-

1. FORMATTING INDEX EXTENTS.

2. FORMATTING DATA FILE EXTENTS.

3. INITIAL LOADING OF INPUT BUFFERS.

DDAB 23 5 | RECOVERY- 3-- IMMEDIATE CANCEL.

NOTE- IF THE HALT OCCURRED FOR REASON 1, RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM BEFORE USING THE FILE. IF NO ALTERNATE TRACK IS ASSIGNED, CONTACT IBM FOR HARDWARE SUPPORT.

IF THE HALT OCCURRED FOR REASON 2 AND A NEW DIRECT OUTPUT FILE IS BEING OPENED, RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM BEFORE USING THE FILE. IF NO ALTERNATE TRACK IS ASSIGNED, CONTACT IBM FOR HARDWARE SUPPORT.

IF THE HALT OCCURRED FOR REASON 2 AND $DELET IS BEING RUN WITH DATA-YES SPECIFIED, THE FILE HAS NOT BEEN COMPLETELY DELETED. BEFORE USING THIS DATA FILE, THE USER SHOULD RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM AND THEN RUN $DELET WITH DATA-YES TO DELETE THE FILE FROM THE DISK AND VTOC. IF NO ALTERNATE TRACK IS ASSIGNED, CONTACT IBM FOR HARDWARE SUPPORT.

IF THE HALT OCCURRED FOR REASON 3, RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM. IF AN ALTERNATE TRACK IS NOT ASSIGNED, CHECK THE FILE INDEX. IF THE FILE INDEX IS DESTROYED, CONTACT IBM FOR PROGRAMMING SUPPORT. IF THE FILE INDEX IS NOT DESTROYED, CONTACT IBM FOR HARDWARE SUPPORT.

12 45 3

REASON- A FILE HAS BEEN SPECIFIED BY THE USING PROGRAM AS A DIRECT MULTIVOLUME FILE. HOWEVER, THE FILE STATEMENT INDICATES AN OFFLINE FILE.

PROBABLE USER ERROR.

DDAB 12 45

RECOVERY- 3-- IMMEDIATE CANCEL. DIRECT MULTIVOLUME FILES MUST BE ONLINE.

---

1 345 03

REASON- A FILE HAS BEEN REFERENCED FOR CONSECUTIVE ADD OR UPDATE AND THE FILE IS AN INDEXED FILE.

PROBABLE USER ERROR.

DDAB 1 345

RECOVERY- 0-- CONTINUE. THE SPECIFICATIONS FOR ANY SUBSEQUENT FILES USED BY THE SAME JOB WILL BE CHECKED FOR ERRORS, THEN HALT AB135 WILL OCCUR.

3-- IMMEDIATE CANCEL.

2345 03

REASON- THE OCL INDICATES THAT A MULTIVOLUME FILE IS TO BE BUILT, HOWEVER, SINGLE VOLUME DATA MANAGEMENT WILL BE USED.

DDAB 2345

RECOVERY- 0-- CONTINUE. THE FILE IS BUILT AS A SINGLE VOLUME FILE.

3-- IMMEDIATE CANCEL.

12345

REASON- ATTEMPTING TO REFERENCE A FILE IN TWO LEVELS, ONE OR BOTH LEVELS USING RETAIN-S.

03

RECOVERY-0-- CONTINUE. THE SPECIFICATIONS FOR ANY SUBSEQUENT FILES USED BY THE SAME JOB WILL EE CHECKED FOR ERROR; THEN HALT AB135 WILL OCCUR.

3-- IMMEDIATE CANCEL.

:	5		23	REASON- READER STATEMENT FOUND BETWEEN LOAD OR CALL STATEMENT, AND RUN STATEMENT. PROBABLE USER ERROR. RECOVERY- 2-- REMAINING OCL WILL BE READ AND SCANNED, BUT JOB WILL NOT BE EXECUTED. 3-- IMMEDIATE CANCEL.
	CRABC	5		

:	12	03	REASON- THIS HALT OCCURS WHEN COMPILING AN RPG II JOB, AND CAN OCCUR TWICE DURING THE SAME JOB IF COLUMN 10 OF THE RPG II HEADER IS NOT BLANK. THE HALT WILL OCCUR IMMEDIATELY AFTER THE DIAGNOSTICS IF THERE WERE ANY WARNING ERRORS, AND A SECOND TIME IF THE OBJECT PROGRAM EXCEEDS CORE SIZE TO EXECUTE AS SPECIFIED IN COLUMNS 12-14 OF THE RPG II HEADER OR EXCEEDS SYSTEM SIZE IF NO CORE SIZE WAS SPECIFIED. THE SECOND HALT WILL OCCUR AFTER THE STORAGE MAP IS COMPLETED. IF COLUMN 10 OF THE RPG II HEADER IS BLANK, THE HALT WILL OCCUR ONLY IF THE OBJECT PROGRAM EXCEEDS THE CORE SIZE TO EXECUTE. PROBABLE USER ERROR. NOTE - THIS HALT WILL BE BYPASSED ON WARNING ERRORS IF NOHALT WAS SPECIFIED, OR IF COLUMN 10 OF THE RPG II CONTROL CARD IS BLANK. THIS HALT IS NEVER BYPASSED IF YOUR PROGRAM EXCEEDS THE SPECIFIED CORE SIZE OR THE SYSTEM SIZE. RECOVERY- 0-- CONTINUE. COMPILER WILL ASSIGN DEFAULT VALUES AS INDICATED IN THE ERROR MESSAGE TEST. IF THE HALT OCCURRED BECAUSE OF CORE SIZE, THE OBJECT PROGRAM WILL STILL BE PRODUCED. HOWEVER, THE PROGRAM WILL REQUIRE MORE CORE STORAGE TO EXECUTE THAN WAS INDICATED ON THE RPG II HEADER. 3-- IMMEDIATE CANCEL.

C 23 — OPTIONS: 23

REASON- INVALID OCL STATEMENT IDENTIFIER.

PROBABLE USER ERROR.

CRABC 23

RECOVERY- 2-- REMAINING OCL WILL BE READ AND SCANNED, BUT JOB WILL NOT BE EXECUTED.

3-- IMMEDIATE CANCEL.

C 24 — OPTIONS: 3

REASON- /& BETWEEN LOAD OR CALL STATEMENT, AND RUN STATEMENT.

PROBABLE USER ERROR.

CRABC 24

RECOVERY- 3-- IMMEDIATE CANCEL.

C 25 — OPTIONS: 03

REASON- SWITCH STATEMENT FOUND BETWEEN JOBS. SWITCH STATEMENT MUST BE BETWEEN LOAD OR CALL STATEMENT, AND RUN STATEMENT.

PROBABLE USER ERROR.

CRABC 25

RECOVERY- 0-- IGNORE SWITCH STATEMENT AND CONTINUE.

3-- IMMEDIATE CANCEL.

C 34 — OPTIONS: 3

REASON- A SECOND LOAD OR CALL STATEMENT HAS BEEN READ PRIOR TO READING A RUN STATEMENT.

PROBABLE USER ERROR.

CRABC 34 LR

A SECOND LOAD OR CALL STATEMENT HAS BEEN READ PRIOR TO READING A RUN STATEMENT.

CRABC 34 OV

CALL STATEMENT FOUND IN PROCEDURE OVERRIDE STATEMENTS. EITHER AN EXTRA CALL STATEMENT IS PRESENT, OR A RUN STATEMENT HAS BEEN OMITTED.

RECOVERY- 3-- IMMEDIATE CANCEL. THE OCL READ PRIOR TO THE SECOND LOAD OR CALL STATEMENT WILL BE IGNORED. IF THE LOAD OR CALL STATEMENT JUST READ BELONGS TO THE NEXT JOB, IT MUST BE REREAD.

C 12 4 023

REASCN- DIVIDE EY ZERO IN CBJECT PROGRAM.

PROBABLE USER ERROR.

RECOVERY- 0-- CCNTINUE. RESULT AND REMAINDER ARE SET TO ZERO.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

C 12 5 023

REASCN- A SEQUENCED TABLE IS CUT OF SEQUENCE.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE WITH ELEMENT OUT OF SEQUENCE.

2-- CCNTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

C 1 34 023

REASON- THE HALT OCCURRED FCR ONE OF THE FOLLOWING REASONS-

1. KEY OF UPDATED RECORD TO BE WRITTEN DOES NOT MATCH KEY OF RETRIEVED RECORD.

2. NO RECORD HAS BEEN RETRIEVED.

3. A RECORD THAT HAS NOT BEEN RETRIEVED IS BEING UPDATED, OR A RECORD HAS BEEN RETRIEVED AND AN INTERVENING RECORD HAS BEEN ADDED TO THE SAME FILE.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE WITHOUT UPDATING RECORD.

2-- CCNTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

: 1 45 3 REASON- NC INPUT FILE ALLOCATED. RPG II OBJECT PROGRAM.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.
CHECK SWITCH CARD AND RESUBMIT JOB.

: 234 03 REASON- OBJECT PROGRAM IS READY TO PUNCH TABLES.

RECOVERY- 0-- FOR THE 5496, PLACE BLANK CARDS IN HOPPER AND CONTINUE. FOR THE 129, PLACE THE CARDS IN THE HOPPER, PRESS THE FEED KEY TWICE, AND CONTINUE.

3-- IMMEDIATE CANCEL.

: 23 5 03 REASON- STATEMENT IDENTIFIER MISSING.

PROBABLE USER ERROR.

CRABC 23 5 RECOVERY- 0-- IGNORE STATEMENT AND CONTINUE.

3-- IMMEDIATE CANCEL.

: 1234 23 REASON- END OF FILE OR END OF EXTENT. HALT OCCURRED FOR ONE OF THE FOLLOWING REASONS-

1. ALLOCATED DISK SPACE FOR FILE IS TOO SMALL TO CONTAIN ADDITIONS TO FILE. REALLOCATE SPACE FOR THIS FILE. IF THE HALT OCCURRED DURING AN RPG II COMPILATION, EITHER $WORK OR $SOURCE MUST BE LARGER.

2. ATTEMPTING TO ADD OR RETRIEVE A KEY HIGHER THAN THE HIGHEST KEY PHYSICALLY ON AN INDEXED MULTIVOLUME FILE USING SEQUENTIAL ADD. HIKEY IS PROBABLY MISSING FROM VOLUME. HIKEY CAN BE LOADED USING RANDOM ADD.

3. YOU HAVE REACHED END OF FILE ON A MULTI-VOLUME INDEXED FILE USING SEQUENTIAL ADD.

PROBABLE USER ERROR.

RECOVERY- 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

NOTE- THIS OPTION SHOULD NOT BE TAKEN IF THE HALT OCCURRED DURING AN RPG COMPILATION.

3-- IMMEDIATE CANCEL.

ALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
1 345	023	REASON- OUT OF SEQUENCE KEY FOUND DURING A LOAD OR ADD TO AN INDEXED ORDERED FILE. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE WITHOUT ADDING THIS RECORD. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.
2345	3	REASON- COMPILE TIME TERMINAL ERRORS FOUND IN SOURCE PROGRAM. PROBABLE USER ERROR. NOTE - THIS HALT WILL BE BYPASSED IF NOHALT WAS SPECIFIED. RECOVERY- 3-- IMMEDIATE CANCEL.
12345	023	REASON- DUPLICATE KEYS FOUND DURING A LOAD OR ADD TO AN INDEXED ORDERED FILE. YOU MAY HAVE SPECIFIED PACKED KEYS BUT DIDN'T PACK THE OUTPUT KEY FIELD. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE WITHOUT ADDING THIS RECORD. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.

CD 2 123

REASON- A MULTIVOLUME FILE IS BEING RELOADED, PROCESSING OF A VOLUME HAS BEEN COMPLETED, AND-

1. THE NEXT VOLUME TO BE PROCESSED IS NOT IN THE SAME SEQUENCE AS WHEN THE FILE WAS ORIGINALLY LOADED, OR

2. THE EXISTING PORTION OF THE FILE ON THE NEXT VOLUME TO BE PROCESSED IS A PERMANENT FILE, OR

3. THE LOCATION OF THE EXISTING PORTION OF THE NEXT VOLUME IS DIFFERENT THAN THAT SPECIFIED IN THE FILE STATEMENT, OR

4. THE FILE BEING REFERENCED ON THE NEXT VOLUME IS A BASIC FILE.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD 2 XX

RECOVERY- 1-- RETRY AFTER MOUNTING THE CORRECT PACK.

2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS.

3-- IMMEDIATE CANCEL.

CD 3 123

REASON- KEY ERROR, MULTIVOLUME FILE. KEY TOO LOW FOR INDEXED RANDOM OFFLINE MULTIVOLUME FILE, OR KEY HIGHER THAN HIGHEST HIKEY SPECIFIED FOR INDEXED RANDOM MULTIVOLUME FILE.

PROBABLE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION IS INVALID IF THE KEY IS TOO LOW.

2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-VOLUME OCCURS. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

BCD1 3 123

REASON- PROCESSING OF A VOLUME OF A MULTIVOLUME INPUT FILE HAS BEEN COMPLETED AND THE REFERENCED FILE CANNOT BE FOUND ON THE NEXT VOLUME TO BE PROCESSED.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD1 3 XX

RECOVERY- 1-- RETRY AFTER MOUNTING THE CORRECT PACK.

2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS.

3-- IMMEDIATE CANCEL.

BCD1 4

REASON- ADD TO AN EXISTING MULTIVOLUME IS SPECIFIED AND THE FILE EXTENT ON THE VOLUME CURRENTLY MOUNTED IS FULL. IF THE HALT RECURS AFTER MOUNTING ANOTHER PACK, EITHER THE FILE EXTENT ON THAT VOLUME IS ALSO FULL, OR THE FILE CANNOT BE FOUND ON THAT PACK.

THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER ON WHICH THE PACK SHOULD BE MOUNTED.

PROBABLE USER ERROR.

1 3 5 ABCD1 4 1 13

REASON- PACK SHOULD BE MOUNTED ON R1.

3 ABCD1 4 2 13

REASON- PACK SHOULD BE MOUNTED ON R2.

RECOVERY- 1-- RETRY. IF IT IS KNOWN WHICH VOLUME WAS BEING PROCESSED WHEN THE LOAD OR LAST ADD WAS COMPLETED, THAT VOLUME SHOULD BE MOUNTED. OTHERWISE, EACH SUBSEQUENT VOLUME SHOULD BE MOUNTED IN ORDER AS DESIGNATED BY THE // FILE PACK-SPECIFICATION UNTIL THE HALT NO LONGER OCCURS.

3-- IMMEDIATE CANCEL.

:D 2 5 3 REASON- AN INDEXED MULTIVOLUME FILE IS BEING PROCESSED AND EITHER THE HIKEY CANNOT BE FOUND FOR THE CURRENT VOLUME, OR IT DOES NOT AGREE WITH THE // FILE HIKEY SPECIFICATION. THIS HALT CAN ALSO OCCUR IF HIKEY IS NOT SPECIFIED FOR A LOAD OR ADD.

IF LOG IS ON AND THE FILE IS AN OFFLINE, MULTI-VOLUME FILE, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD 2 5XX RECOVERY- 3-- IMMEDIATE CANCEL.

:D 34 023 REASON- WARNING. LOADING AN INDEXED MULTIVOLUME FILE AND YOU HAVE REACHED END OF VOLUME. THE RECORD CONTAINING THE HIKEY FOR THIS VOLUME WAS NOT LOADED.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD 34 XX RECOVERY- 0-- CONTINUE. THE HIKEY RECORD CAN BE ADDED TO THE CORRECT VOLUME BY USING RANDOM ADD. SEE HALTS ABCD1235 AND ABC1234 FOR EXPOSURE IF YOU ATTEMPT A SEQUENTIAL ADD AT A LATER TIME.

2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS.

3-- IMMEDIATE CANCEL.

HALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
BCD12 5 (CONTINUED)		
DDABCD12 5XX		RECOVERY- 1-- FOR REASON 1- RETRY AFTER MOUNTING CORRECT PACK, OR IF THE NEXT SEQUENTIAL VOLUME IS MOUNTED AND OPTION 0 WAS SELECTED BY MISTAKE ON THE ABCD145 HALT, LEAVE THE VOLUME MOUNTED. THIS OPTION WILL ALLOW PROCESSING TO CONTINUE. FOR REASON 2- MOUNT CORRECT PACK. 2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS. 3-- IMMEDIATE CANCEL.
CD1 34	0123	REASON- THIS IS A WARNING THAT ONE OR MORE VOLUMES OF A MULTIVOLUME FILE ARE ABOUT TO BE BYPASSED. IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.
DDABCD1 34 XX		RECOVERY- 0-- CONTINUE. THE CURRENT VOLUME WILL BE PROCESSED. ANY BYPASSED VOLUMES CANNOT BE PROCESSED BY THIS JOB. 1-- RETRY AFTER MOUNTING THE CORRECT PACK. 2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS. 3-- IMMEDIATE CANCEL.

D 234 | 3

REASON- ADD TO A CONSECUTIVE MULTIVOLUME FILE ON LINE HAS BEEN SPECIFIED. THE LAST PACK CANNOT BE FOUND.

PROBABLE USER ERROR.

DDABCD 234

RECOVERY- 3-- IMMEDIATE CANCEL. ANY ADDS MUST BEGIN AT THE END OF THE PRESENT FILE.

D 23 5 | 013

REASON- THE FIRST VOLUME OF AN INDEXED MULTIVOLUME FILE TO BE REFERENCED IS NOT VOLUME SEQUENCE NUMBER ONE.

IF LOG IS ON AND THE FILE IS AN OFFLINE, MULTI-VOLUME FILE, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD 23 5XX

RECOVERY- 0-- CONTINUE. THIS VOLUME WILL BE PROCESSED, BYPASSING ANY PRECEDING VOLUMES.

1-- RETRY AFTER MOUNTING THE CORRECT PACK.

3-- IMMEDIATE CANCEL.

D 2 45 | 13

REASON- HALT ABCD235 HAS OCCURRED AND OPTION 0 OR 1 WAS TAKEN. EITHER THE PACK NAME IS INCORRECT OR THE FILE CANNOT BE FOUND ON THE REFERENCED VOLUME.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

PROBABLE USER ERROR.

DDABCD 2 45XX

RECOVERY- 1-- RETRY AFTER MOUNTING THE CORRECT PACK.

3-- IMMEDIATE CANCEL.

ABCD 345
(CONTINUED)

DDABCD 345XX

RECOVERY- 1-- RETRY. MOUNT CORRECT PACK. IF ANY PACK HAS THE SAME NAME, THE WRONG PACK MAY BE MOUNTED.

2-- CONTROLLED CANCEL. IF AN INPUT FILE IS BEING PROCESSED, END-OF-FILE OCCURS. IF AN OUTPUT FILE IS BEING PROCESSED, END-OF-EXTENT OCCURS.

3-- IMMEDIATE CANCEL.

FOR REASONS 1 AND 2, SPECIFY LOCATION ON PACK KNOWN TO BE FREE AND RERUN THE JOB. FOR REASON 3, IF THE FILES ON THIS PACK ARE NO LONGER NEEDED, INITIALIZE THE PACK AND RERUN THE JOB. OTHERWISE, USE AN EMPTY PACK AND RERUN THE JOB.

ABCD1234

REASON- KEYBOARD PARITY ERROR WHILE RESPONDING TO ANOTHER HALT.

RECOVERY- PRESS PROG START TO RETURN TO ORIGINAL HALT AND RETRY RECOVERY. TRY ENTERING OPTION FROM THE OTHER SET OF KEYS. KEYS ON ADDING MACHINE TYPE KEYBOARD AND NUMERIC KEYS ON CONSOLE KEYBOARD ARE THE SAME.

IF HALT ABCD1234 PERSISTS, PRESS SYSTEM START. IF THE ORIGINAL HALT ALLOWED A 2 OPTION, THE 2 OPTION IS TAKEN. OTHERWISE, A 3 OPTION IS TAKEN.

CONTACT IBM FOR HARDWARE SUPPORT.

ABCD12345		REASON- END OF JOB. RECOVERY- TO CONTINUE- A. CLEAR CARDS FROM THE DATA RECORDER AND RETURN THE CARD DECK TO THE PROGRAMMER. B. PREPARE FOR THE NEXT JOB. C. PRESS SYSTEM START.
AB D	03	REASON- AN EXISTING FILE HAS BEEN REFERENCED AND THE WRONG KEY LENGTH OR KEY LOCATION HAS BEEN SPECIFIED. PROBABLE USER ERROR.
DDAB D		RECOVERY- 0-- CONTINUE. THE SPECIFICATIONS FOR ANY SUBSEQUENT FILES USED BY THE SAME JOB WILL BE CHECKED FOR ERRORS, THEN HALT AB135 WILL OCCUR. 3-- IMMEDIATE CANCEL. NOTE - RUN FILE AND VOLUME LABEL DISPLAY UTILITY AND COMPARE KEY LENGTHS.
AB D 3	3	REASON- A PROBLEM HAS BEEN ENCOUNTERED THAT INVALIDATES THE SYSTEM GENERATION CARTRIDGE THAT CONTAINS THE PROGRAM PRODUCTS. CONTACT IBM FOR PROGRAMMING SUPPORT.
GPAB D 3 NE		RECOVERY- 3-- IMMEDIATE CANCEL.

AB D12 — OPTIONS: 3

REASON- TOO MANY UTILITY CONTROL STATEMENTS. MAXIMUM IS 25.

PROBABLE USER ERROR.

CRAB D12

RECOVERY- 3-- IMMEDIATE CANCEL.

AB D1 3 — OPTIONS: 3

REASON- A SYSTEM GENERATION ERROR HAS OCCURRED. THE LOG INDICATES THE REASON FOR THE HALT.

GGAB D1 3 GT

REASON- A PERMANENT DISK I/O ERROR HAS OCCURRED WHILE READING FROM F1.

GGAB D1 3 PT

REASON- A PERMANENT DISK I/O ERROR OCCURRED WHILE WRITING ON F1.

RECOVERY- 3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS. PRESS PROG START.

A.	SYSTEM PROMPTS	READY-
B.	RESPOND WITH	CALL
C.	SYSTEM PROMPTS	CALL NAME-
D.	RESPOND WITH	$SGCAL
E.	SYSTEM PROMPTS	UNIT-
F.	RESPOND WITH	R1

NOTE- IF THIS ERROR PERSISTS, CONTACT IBM FOR HARDWARE SUPPORT.

AB D1 5

REASON- ERROR DETECTED BY OVERLAY LINKAGE EDITOR. THE SUBHALT OR THE LOG INDICATES THE REASON FOR THE HALT.

B 45 EOAB D1 501 03

REASON- ERROR IN PHASE STATEMENT.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE STATEMENT IS IGNORED.

3-- IMMEDIATE CANCEL.

CD1 4 EOAB D1 502 03

REASON- ERROR IN OPTIONS STATEMENT.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE STATEMENT IS IGNORED.

3-- IMMEDIATE CANCEL.

CD12 4 EOAB D1 503 03

REASON- MUTUALLY EXCLUSIVE ATTRIBUTES ARE SPECIFIED IN THE OPTIONS STATEMENT.

PROBABLE USER ERROR.

(HALT CONTINUED ON NEXT PAGE)

B D1 5
CONTINUED)

PROBABLE USER ERROR.

RECOVERY- 0-- THE STATEMENT IS IGNORED.
1-- RETRY. MOUNT ANOTHER PACK.
3-- IMMEDIATE CANCEL.

ABCD 45 EOAB D1 511 3

REASON- A CARD IN THE OBJECT (R) DECK IS OUT OF SEQUENCE.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

ABC 1 4 EOAB D1 512 013

REASON- A MODULE SPECIFIED ON THE INCLUDE CARD WAS NOT FOUND.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE MODULE NAME IS IGNORED.
1-- RETRY. MOUNT ANOTHER PACK.
3-- IMMEDIATE CANCEL.

ABC 12 4 EOAB D1 513 03

REASON- UNIT R2 IS NOT SUPPORTED.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE STATEMENT IS IGNORED.
3-- IMMEDIATE CANCEL.

ABCD EOAB D1 514 03

REASON- UNIT F2 IS NOT SUPPORTED.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE STATEMENT IS IGNORED.
3-- IMMEDIATE CANCEL.

ABC 12 5 EOAB D1 515 3

REASON- AN OBJECT (R) MODULE WAS NOT INCLUDED TO LINK EDIT.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

ABC 1 EOAB D1 516 03

REASON- AN ENTRY POINT NAME ON THE OPTIONS CARD WAS NOT FOUND.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. THE STANDARD ENTRY POINT WILL BE USED.

(HALT CONTINUED ON NEXT PAGE)

AB D1 5
(CONTINUED)

RECOVERY- 3-- IMMEDIATE CANCEL.

C 12 4 EOAB D1 526 3

REASON- THE PROGRAM WILL NOT FIT IN THE MAXIMUM STORAGE SIZE.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

CD 23 EOAB D1 527 03

REASON- THE PROGRAM WILL NOT FIT IN THE SPECIFIED STORAGE SIZE.

RECOVERY- 0-- CONTINUE. THE PROGRAM REQUIRES THE STORAGE SIZE SHOWN IN THE CORE USAGE MAP.

NOTE- IF THE STORAGE SIZE WAS NOT SPECIFIED ON THE OPTIONS CARD, THE STORAGE SIZE IS THE PARTITION SIZE.

3-- IMMEDIATE CANCEL.

C 12 5 EOAB D1 528 3

REASON- THERE ARE MORE THAN 400 ENTRY POINTS AND MODULE NAMES IN THE COMBINATION OF THE ROOT AND ONE OVERLAY.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

A 23 5 EOAB D1 530 3

REASON- MUTUALLY EXCLUSIVE ATTRIBUTES ARE ON THE INCLUDED OBJECT (R) MODULES.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

A 123 5 EOAB D1 531 03

REASON- A MODULE WAS READ FROM THE SYSIN DEVICE OR NAMED ON A INCLUDE STATEMENT BUT IT WAS NOT REFERENCED BY AN EXTRN STATEMENT IN THE OBJECT MODULE.

RECOVERY- 0-- CONTINUE.

3-- IMMEDIATE CANCEL.

A 23 EOAB D1 532 03

REASON- THE MAINLINE MODULE IS NAMED IN A GROUP OR CATEGORY CARD.

RECOVERY- 0-- CONTINUE.

3-- IMMEDIATE CANCEL.

A 1 3 EOAB D1 533 03

REASON- A MODULE IN A GROUP CARD HAS A CATEGORY VALUE FROM 0 TO 7.

RECOVERY- 0-- CONTINUE. THE GROUP CARD IS IGNORED.

(HALT CONTINUED ON NEXT PAGE)

AB D1 5
(CONTINUED)

3-- IMMEDIATE CANCEL.

AB 1 EOAB D1 542 3

REASON- THE ENTRY POINT IS NOT RELATIVE ZERO FOR A MODULE WITH COMMON.

PROBABLE USER ERROR.

RECOVERY- 3-- IMMEDIATE CANCEL.

AB 12 EOAB D1 543 3

REASON- FILE CARDS WERE OMITTED AND WORK SPACE WAS NOT FOUND ON F1 OR R1.

RECOVERY- 3-- IMMEDIATE CANCEL.

BCD 34 EOAB D1 599 3

REASON- INCORRECT ERROR CODE.

CONTACT IBM FOR PROGRAMMING SUPPORT.

RECOVERY- 3-- IMMEDIATE CANCEL.

AB D 23

REASON- AN ERROR HAS BEEN DETECTED BY THE MULTI-LEAVING REMOTE JOB ENTRY WORKSTATION (MRJE/WS) PROGRAM. THE SUBHALT OR LOGGED ERROR CODE INDICATES THE REASON FOR THE HALT.

NOTE- IF RECOVERY OPTION 2 INDICATES THAT A FAILING TASK IS DEACTIVATED, THE OTHER TASKS OF THE MRJE/WS REMAIN ACTIVE WHEN OPTION 2 IS SELECTED.

A 23 02

REASON- PRINTER PRINT CHECK. ONE OR MORE CHARACTERS MAY BE PRINTED INCORRECTLY. IF THIS HALT CONTINUES TO OCCUR, CONTACT IBM FOR HARDWARE SUPPORT.

RECOVERY- 0-- CONTINUE. IT IS NOT POSSIBLE TO CORRECT THE CHARACTERS THAT ARE PRINTED INCORRECTLY.

2-- DEACTIVATE THE PRINTER TASK.

A 24 02

REASON- PRINTER SYNCHRONOUS CHECK. THE MECHANICAL AND ELECTRICAL OPERATIONS OF THE PRINTER ARE NOT WORKING TOGETHER. ONE OR MORE CHARACTERS IN THE LINE MAY BE PRINTED INCORRECTLY. IF THIS HALT CONTINUES TO OCCUR, CONTACT IBM FOR HARDWARE SUPPORT.

RECOVERY- 0-- CONTINUE. IT IS NOT POSSIBLE TO CORRECT THE CHARACTERS THAT ARE PRINTED INCORRECTLY.

2-- DEACTIVATE THE PRINTER TASK.

A 145 02

REASON- PRINTER MARGIN CHECK. THIS HALT CAN OCCUR FOR

(HALT CONTINUED ON NEXT PAGE)

(B D 23
CONTINUED)

NOTE- WHEN JAMMED CARD IS REMOVED FROM THE 5496, PRESS THE REL KEY ON DATA RECORDER KEYBOARD TO TURN OFF THE FD CHK LIGHT. THE DATA RECORDER CAN BE TAKEN OFFLINE AT THIS TIME TO PUNCH A NEW CARD.

FOR THE 129, PLACE THE LAST CARD READ AND THE UNREAD CARDS IN THE HOPPER. IF CARDS WERE PUNCHED, DISCARD THE LAST CARD PUNCHED AND PLACE THE REST OF THE CARDS IN THE HOPPER. PRESS THE FEED KEY TWICE. PRESS THE VER REJ KEY AND CONTINUE.

B 1 5 — OPTIONS: 0123

REASON- CARD JAM IN HOPPER AREA OF DATA RECORDER.

RECOVERY- 0-- CLEAR JAM. FOR THE 129, USE THE CLEAR SWITCH TO CLEAR THE JAM. IF READING, READ NEXT CARD. IF PUNCHING, PUNCH NEXT CARD.

1-- CLEAR JAM. FOR THE 129, USE THE CLEAR SWITCH TO CLEAR THE JAM. IF READING, READ NEXT CARD. IF PUNCHING, PUNCH NEXT CARD.

2-- DEACTIVATE THE PUNCH TASK (PUNCH ONLY).

3-- IMMEDIATE CANCEL (READER ONLY).

NOTE- WHEN JAMMED CARD IS REMOVED FROM THE 5496, PRESS THE REL KEY ON DATA RECORDER KEYBOARD TO TURN OFF THE FD CHK LIGHT. THE DATA RECORDER CAN BE TAKEN OFFLINE AT THIS TIME TO PUNCH A NEW CARD.

FOR THE 129, PLACE THE LAST CARD READ AND THE UNREAD CARDS IN THE HOPPER. IF CARDS WERE PUNCHED, DISCARD THE LAST CARD PUNCHED AND PLACE THE REST OF THE CARDS IN THE HOPPER. PRESS THE FEED KEY TWICE. PRESS THE VER REJ KEY AND CONTINUE.

BC 1 45 — MWAB D 23 10 — OPTIONS: 03

REASON- ONE OR MORE FILES HAVE NOT BEEN ALLOCATED. SEE SYSLOG OUTPUT FOR THE FILENAMES.

RECOVERY- 0-- CONTINUE.

3-- IMMEDIATE CANCEL.

B D 5 — OPTIONS: 012

REASON- INCORRECT PUNCHES IN CARD JUST PUNCHED.

RECOVERY- 0-- CONTINUE. PUNCH NEXT CARD.

1-- REPUNCH LAST CARD.

2-- DEACTIVATE THE PUNCH TASK.

B — MWAB D 23 04 — OPTIONS: 13

REASON- DEVICE SPECIFIED ON INITIAL CONFIG COMMAND NOT

(HALT CONTINUED ON NEXT PAGE)

AB D 23
(CONTINUED)

3-- IMMEDIATE CANCEL.

CD12 5 MWAB D 23 05 13

REASON- INVALID PARAMETER IN CONFIG COMMAND. ONE OF THE FOLLOWING ERRORS IS DETECTED:

1. ILLEGAL PARAMETER.
2. ILLEGAL PARAMETER OPTION.
3. LEN IS NOT 3 DIGITS.
4. CCN OR TID PARAMETER SPECIFIED.
5. TEL IS NOT BETWEEN 1 AND 15 DIGITS.
6. FSN IS NOT 4 DIGITS (LEADING ZEROS REQUIRED).
7. CEN IS NOT SPECIFIED.
8. CONTINUATION IS INDICATED BUT NO CONTINUATION CARD WAS READ.
9. CCM-C IS SPECIFIED AND MODULE $@MRFC WAS NOT INCLUDED DURING MRJE/WS GENERATION.

RECOVERY- 1-- RETRY. CORRECT THE ERROR AND REENTER THE CONFIG COMMAND.

3-- IMMEDIATE CANCEL.

CD 2345 MWAB D 23 08 3

REASON- OCL OR LINK EDIT ERROR DETECTED DURING INITIALIZATION. ONE OF THE FOLLOWING ERRORS IS DETECTED:

1. DISK DEVICE IS USED FOR A DEFERRED MOUNT DEVICE AND PERMANENT MOUNT.
2. CONFIG PARM PU1 OR PR1 SPECIFIED TEMPORARY DISK, AND THE TDISKPXL FILE STATEMENT WAS NOT INCLUDED IN OCL.
3. MRJE/WS PROGRAM LINK EDITED WITHOUT INQUIRY ATTRIBUTE.

RECOVERY- 3-- IMMEDIATE CANCEL.

D1 03

REASON- PRINTER PRINT CHECK DURING CONSOLE OUTPUT. ONE OR MORE CHARACTERS MAY BE PRINTED INCORRECTLY. IF THIS HALT CONTINUES TO OCCUR, CONTACT IBM FOR HARDWARE SUPPORT.

RECOVERY- 0-- CONTINUE. IT IS NOT POSSIBLE TO CORRECT THE CHARACTERS THAT ARE PRINTED INCORRECTLY.

3-- IMMEDIATE CANCEL.

(HALT CONTINUED ON NEXT PAGE)

ALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
D 2 4	3	REASON- SYSTEM MODULE OR $WORK FILE MISSING.
EBAB D 2 4		PASS 1 OVERLAY ROUTINES ARE NOT ONLINE.
EBAB D 2 4 WF		$WORK FILE NOT SUPPLIED.
EGAB D 2 4		PASS 2 OVERLAY ROUTINES ARE NOT ONLINE.
EKAB D 2 4		LIBRARY OUTPUT OVERLAY ROUTINES ARE NOT ONLINE.
		RECOVERY- 3-- IMMEDIATE CANCEL. CONTACT IBM FOR PROGRAMMING SUPPORT.
D 2 5	3	REASON- COMPILER OUTPUT ERROR.
ENAB D 2 501		DATA RECORDER ERROR CAUSING INVALID OBJECT DECK.
EJAB D 2 502		COMPILED PROGRAM GENERATED WITH 0 SECTOR TEXT LENGTH. NO OBJECT PROGRAM GENERATED.
		RECOVERY- 3-- IMMEDIATE CANCEL.
D 45	3	REASON- AUTO REPORT. TERMINAL ERRORS HAVE BEEN FOUND IN THE AUTO REPORT SOURCE PROGRAM.
		NOTE - THIS HALT WILL BE BYPASSED IF NOHALT WAS SPECIFIED.
		RECOVERY- 3-- IMMEDIATE CANCEL.

D1 34
ONTINUED)

CUMULATIVE CHECK SUM IN THE CKSUM FIELD OF THE CONTROL STATEMENT DOES NOT MATCH THE CALCULATED CHECK SUM.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 DC 3 — REASON- INVALID PATCH CHARACTERS ON THE DATA STATEMENT FOR THE PROGRAM TEMPORARY FIX PROGRAM. VALID CHARACTERS ARE 0-9 AND A-F.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 DS 3 — REASON- FORMAT OR PUNCTUATION ERROR IN THE DATA STATEMENT FOR THE PROGRAM TEMPORARY FIX PROGRAM.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 ES 3 — REASON- THE LAST CONTROL STATEMENT WAS NOT AN END STATEMENT.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 HS 3 — REASON- FORMAT OR PUNCTUATION ERROR IN THE HEADER STATEMENT FOR THE PROGRAM TEMPORARY FIX PROGRAM.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 HN 3 — REASON- HEADER STATEMENT NOT FIRST STATEMENT OF PROGRAM TEMPORARY FIX STATEMENTS.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 ID 3 — REASON- THE MODULE REFERRED TO BY THE PTF ID FIELD ON THE HEADER STATEMENT CAN NOT BE FOUND ON THE UNIT SPECIFIED BY THE UNIT 2 FIELD.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 LD 3 — REASON- AN INVALID RLD BYTE WAS FOUND IN THE MODULE BEING PATCHED.

RECOVERY- 3-- IMMEDIATE CANCEL.

GFAB D1 34 LV 03 — REASON- THE LEVEL OF THE MODULE TO WHICH THE PROGRAM TEMPORARY FIX IS TO BE APPLIED IS NOT THE SAME LEVEL AS SPECIFIED IN THE LEVEL FIELD OF THE PTF STATEMENT.

RECOVERY- 0-- CONTINUE. THE PROGRAM TEMPORARY FIX IS APPLIED.

3-- IMMEDIATE CANCEL.

GFAB D1 34 ME 3 — REASON- INSUFFICIENT ROOM IN THE MODULE BEING PATCHED FOR THE ADDITIONAL RLD'S REQUIRED BY THE

(HALT CONTINUED ON NEXT PAGE)

D1 3 5 | 3

REASON- SYSTEM OR PROGRAM ERRORS. THE FOLLOWING MESSAGE WILL BE PRINTED IDENTIFYING THE ERROR-

ERROR XX IN PHASE NNN

WHERE XX IS THE ERROR NUMBER AND NNN IS THE PHASE NUMBER OF WHERE THE ERROR OCCURRED.

MESSAGES ARE LISTED FOLLOWING ITEM III.

EKAB D1 3 5

RECOVERY- 3-- IMMEDIATE CANCEL.

READ THE FOLLOWING ITEMS-I, II, AND III-TO DETERMINE WHAT ACTION TO TAKE.

I. IF YOU WERE COMPILING AN RPG II PROGRAM WHEN THE HALT OCCURRED, THE FOLLOWING ERROR MESSAGES ARE THE ONES FOR WHICH YOU MAY BE ABLE TO TAKE CORRECTIVE ACTION.

04-ALLOCATE MORE CORE STORAGE FOR THE PROGRAM ON THE HEADER CARD.
05-INCREASE THE SIZE OF THE WORK FILE OR REDUCE THE SIZE OF THE PROGRAM.
08-PRINT THE OBJECT LIBRARY DIRECTORY. IF THE REQUESTED MODULE IS NOT THERE, PLACE MISSING MODULE IN OBJECT LIBRARY AND RERUN THE JOB. IF THE REQUESTED SYSTEM MODULE IS THERE, THE SYSTEM MAY NEED SERVICE.
A. CHANGE THE NAME OF THE CURRECT SOURCE MODULE OR,
B. DELETE THE PERMANENT LOAD MODULE.

IF ANY OTHER ERROR MESSAGES WERE PRINTED, CONTACT IBM FOR PROGRAMMING SUPPORT.

II. IF YOU ARE PERFORMING SYSTEM GENERATION AND THIS HALT OCCURED, CONTACT IBM FOR PROGRAMMING SUPPORT.

III. IF YOU WERE NOT COMPILING AN RPG II PROGRAM OR GENERATING A SYSTEM WHEN THIS HALT OCCURRED, CONTACT IBM FOR PROGRAMMING SUPPORT.

THE FOLLOWING IS A LIST OF THE POSSIBLE ERROR NUMBERS AND THE REASON FOR THE ERROR.

00-THE FIRST RECORD GENERATED WAS NOT A PHASE RECORD.
01-THE PHASE NAME GENERATED IS GREATER THAN SIX CHARACTERS OR THERE IS NO PHASE NAME.
02-THE PHASE ORGIN ADDRESS IS INVALID OR MISSING
03-RPG II COMPILER GENERATED MORE THAN 128 PHASE RECORDS.
04-EXTERNAL SYMBOL LIST TABLE GENERATED EXCEEDS STORAGE.
05-THE $WORK FILE IS TOO SMALL.
06-RPG II COMPILER INCLD NAME IS INVALID OR MISSING.

(HALT CONTINUED ON NEXT PAGE)

3 D 2 45 23 REASCN- PROGRAM IS REQUESTING LEDGER CARD DEVICE. THIS DEVICE WAS NOT DEFINED AS PART OF THE SYSTEM AT SYSTEM GENERATION.

PROBABLE USER ERROR.

CIAB D 2 45 RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

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3 D 345 SYSTEM GENERATION ERRORS.

GBAB D 345SW 3 REASON- INVALID RESPONSE TO THE SWITCH KEYWORD.

RECOVERY- 3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS. PRESS PROG START.

A. SYSTEM PROMPTS READY-
B. RESPOND WITH CALL
C. SYSTEM PROMPTS CALL NAME-
D. RESPOND WITH $SGCOR
E. SYSTEM PROMPTS UNIT-
F. RESPOND WITH R1
G. RESPOND TO SWITCH STATEMENT-
11000000 TO SAVE SPACE FOR BASIC.
10000000 BASIC NOT ON SYSTEM.
H. SYSTEM PROMPTS MODIFY-
I. RESPOND WITH RUN
J. SYSTEM PROMPTS READY-
K. RESPOND WITH CALL
L. SYSTEM PROMPTS CALL NAME-
M. RESPOND WITH $SGRSG
N. SYSTEM PROMPTS UNIT-
C. RESPOND WITH R1

GKAB D 345IS 3 REASCN- A DISK ERROR OCCURRED DURING A READ OR WRITE OPERATION. IF THIS ERROR PERSISTS, CONTACT IBM FOR HARDWARE SUPPORT.

RECOVERY- 3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS. PRESS PROG START.

A. SYSTEM PROMPTS READY-
B. RESPOND WITH CALL
C. SYSTEM PROMPTS CALL NAME-
D. RESPOND WITH $SGCAL
E. SYSTEM PROMPTS UNIT-
F. RESPOND WITH R1

GKAB D1 345RB 13 REASON- MORE THAN ONE DIGIT KEYED. KEYBOARD IMAGE SELECT CHARACTER SHOULD BE 1-9.

RECOVERY- 1-- KEY CORRECT RESPONSE, OR PRESS PROG START. IF YOU DO NOT KEY A NEW RESPONSE, THE SYSTEM DEFAULTS TO THE KEYBOARD IMAGE ON THE PID PACK.

(HALT CONTINUED ON NEXT PAGE)

B D 345
CONTINUED)

GMAB D 345IC 13

REASON- AN OPTION WAS SPECIFIED ON THE LAST SYSTEM CONFIGURATION STATEMENT THAT DEPENDS ON AN OPTION FROM A PRECEDING SYSTEM CONFIGURATION STATEMENT. THIS PRECEDING OPTION WAS NOT GIVEN OR THE WRONG OPTION WAS SELECTED ON THE LAST SYSTEM CONFIGURATION STATEMENT KEYED. IF THE LAST SYSTEM CONFIGURATION STATEMENT KEYED IS THE ONLY ONE IN ERROR, TAKE RECOVERY 1.

RECOVERY- 1-- A. ENTER CORRECT RESPONSE. IF THE DEFAULT VALUE IS THE CORRECT RESPONSE, ENTER THE DEFAULT VALUE.
B. PRESS PROG START.

SYSTEM GENERATION CONTINUES.

3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS. PRESS PROG START.

A. SYSTEM PROMPTS READY-
B. RESPOND WITH CALL
C. SYSTEM PROMPTS CALL NAME-
D. RESPOND WITH $SGRSG
E. SYSTEM PROMPTS UNIT-
F. RESPOND WITH R1

GMAB D 345IO 3

REASON- A DISK I/O ERROR HAS OCCURED WHILE WRITING THE OUTPUT FILE ON F1.

NOTE- IF THE ERROR PERSISTS, RUN ALTERNATE TRACK ASSIGNMENT DISK UTILITY.

RECOVERY- 3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS. PRESS PROG START.

A. SYSTEM PROMPTS READY-
B. RESPOND WITH CALL
C. SYSTEM PROMPTS CALL NAME-
D. RESPOND WITH $SGCAL
E. SYSTEM PROMPTS UNIT-
F. RESPOND WITH R1

RESTART SYSTEM GENERATION.

GMAB D 345IR 13

REASON- AN INVALID OPTION IS SPECIFIED ON THE LAST SYSTEM CONFIGURATION STATEMENT KEYED.

RECOVERY- 1-- A. ENTER CORRECT RESPONSE. IF THE DEFAULT VALUE IS THE CORRECT RESPONSE, ENTER THE DEFAULT VALUE.
B. PRESS PROG START.

SYSTEM GENERATION CONTINUES.

3-- IMMEDIATE CANCEL. HALT ABCD12345 APPEARS.

(HALT CONTINUED ON NEXT PAGE)

HALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
D1234	03	REASON- COMPILE STATEMENT FOUND BETWEEN JOBS. COMPILE STATEMENT MUST BE BETWEEN LOAD OR CALL STATEMENT, AND RUN STATEMENT. PROBABLE USER ERROR.
CRAB D1234		RECOVERY- 0-- IGNORE COMPILE STATEMENT AND CONTINUE. 3-- IMMEDIATE CANCEL.
D123 5	3	REASON- TOO MANY OVERRIDE STATEMENTS FOR PROCEDURE. MAXIMUM IS 25. PROBABLE USER ERROR.
CRAB D123 5		RECOVERY- 3-- IMMEDIATE CANCEL.
D12 45		REASON- EQUIPMENT CHECK. THE DISK HARDWARE HAS DETECTED A CONDITION THAT COULD CAUSE TRANSFER OF INVALID DATA IF THE OPERATION IS ALLOWED TO CONTINUE.
IDAB D12 45		RECOVERY------PRESS PROG START. IF THE HALT RECURS IMMEDIATELY, TAKE A CORE STORAGE DUMP. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL. SAVE THE ARR CONTENTS AND THE DUMP, AND CONTACT IBM FOR HARDWARE SUPPORT.

C 1 — OPTIONS: 0

REASON- FORMS ALIGNMENT HALT.

IPA C 1

RECOVERY- 0-- CHANGE FORMS AND/OR ALIGN THEM ON LINE 1.

C 12 — OPTIONS: 0123

REASON- PRIMARY HALT AC235 AND SECONDARY HALT A4 HAVE PRECEDED THIS HALT. THE NEXT LINE INDICATOR ( ) HAS BEEN PRINTED IN POSITION 215 OF THE NEXT AVAILABLE PRINT LINE.

RECOVERY- 0-- WHEN THE LCD INDICATOR LIGHT TURNS ON, REINSERT THE SAME LEDGER CARD IN THE INPUT CHUTE. THE NEXT LINE INDICATOR IS PRINTED AGAIN.

1-- CONTINUE WITH THE NORMAL LEDGER CARD PROCESSING.

2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE.

3-- IMMEDIATE CANCEL.

C 1 5 — OPTIONS: 3

REASON- DUPLICATE FILE NAMES HAVE BEEN FOUND IN THE // FILE STATEMENTS.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CIA C 1 5

RECOVERY- 3-- IMMEDIATE CANCEL.

C 2 5 23 REASON- KEYWORD ERROR IN FILE STATEMENT.

PROBABLE USER ERROR.

CRA C 2 5DK DUPLICATE KEYWORD.

CRA C 2 5IK INVALID KEYWORD.

RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL FOR JOB IS READ AND CHECKED.

3-- IMMEDIATE CANCEL. REMAINING OCL FOR JOB IS READ BUT NOT CHECKED.

C 34 23 REASON- INVALID COMBINATION OF KEYWORDS AND/OR PARAMETERS ON FILE STATEMENT.

PROBABLE USER ERROR.

CRA C 34 TL TRACKS AND/OR LOCATION INCORRECT FOR DEVICE TYPE.

CRA C 34 TR BOTH TRACKS AND RECORDS SPECIFIED ON FILE CARD.

RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL FOR JOB IS READ AND CHECKED.

3-- IMMEDIATE CANCEL. REMAINING OCL FOR JOB IS READ BUT NOT CHECKED.

C 45 03 REASON- ERRORS HAVE BEEN FOUND IN THE OCL FOR THIS JOB.

CRMN RECOVERY- 0-- CONTINUE WITH NEXT JOB. USE THIS OPTION IF NO DATA FOR CANCELLED JOB IS IN DATA RECORDER.

3-- IMMEDIATE CANCEL.

ALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
C 1 34	023	REASON- PRINTER MARGIN CHECK. THIS HALT CAN OCCUR FOR ONE OF THE FOLLOWING REASONS- 1. PROGRAM HAS REQUESTED PRINTING OUTSIDE OF MARGIN SETTING. 2. MARGIN SWITCHES ARE OUT OF ADJUSTMENT. 3. SYSTEM PROGRAM HAS LOST PRINT HEAD LOCATION. IF HALT OCCURS FOR REASON 2 OR 3, CONTACT IBM FOR SUPPORT.
IPA C 1 34		RECOVERY- 0-- CONTINUE. PRINT HEAD IS REPOSITIONED ON CURRENT LINE AND PROCESSING CONTINUES WITH NEXT PRINT REQUEST. IF MARGIN CHECK OCCURRED BEFORE PRINTING A LINE OF PRINT MAY BE LOST. 2-- CONTROLLED CANCEL. ALIGN FORMS AT FIRST PRINT LINE. 3-- IMMEDIATE CANCEL. ALIGN FORMS AT FIRST PRINT LINE.
C 1 3 5	23	REASON- INVALID PRINT COMMAND. ERROR CAN BE CAUSED BY EITHER OF THE FOLLOWING- 1. PRINTER TYPE ON SYSTEM IS DIFFERENT THAN PRINTER TYPE REQUIRED BY PROGRAM. FOR EXAMPLE, SYSTEM HAS PIN FEED PRINTER AND THE PROGRAM BEING RUN REQUESTS THE PRINTER TO SKIP. 2. SYSTEM PROGRAMMING PROBLEM.
IPA C 1 3 5		RECOVERY- 2-- CONTROLLED CANCEL. ALIGN FORMS AT FIRST PRINT LINE. 3-- IMMEDIATE CANCEL. ALIGN FORMS AT FIRST PRINT LINE. NOTE- IF THE PRINTER TYPE IS KNOWN TO BE CORRECT, IT IS RECOMMENDED THAT A CORE STORAGE DUMP BE TAKEN RATHER THAN SELECTING AN OPTION. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL. CONTACT IBM FOR PROGRAMMING SUPPORT.

C 23 5
CONTINUED)

1. THERE WAS NO LEDGER CARD IN THE TRANSPORT.

2. THE LEDGER CARD ENTERED THE TRANSPORT BUT FAILED TO CONTINUE TO THE CARD OUTPUT TRAY.

3. NO MOVEMENT OCCURRED IN THE TRANSPORT.

RECOVERY- 1-- A. THE LEDGER CARD IS EJECTED INTO THE OUTPUT TRAY AND CAN BE REINSERTED IN THE INPUT CHUTE.

B. IF PRIMARY HALT C13 APPEARS, PERFORM ITS RECOVERY PROCEDURES. OTHERWISE, REINSERT THE SAME LEDGER CARD IN THE INPUT CHUTE WHEN THE LCD INDICATOR LIGHT TURNS ON.

2-- CONTROLLED CANCEL. NO FURTHER PROCESSING OF THE LEDGER CARD WILL BE DONE. IF THE LEDGER CARD REMAINS IN THE DEVICE, EJECT IT BY PRESSING THE CARD EJECT SWITCH.

3-- IMMEDIATE CANCEL. IF THE LEDGER CARD REMAINS IN THE DEVICE, EJECT IT BY PRESSING THE CARD EJECT SWITCH.

A2

REASON- SENSE AMP CHECK. THE IDENTIFICATION NUMBER WAS NOT READ PROPERLY.

RECOVERY- 1-- LEDGER CARD IS EJECTED INTO THE OUTPUT TRAY.

A. CHECK THE LEDGER CARD RELEASE LEVER. IT SHOULD NOT BE IN THE POSITION TO REMOVE LEDGER CARDS.

B. CHECK THAT THE LEFT MOVABLE GUIDE IS ADJUSTED PROPERLY.

C. REINSERT THE SAME LEDGER CARD IN THE INPUT CHUTE WHEN THE LCD INDICATOR LIGHT TURNS ON.

2-- CONTROLLED CANCEL. NO FURTHER PROCESSING OF THE LEDGER CARD WILL BE DONE. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

(HALT CONTINUED ON NEXT PAGE)

C 23 5
(CONTINUED)

2-- CONTROLLED CANCEL. NO FURTHER PROCESSING OF THE LEDGER CARD WILL BE DONE. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

A5

REASON- LINE FINDER MARK CHECK. UNCLEAR OR UNWANTED MARKS HAVE APPEARED ON THE LEDGER CARD IN THE LINE FINDER MARK COLUMN, OR THE LEDGER CARD WAS NOT SECURELY AGAINST THE PLATEN.

RECOVERY- 0-- THE LEDGER CARD IS EJECTED INTO THE OUTPUT TRAY. SELECT THIS OPTION, BYPASS THE EJECTED CARD, AND INSERT THE NEXT CARD OF THE JOB WHEN THE CARD IN ERROR CANNOT BE CORRECTED.

1-- THE LEDGER CARD IS EJECTED INTO THE OUTPUT TRAY.

A. ERASE ANY UNWANTED MARKS OR SCRIBE OVER UNCLEAR MARKS WITH AN IBM ELECTROGRAPHIC R PENCIL OR AN EQUIVALENT PENCIL.

B. WHEN THE LCD INDICATOR LIGHT TURNS ON, REINSERT THIS CARD IN THE INPUT CHUTE TO CONTINUE PROCESSING. IF THE IDENTIFICATION NUMBER HAS BEEN READ BEFORE THE LINE FINDER MARK CHECK OCCURRED, AN IDENTIFICATION NUMBER COMPARISON IS MADE TO ENSURE THAT THE SAME CARD IS RE-INSERTED.

IF THIS SECONDARY HALT CONSISTENTLY OCCURS FOR OTHER LEDGER CARDS, CHANGE THE PRINTER RIBBON.

2-- CONTROLLED CANCEL. NO FURTHER PROCESSING OF THE LEDGER CARD WILL BE DONE.

3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

A C 123 5

REASON- THERE HAVE EEEN MORE THAN FCUR REQUESTS TO ALLOCATE SCRATCH WORK DISK SPACE DURING THE JOB.

PROBAELE USER ERROR.

B 45 CIA C 123 501 23

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

NOTE 1- IF THIS HALT OCCURS WHILE THE LIBRARY MAINTENANCE PROGRAM IS RUNNING, SELECT OPTION 3. RELOAD THE LIBRARY MAINTENANCE PROGRAM AND CONTINUE PROCESSING WITH THE LAST CONTROL STATEMENT THAT WAS READ OR ENTERED.

NOTE 2- THIS HALT MIGHT ALSO OCCUR IF TOO MANY FILE CARDS ARE PRESENT. (IF RUNNING $CCPY OR $KCOPY, SEE 'SCHEDULER WORK AREA' IN THE IBM SYSTEM/3 MODEL 10 DISK SYSTEM CONTRCL PROGRAMMING REFERENCE MANUAL, GC21-7512.

A C 12 45 23

REASON- AN ATTEMPT IS BEING MADE TO ALLOCATE A NEW FILE AND THERE IS INSUFFICIENT SPACE ON THE SPECIFIED UNIT. THAT IS, LOCATION HAS BEEN SPECIFIED AND THE NUMBER OF TRACKS REQUIRED EXCEED THE CAPACITY OF THE PACK.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBAELE USER ERROR.

CIA C 12 45

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

ALT/SUBHALT LOG		OPTIONS	REASON AND RECOVERY
CD		013	REASON- LINKAGE EDITOR ERROR.
ELA CD	IL		REASON- RPG II LINKAGE EDITOR IS ATTEMPTING TO CATALOG A PROGRAM WHEN A ROLLIN IS PENDING. RECOVERY- 0-- CATALOG IS IGNORED AND MODULE IS PUNCHED. 1-- RETRY. THE A CD HALT REAPPEARS: THIS OPTION WILL NOT CLEAR THE INQUIRY REQUEST. 3-- IMMEDIATE CANCEL.
EOA CD	IL		REASON- OVERLAY LINKAGE EDITOR IS ATTEMPTING TO CHANGE THE LIBRARY ON A PACK BEING USED. RECOVERY- 0-- PUNCH THE DECK INSTEAD OF THE CATALOG. 1-- RETRY. THE A CD HALT REAPPEARS: THIS OPTION WILL NOT CLEAR THE INQUIRY REQUEST. 3-- IMMEDIATE CANCEL.

CD1			REASON- THE HALT OCCURED FOR ONE OF THE FOLLOWING REASONS- 1. AN ERROR HAS OCCURRED ON AN INPUT/OUTPUT DEVICE SUPPORTED VIA AN RPQ ROUTINE. 2. AN ERROR HAS OCCURRED IN AN RPQ EXTERNAL SUBROUTINE. 3. AN OPERATOR ACTION IS REQUESTED BY AN RPQ ROUTINE. RECOVERY- PRESS SYSTEM START. A SECONDARY HALT IS DISPLAYED THAT INDICATES THE NAME OF THE RPQ ROUTINE. FOR EXAMPLE, IF ABD1235 IS DISPLAYED, THE SUBROUTINE NAME IS SUBR02. REFER TO THE REFERENCE MANUAL FOR THE RPQ ROUTINE FOR FURTHER HALT RECOVERY INFORMATION.

HALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
CD 5	3	REASON- THE HALT OCCURRED FOR ONE OF THE FOLLOWING REASONS- 1. FOR AN ASSEMBLER PROGRAM, THE DTF FORMS LENGTH IS ZERO AND THE MAXIMUM SKIP VALUE SPECIFIED IN THE DTF IS GREATER THAN THE PAGE SIZE FOR THAT TRACTOR. 2. FOR AN RPG II PROGRAM, THE LINE COUNTER SPECIFICATIONS HAVE BEEN OMITTED AND THE MAXIMUM SKIP VALUE SPECIFIED ON THE OUTPUT OR CALCULATIONS SPECIFICATIONS IS GREATER THAN THE PAGE SIZE FOR THAT TRACTOR. PROBABLE USER ERROR. RECOVERY- 3-- IMMEDIATE CANCEL.
DDA CD 5		
CD12	023	REASON- RPG II INDICATOR H6 IS ON. RECOVERY- 0-- CONTINUE TO HALT ACD1245. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.
CD1 3	123	REASON- A LEDGER CARD WAS IN THE DEVICE WHEN A READ OR WRITE COMMAND WAS ISSUED. EITHER AN EJECT COMMAND WAS OMITTED BETWEEN READ AND/OR WRITE COMMANDS, OR THE LEDGER CARD WAS LEFT IN THE DEVICE BY THE PREVIOUS JOB. RECOVERY- 1-- CONTINUE NORMAL PROCESSING. 2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. 3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

CD 23
CONTINUED)

RECOVERY- 0-- FOR THE 5496, READY DATA RECORDER AND CONTINUE. FOR THE 129, READY DATA RECORDER, PRESS FEED KEY TWICE, PRESS VEB/RES KEY TO RESET THE COLUMN INDICATOR TO 01, AND CONTINUE.

2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

CD 2 4

REASON- A TAPE DRIVE IS NOT AVAILABLE.

D12 4 CIA CD 2 4 AC 23

REASON- AN ATTEMPT HAS BEEN MADE TO ALLOCATE A TAPE DTF, HOWEVER, TAPE IS NOT SUPPORTED ON THE IBM SYSTEM/3 MODEL 6 SYSTEM.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

CD 2 5

REASON- AN ERROR OCCURRED WHEN TRYING TO USE A PUNCH DEVICE.

B 45 CIA CD 2 501 23

REASON- PROGRAM IS REQUESTING A 1442 CARD READ PUNCH. VDEVICE IS NOT SUPPORTED BY THE SYSTEM/3 MODEL 6 SYSTEM.

PROBABLE USER ERROR.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL. PROGRAM MUST BE RUN ON A SYSTEM/3 DISK SYSTEM.

CD1 4 CIA CD 2 502 23

REASON- THE HALT OCCURED FOR ONE OF THE FOLLOWING -REASONS-

1. THE 3741 IS NOT SUPPORTED, OR

2. THE 3741 IS ALLOCATED TO THE OTHER PROGRAM AND CANNOT BE USED BY THIS PROGRAM LEVEL.

RECOVERY 2- CONTROLLED CANCEL
3-- IMMEDIATE CANCEL.

A CD 45 3 REASON- THE PRINTER LINE LENGTH REQUESTED BY THE PROGRAM EXCEEDS THE ACTUAL SIZE OF THE PRINTER AS SPECIFIED AT SYSTEM GENERATION.

PROBABLE USER ERROR.

CIA CD 45 RECOVERY- 3-- IMMEDIATE CANCEL.

A CD123 3 REASON- REQUESTED PROGRAM NOT FOUND ON SPECIFIED FIXED DISK.

PROBABLE USER ERROR.

CIA CD123 RECOVERY- 3-- IMMEDIATE CANCEL.

A CD12 4 023 REASON- RPG II INDICATOR H2 IS ON.

RECOVERY- 0-- CONTINUE TO HALT ACD1245.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

A CD12 5 13 REASON- ERROR IN REBUILD STATEMENT OR CARD SEQUENCE ERROR.

PROBABLE USER ERROR.

URA CD12 5AT TRACK PARAMETER SPECIFIES AN ALTERNATE TRACK ADDRESS. THE PARAMETER MUST SPECIFY A PRIMARY TRACK.

URA CD12 5CI CONTINUATION IS INDICATED ON THE CONTROL STATEMENT, BUT A CONTINUATION IS NOT VALID.

URA CD12 5CS CARD SEQUENCE ERROR. ORDER OF CARDS SHOULD BE // REBUILD, DATA CARDS, AND // END.

URA CD12 5D1 INVALID DISPLACEMENT PARAMETER. CHARACTERS OF PARAMETER MUST BE NUMERIC.

URA CD12 5DK DUPLICATE KEYWORD.

URA CD12 5DL NUMBER OF HEXADECIMAL DIGITS ON DATA CARD DOES NOT AGREE WITH LENGTH PARAMETER ON REBUILD STATEMENT.

URA CD12 5IC TRACK PORTION OF TRACK PARAMETER EXCEEDS PACK CAPACITY.

URA CD12 5ID PARAMETER FOR DISP KEYWORD IS INVALID. IT IS NOT 1 THROUGH 255.

(HALT CONTINUED ON NEXT PAGE)

A CD1 3 5		0123	REASON- COMPARE ERROR DURING A READ OR PUNCH OPERATION FOR A 5496 OR DURING A READ OPERATION FOR A 129.
	ICA CD1 3 5		RECOVERY- 0-- CONTINUE. READ OR PUNCH NEXT CARD.
			1-- FOR THE 5496, PLACE CARD BACK IN HOPPER AND REREAD, OR REPUNCH LAST CARD. FOR THE 129, REPUNCH THE LAST CARD USING ONLY THE 64 VALID SYSTEM/3 PUNCH COMBINATIONS.
			2-- CONTROLLED CANCEL.
			3-- IMMEDIATE CANCEL.
A CD1 45		3	REASON- THE PROGRAM SPECIFIES A SECONDARY TRACTOR AND A SECONDARY TRACTOR IS NOT AVAILABLE.
	CIA CD1 45		RECOVERY- 3-- IMMEDIATE CANCEL.
A CD 234		23	REASON- PROGRAM IS REQUESTING DATA RECORDER. THIS DEVICE WAS NOT DEFINED AS PART OF THE SYSTEM AT SYSTEM GENERATION.
			PROBABLE USER ERROR.
	CIA CD 234		RECOVERY- 2-- CONTROLLED CANCEL.
			3-- IMMEDIATE CANCEL.

\ CD1234		3	REASON- AN INQUIRY REQUEST HAS BEEN ALLOWED, BUT THE PROGRAM TO BE EXECUTED IS THE WRONG TYPE. PROGRAMS THAT CANNOT BE EXECUTED UNDER THESE CONDITIONS ARE- 1. PROGRAMS THAT MUST RUN AS STAND-ALONE. 2. ALL // LOAD * PROGRAMS. PROBABLE USER ERROR.
	CIA CD1234		RECOVERY- 3-- IMMEDIATE CANCEL.
\ CD123 5			REASON- REQUESTED SOURCE PROGRAM NOT FOUND ON DISK SPECIFIED BY THE COMPILE STATEMENT. PROBABLE USER ERROR.
B 45	CIA CD123 501	3	REASON- SOURCE PROGRAM NOT FOUND ON THE FIXED DISK SPECIFIED BY THE COMPILE STATEMENT. RECOVERY- 3-- IMMEDIATE CANCEL.
CD1 4	CIA CD123 502	13	REASON- SOURCE PROGRAM NOT FOUND ON THE REMOVABLE DISK SPECIFIED BY THE COMPILE STATEMENT. RECOVERY- 1--RETRY AFTER MOUNTING THE CORRECT PACK. NOTE- RECOVERY 1 IS NOT ALLOWED IF THE REMOVABLE PACK IS ALSO BEING USED FOR SOME OTHER FUNCTION AND CANNOT BE REMOVED AT THIS TIME. 3-- IMMEDIATE CANCEL.
CD12 4	CIA CD123 503	3	REASON- A PERMANENT DISK ERROR HAS OCCURRED WHILE WRITING TO THE $SOURCE FILE. RECOVERY- 3-- IMMEDIATE CANCEL.

\ CD12345

REASCN- REQUESTED PROGRAM CANNOT BE FOUND.

B 45 CIA CD1234501 13

REASON- REQUESTED PROGRAM NOT FOUND ON THE SPECIFIED REMOVABLE PACK.

RECOVERY- 1-- RETRY AFTER MOUNTING THE CORRECT PACK.

3-- IMMEDIATE CANCEL.

CD1 4 CIA CD1234502 3

REASON- REQUESTED PROGRAM NOT FOUND ON THE SPECIFIED REMOVABLE PACK. THE REMOVABLE PACK IS ALSO BEING USED FOR SCME OTHER FUNCTION AND CANNOT BE REMOVED AT THIS TIME.

RECOVERY- 3-- IMMEDIATE CANCEL.

\ D1 23

REASON- BSCA. PROGRAM LOST CONTROL. NO DATA WAS TRANSMITTED OR RECEIVED WITHIN THE TIME LIMIT SPECIFIED ON THE TELECOMMUNICATIONS SPECIFICATION.

PROBABLE USER ERROR.

IBA D1

RECOVERY- 2-- CONTROLLED CANCEL.

NOTE- IF MORE THAN ONE BSCA FILE IS USED BY THIS PROGRAM, A SECOND BSCA HALT OR RECEIVE INITIAL MAY OCCUR. IF A SECOND BSCA HALT OCCURS, TAKE THE 2 OPTION FOR THAT HALT. IF RECEIVE INITIAL OCCURS, PERFORM THE PROGRAM LOAD PROCEDURE.

3-- IMMEDIATE CANCEL.

NOTE- FOR EITHER OPTION TAKEN, RETURN JOB TO PROGRAMMER.

D12 23 REASON- PARAMETER ERROR IN FILE STATEMENT.

PROBABLE USER ERROR.

CRA D12 01 INVALID NAME PARAMETER.

CRA D12 02 INVALID UNIT PARAMETER.

CRA D12 03 INVALID PACK PARAMETER.

CRA D12 04 INVALID LABEL PARAMETER.

CRA D12 05 INVALID RETAIN PARAMETER.

CRA D12 06 INVALID DATE PARAMETER.

CRA D12 07 INVALID RECORDS PARAMETER.

CRA D12 08 INVALID TRACKS PARAMETER.

CRA D12 09 INVALID LOCATION PARAMETER.

RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL FOR JOB IS READ AND CHECKED.

3-- IMMEDIATE CANCEL. REMAINING OCL FOR JOB IS READ BUT NOT CHECKED.

D1 3 23 REASON- THE TOTAL NUMBER OF VOLUMES SPECIFIED ON THE FILE STATEMENT FOR THIS JOB EXCEEDS 40.

PROBABLE USER ERROR.

CRA D1 3 RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL FOR JOB IS READ AND CHECKED.

3-- IMMEDIATE CANCEL. REMAINING OCL FOR JOB IS READ BUT NOT CHECKED.

NOTE- THE TOTAL NUMBER OF VOLUMES IS THE NUMBER OF PACKS SPECIFIED PLUS THE NUMBER OF HIKEYS SPECIFIED.

D 2 5 — OPTIONS: 23

REASON- PERMANENT ERROR, BSC PROGRAM OR BSCA HARDWARE. IF YOU DO NOT SPECIFY A PERMANENT ERROR INDICATOR, THIS HALT OCCURS WHEN AN ERROR IS FOUND.

IF YOU DO SPECIFY A PERMANENT ERROR INDICATOR, THE INDICATOR IS SET ON, AND CONTROL IS RETURNED TO THE OBJECT PROGRAM. PROCESSING CONTINUES.

POSSIBLE REASONS FOR THIS HALT ARE-

1. COMMUNICATION LINE IS NO LONGER AVAILABLE TO TRANSMIT OR RECEIVE DATA.

2. OTHER SYSTEM SENT INVALID MESSAGE.

IBA D 2 5

RECOVERY- 2-- CONTROLLED CANCEL.

NOTE- IF MORE THAN ONE BSCA FILE IS USED BY THIS PROGRAM, A SECOND BSCA HALT OR RECEIVE INITIAL MAY OCCUR. IF A SECOND BSCA HALT OCCURS, TAKE THE 2 OPTION FOR THAT HALT. IF RECEIVE INITIAL OCCURS, PERFORM THE PROGRAM LOAD PROCEDURE. IN EITHER CASE, RETURN THE JOB TO THE PROGRAMMER.

3-- IMMEDIATE CANCEL.

D 45 — OPTIONS: 12

REASON- ESCA. NO CONNECTION ON INITIALIZATION. THE SYSTEM YOU ARE TRYING TO CONNECT TO IS NOT READY TO CONNECT WITH THIS SYSTEM. THIS HALT WILL NOT NECESSARILY OCCUR AT THE BEGINNING OF THE PROGRAM. IT CAN OCCUR WHEN A DIFFERENT BSC FILE IS USED. THE POSSIBLE REASONS FOR NO CONNECTION ARE-

1. THE SYSTEM YOU ARE TRYING TO CONNECT TO IS NOT RUNNING THE JOB TO MATCH THE JOB BEING RUN ON YOUR SYSTEM.

2. THE DATA PHONE ON THE SYSTEM YOU ARE TRYING TO CONNECT TO IS NOT ON AUTO WHEN REQUIRED.

3. THE SYSTEM YOU ARE TRYING TO CONNECT TO IS NOT RUNNING A BSC JOB.

IBA D 45NC

RECOVERY- 1-- RETRY. IF THE HALT RECURS, CHECK WITH THE OTHER SYSTEM TO DETERMINE IF THEY ARE READY TO COMMUNICATE WITH YOU.

2-- CONTROLLED CANCEL.

(HALT CONTINUED ON NEXT PAGE)

D1 45 23 REASON- ESCA. THE PROGRAM IS ATTEMPTING TO SEND OR RECEIVE AN INVALID ASCII CHARACTER.

PROBABLE USER ERROR.

IBA D1 45 RECOVERY- 2-- CONTROLLED CANCEL.

NOTE- IF MORE THAN ONE BSCA FILE IS USED BY THIS PROGRAM, A SECOND BSCA HALT OR RECEIVE INITIAL MAY OCCUR. IF A SECOND BSCA HALT OCCURS, TAKE THE 2 OPTION FOR THAT HALT. IF RECEIVE INITIAL OCCURS, PERFORM THE PROGRAM LOAD PROCEDURE.

3-- IMMEDIATE CANCEL.

NOTE- RETURN THE JOB TO THE PROGRAMMER. CHECK IF ONLY VALID ASCII CHARACTERS ARE BEING USED. IF FILE TRANSLATION IS BEING USED, CHECK IF ALL CHARACTERS ARE BEING TRANSLATED PROPERLY.

D 2345 03 REASON- THE DIRECTLY ATTACHED 3741 IS NOT IN THE PROPER MODE.

RECOVERY- 0-- PUT THE 3741 INTO THE PROPER MODE. CONTINUE PROCESSING.

3-- IMMEDIATE CANCEL.

B 1 01 REASON- AN ENTRY CONTAINING A BLANK CARD OR STATEMENT IS ABOUT TO BE PLACED IN THE SOURCE OR PROCEDURE LIBRARY.

PROBABLE USER ERROR.

LM B 1 BC RECOVERY- 0-- CONTINUE. THE ENTRY CONTAINING BLANKS IS PLACED IN THE LIBRARY. THE ENTRY MAY NOT BE USABLE.

1-- CORRECT THE STATEMENT AND RETRY. THE NEXT STATEMENT ENTERED IS PROCESSED. THIS OPTION IS AVAILABLE ONLY WHEN INPUT IS FROM THE KEYBOARD.

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23 3 REASON- YOU HAVE USED KDE TO MAINTAIN A FILE AND HAVE SUPPLIED EITHER THE INCORRECT RECORD LENGTH, KEY FIELD LENGTH OR KEY FIELD START LOCATION.

U B 23 RECOVERY- 3-- IMMEDIATE CANCEL.

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2 4 13 REASON- INVALID DIU CONTROL CARD READ FROM DATA RECORDER. IMAGE OF CARD IN ERROR AND ERROR MESSAGES ASSOCIATED WITH THIS CARD PRECEDE THIS HALT.

PROBABLE USER ERROR.

U B 2 4 RECOVERY- 1-- CORRECT CARD AND RETRY.

3-- IMMEDIATE CANCEL.

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2 5 3 REASON- A CONVERSATIONAL UTILITY PROGRAM HAS NOT FOUND ONE OF ITS NEEDED PHASES ON THE PACK IT WAS LOADED FROM, OR A SITUATION HAS ARISEN WHICH IS A CONVERSATIONAL UTILITY PROGRAM PROBLEM.

U B 2 5 RECOVERY- 3-- IMMEDIATE CANCEL. CONTACT IBM FOR PROGRAMMING SUPPORT.

---

34 23 REASON- DIU FILE CONVERSION ERROR. DIU ERROR MESSAGE IS PRINTED BEFORE HALT CODE.

PROBABLE USER ERROR.

U B 34 RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

ALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
B 12 5		023	REASON- CRT PARITY ERROR. ONE OR MORE CHARACTERS BEING DISPLAYED MAY BE INCORRECT.
	D B 12 5		RECOVERY- 0-- RETRY.
			2-- CONTROLLED CANCEL.
			3-- IMMEDIATE CANCEL.
			NOTE- IF THIS ERROR RECURS, CONTACT IBM FOR HARDWARE SUPPORT.
B 1 45		03	REASON- AN INVALID STATEMENT WAS FOUND IN THE MASTER CHAINED PROCEDURE.
	CR B 1 45IN		INVALID NAME FOR PROCEDURE TO BE CALLED.
	CR B 1 45IS		INVALID STATEMENT IN PROCEDURE.
	CR B 1 45IU		INVALID UNIT FOR PROCEDURE TO BE CALLED.
	CR B 1 45MX		ATTEMPTING TO CHAIN MORE THAN 9 LEVELS OF PROCEDURES.
	CR B 1 45NC		A NON-CALL VERB IN A CHAINED PROCEDURE STATEMENT.
	CR B 1 45NF		PROCEDURE TO BE CALLED IS NOT IN PROCEDURE LIBRARY.
			RECOVERY- 0-- PROCEED TO NEXT STATEMENT.
			3-- IMMEDIATE CANCEL.
B 234		23	REASON- END OF AVAILABLE SPACE IN SOURCE LIBRARY.
			PROBABLE USER ERROR.
	U B 234		RECOVERY- 2-- CONTROLLED CANCEL. ALL RECORDS UP TO THE POINT WHERE THE HALT OCCURRED ARE RETAINED IN THE SOURCE LIBRARY ENTRY. RUN COPY TO PRINT FUNCTION OF LIBRARY MAINTENANCE PROGRAM TO DETERMINE THE LAST RECORD PLACED IN THE ENTRY.
			3-- IMMEDIATE CANCEL. SOURCE LIBRARY ENTRY IS LOST.

1234 0123

REASON- UNIDENTIFIED RECORD IN FILE. STATEMENT NUMBER 2 ON RPG II SOURCE LISTING INDICATES FILE IN ERROR

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. NEXT RECORD IS READ FROM THE FILE. THIS OPTION IS FOR DEMAND FILES ONLY.

1-- BYPASS TO BEGINNING OF RPG CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION DOES NOT APPLY TO DEMAND FILES.
FOR CHAINED FILES, THE READ MAY NOT BE FROM THE SAME FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

NOTE- IF SEQUENCE IS IMPORTANT AND DOUBLE BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.

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123 5 13

REASON- AN ATTEMPT IS BEING MADE TO REFERENCE A DISK FILE AND THE PACK NAME ON THE SPECIFIED UNIT DOES NOT MATCH THE // FILE STATEMENT PACK-SPECIFICATION, OR THE PACK MAY NOT BE INITIALIZED.

NOTE - THE PACK IS REMOVABLE.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B 123 5R

RECOVERY- 1-- RETRY AFTER THE CORRECT PACK IS MOUNTED.

3-- IMMEDIATE CANCEL.

HALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
B 12345		0123	REASON- UNIDENTIFIED RECORD IN FILE. ANY STATEMENT NUMBERS GREATER THAN 9 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE. NEXT RECORD IS READ FROM THE FILE. THIS OPTION IS FOR DEMAND FILES ONLY. 1-- BYPASS TO BEGINNING OF RPG CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION DOES NOT APPLY TO DEMAND FILES. FOR CHAINED FILES, THE READ MAY NOT BE FROM THE SAME FILE. 2-- CONTROLLED CANCEL. STORE TABLE AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL. NOTE- IF SEQUENCE IS IMPORTANT AND DOUBLE BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.
BC 1		123	REASON- RECORD WITH A SPECIFIED MATCH FIELD IS OUT OF SEQUENCE. STATEMENT NUMBER 9 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR. PROBABLE USER ERROR. RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.

BC 5 23 REASON- AN ATTEMPT IS BEING MADE TO USE AN EXISTING FILE AS AN OUTPUT FILE BUT NO LOCATION AND SPACE WAS SPECIFIED ON THE FILE STATEMENT.

IF YOU ARE USING COPYFILE WITH WORK-YES, THE FILE NAMED COPYO HAS THE SAME LABEL, LOCATION, AND PACK NAME AS THE FILE NAMED COPYIN. ONE OF THESE PARAMETERS MUST BE DIFFERENT.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI BC 5 RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL. IN ORDER TO RELOAD AN EXISTING FILE, LOCATION, AND TRACKS OR RECORDS MUST BE SPECIFIED.

BC 12 123 REASON- RECORD WITH A SPECIFIED MATCH FIELD IS OUT OF SEQUENCE. STATEMENT NUMBER 4 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR.

PROBABLE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

HALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
BC 3 5	123	REASON- RECORD UNIDENTIFIABLE OR OUT OF SEQUENCE. THIS HALT OCCURS ONLY FOR FILES WITH NUMERIC ENTRIES IN COLUMNS 15 AND 16 OF RPG II INPUT SPECIFICATIONS. STATEMENT NUMBER 1 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR. PROBABLE USER ERROR. RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.
BC 123	023	REASON- DESIRED LOGGING DEVICE WAS NOT DEFINED AS PART OF THE SYSTEM AT SYSTEM GENERATION. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE. LOGGING DEVICE IS UNCHANGED. RESUBMIT A CORRECT LOG STATEMENT. 2-- REMAINING OCL WILL BE READ AND SCANNED, BUT JOB WILL NOT BE EXECUTED. 3-- IMMEDIATE CANCEL.
CR BC 123		
BC 12 4	123	REASON- RECORD WITH A SPECIFIED MATCH FIELD IS OUT OF SEQUENCE. STATEMENT NUMBER 7 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR. PROBABLE USER ERROR. RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. 2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE. 3-- IMMEDIATE CANCEL.

BC 1 45 02

REASCN- AN INQUIRY REQUEST HAS BEEN RECEIVED AND ACCEPTED.

CC BC 1 45RD

RECOVERY- 0-- CONTINUE. IF THE DATA RECORDER WAS BEING USED BY THE INTERRUPTED PROGRAM, CLEAR ALL CARDS. PREPARE AND READY ANY DEVICES REQUIRED BY THE INTERRUPTING PROGRAM. IF SYSTEM IPL WAS FROM A REMOVABLE PACK, THAT PACK MUST NOT BE DISMOUNTED.

NOTE- IF THE 3741 WAS BEING USED BY THE INTERRUPTED PROGRAM, NOTE THE TRACK AND SECTOR ADDRESS ON THE 3741 DISPLAY SCREEN. THIS INFORMATION WILL BE NEEDED AT ROLLIN TIME. IF THE 3741 WILL NOT BE USED BY THE INTERRUPTING PROGRAM, DO NOT TAKE THE DEVICE OFFLINE. FOR 3741 CONSIDERATIONS DURING INQUIRY, SEE THE IBM SYSTEM/3 3741 REFERENCE MANUAL, GC21-5113.

2-- CONTROLLED CANCEL. THE INQUIRY REQUEST IS CANCELLED AND CONTROL IS GIVEN BACK TO THE INTERRUPTED PROGRAM.
NOTE- IF THE PRINTER IS BEING USED BY THE INTERRUPTED PROGRAM, RECORD THE NUMBER OF THE LINE PRINTED WHEN THE INQUIRY REQUEST IS ACCEPTED. THE PAPER IN THE PRINTER CAN THEN BE REPOSITIONED TO THIS LINE AFTER THE PROGRAM RESUMES EXECUTION.

NOTE- IF THE INQUIRY REQUEST SWITCH HAS BEEN SET ON ACCIDENTALLY, SELECT OPTION 2 TO RESUME YOUR JOB.

BC 123 5 23 REASON- ERROR IN LOG STATEMENT.

PROBABLE USER ERROR.

CR BC 123 50P NO PARAMETER SPECIFIED.

CR BC 123 51P INVALID PARAMETER.

RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL IS READ AND CHECKED.

3-- IMMEDIATE CANCEL. OCL IS READ BUT NOT CHECKED.

BC 12 45 123 REASON- RECORD WITH A SPECIFIED MATCH FIELD IS OUT OF SEQUENCE. STATEMENT NUMBER 1 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR.

PROBABLE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

BC 2345 3 REASON- AN ATTEMPT IS BEING MADE TO LOAD AN OBJECT PROGRAM, BUT THERE IS NO OBJECT LIBRARY ON THE SPECIFIED UNIT.

PROBABLE USER ERROR.

CI BC 2345 RECOVERY- 3-- IMMEDIATE CANCEL.

BCD 3		023	REASCN- ERROR IN FCRMS STATEMENT.
			PROBABLE USER ERROR.
	CR BCD 3 01		DUPLICATE KEYWORD.
	CR BCD 3 02		INVALID KEYWORD.
	CR BCD 3 03		ABNORMAL END OF STATEMENT.
	CR BCD 3 04		FORMAT CR PUNCTUATICN ERROR.
	CR BCD 3 05		DEVICE PARAMETER INVALID.
	CR BCD 3 06		INVALID DEVICE OR DEVICE NOT SUPPORTED.
	CR BCD 3 07		LINES GREATER THAN 112.
	CR BCD 3 08		LINES PARAMETER MISSING OR IS 0.
	CR BCD 3 09		NO PARAMETERS SPECIFIED.
	CR BCD 3 0A		LINES PARAMETER CONTAINS A NON-NUMERIC CHARACTER.
	CR BCD 3 0B		LINES OR DEVICE PARAMETER SPECIFIED BY A LIST OF DATA.
	CR BCD 3 0C		INVALID CONTINUATICN.
			RECOVERY- 0-- CONTINUE. IGNORE FORMS STATEMENT.
			2-- CONTROLLED CANCEL. REMAINING OCL IS READ AND CHECKED.
			3-- IMMEDIATE CANCEL. OCL IS READ BUT NOT CHECKED.

BCD1 4 13 REASON- ERROR IN ALT STATEMENT.

PROBABLE USER ERROR.

UA BCD1 4 A4 TOO MANY ALT STATEMENTS. ONLY FOUR ARE ALLOWED.

UA BCD1 4 AU BOTH ASSIGN AND UNASSIGN KEYWORDS FOUND.

UA BCD1 4 CX CONTINUATION IS INDICATED ON THE CONTROL STATEMENT BUT A CONTINUATION IS NOT VALID.

UA BCD1 4 DK DUPLICATE KEYWORD.

UA BCD1 4 IK INVALID KEYWORD. KEYWORD NOT PACK, UNIT, VERIFY, ASSIGN OR UNASSIGN.

UA BCD1 4 KM PACK OR UNIT KEYWORD IS MISSING.

UA BCD1 4 NP NO KEYWORDS OR PARAMETERS IN STATEMENT.

UA BCD1 4 P1 PACK KEYWORD MISSING, OR PARAMETER MISSING FOR PACK KEYWORD.

UA BCD1 4 P2 INVALID PARAMETER FOR PACK KEYWORD. PACK NAME MUST BE SIX CHARACTERS OR LESS, NO APOSTROPHES AND LEADING OR EMBEDDED BLANKS.

UA BCD1 4 SE FORMAT OR PUNCTUATION ERROR.

UA BCD1 4 T1 PARAMETER MISSING FOR ASSIGN OR UNASSIGN KEYWORD.

UA BCD1 4 T2 INVALID PARAMETER FOR ASSIGN OR UNASSIGN KEYWORD. MUST BE A TRACK NUMBER BETWEEN 8 AND 405.

UA BCD1 4 T3 TOO MANY TRACKS GIVEN FOR ASSIGN OR UNASSIGN KEYWORD. ONLY SIX TRACKS ARE ALLOWED.

UA BCD1 4 T4 THE PARAMETER FOR THE ASSIGN OR UNASSIGN KEYWORD CONTAINS DUPLICATE TRACK NUMBERS.

UA BCD1 4 U1 NO PARAMETER FOR UNIT KEYWORD.

UA BCD1 4 U2 INVALID PARAMETER FOR UNIT KEYWORD. IT MUST BE R1,R2,F1, OR F2.

UA BCD1 4 US THE REQUESTED DISK UNIT IS NOT ONLINE.

UA BCD1 4 V1 NO PARAMETER FOR VERIFY KEYWORD.

UA BCD1 4 V2 INVALID PARAMETER FOR VERIFY KEYWORD. IT MUST BE A DECIMAL NUMBER BETWEEN 1 AND 255.

RECOVERY- 1-- CORRECT AND RE-ENTER.

KEYBOARD INPUT-RE-ENTER STATEMENT.

CARD INPUT- CORRECT CARD IN ERROR, AND PLACE AHEAD OF CARDS IN HOPPER.

(HALT CONTINUED ON NEXT PAGE)

CD 34	023	REASON- ERROR IN LOG STATEMENT.
		PROBABLE USER ERROR.
CR BCD 34 0P		NO PARAMETER SPECIFIED.
CR BCD 34 IP		INVALID PARAMETER.
		RECOVERY- 0-- CONTINUE.
		2-- CONTROLLED CANCEL. REMAINING OCL IS READ AND CHECKED.
		3-- IMMEDIATE CANCEL. OCL IS READ BUT NOT CHECKED.

CD 3 5	0	REASON- ERROR IN FORMS STATEMENT.
		PROBABLE USER ERROR.
CR BCD 3 501		DUPLICATE KEYWORD.
CR BCD 3 502		INVALID KEYWORD.
CR BCD 3 503		ABNORMAL END OF STATEMENT.
CR BCD 3 504		FORMAT OR PUNCTUATION ERROR.
CR BCD 3 505		DEVICE PARAMETER INVALID.
CR BCD 3 506		INVALID DEVICE OR DEVICE NOT SUPPORTED.
CR BCD 3 507		LINES GREATER THAN 112.
CR BCD 3 508		LINES PARAMETER MISSING OR IS 0.
CR BCD 3 509		NO PARAMETERS SPECIFIED.
CR BCD 3 50A		LINES PARAMETER CONTAINS A NON-NUMERIC CHARACTER.
CR BCD 3 50B		LINES OR DEVICE PARAMETER SPECIFIED BY A LIST OF DATA.
CR BCD 3 50C		INVALID CONTINUATION.
		RECOVERY- 0-- CONTINUE. IGNORE FORMS STATEMENT.

BCD12 4
(CONTINUED)

3-- IMMEDIATE CANCEL.

WARNING- IF RUNNING FILE DELETE, ANY FILES THAT HAVE BEEN SPECIFIED IN PREVIOUS CONTROL STATEMENTS FOR THIS JOB WILL NOT BE REMOVED OR SCRATCHED FROM VTOC. IF DATA-YES WAS USED, THE DATA FOR PREVIOUS FILES HAS ALREADY BEEN REMOVED.

D12 5 13 REASON- ERROR IN UIN STATEMENT.

PROBABLE USER ERROR.

UI BCD12 5AE STATEMENT ENDED IN MIDDLE OF KEYWORD.

UI BCD12 5CE TOO MANY UIN STATEMENTS. ONLY ONE IS ALLOWED.

UI BCD12 5CX CONTINUATION IS INDICATED ON THE CONTROL STATEMENT BUT A CONTINUATION IS NOT VALID.

UI BCD12 5DK DUPLICATE KEYWORD.

UI BCD12 5E1 PARAMETER FOR ERASE KEYWORD IS MISSING.

UI BCD12 5E2 PARAMETER FOR ERASE KEYWORD INVALID. MUST BE YES OR NO.

UI BCD12 5IC INVALID COMBINATION OF TYPE AND ERASE PARAMETERS.

UI BCD12 5IK INVALID KEYWORD.

UI BCD12 5NP NO KEYWORDS OR PARAMETERS IN STATEMENT.

UI BCD12 5P1 PARAMETER FOR THE CAP KEYWORD IS MISSING.

UI BCD12 5P2 PARAMETER FOR THE CAP KEYWORD IS A SUBLIST THAT IS NOT ALLOWED.

UI BCD12 5P3 PARAMETER FOR THE CAP KEYWORD IS NEITHER HALF NOR FULL.

UI BCD12 5SE FORMAT OR PUNCTUATION ERROR.

UI BCD12 5T1 PARAMETER FOR TYPE KEYWORD IS MISSING.

UI BCD12 5T2 PARAMETER FOR TYPE KEYWORD INVALID.

UI BCD12 5U1 UNIT KEYWORD MISSING OR UNIT KEYWORD PARAMETER MISSING.

UI BCD12 5U2 PARAMETER FOR UNIT KEYWORD INVALID. MUST BE R1,R2,F1,OR F2.

UI BCD12 5U4 UNIT SPECIFIED MORE THAN ONCE. FOR EXAMPLE R1,R1.

UI BCD12 5U5 UNIT SPECIFIED IN UNIT PARAMETER IS A PACK FROM WHICH

(HALT CONTINUED ON NEXT PAGE)

BCD 2 45	23	REASCN- ERROR IN FORMS STATEMENT.
		PROBABLE USER ERROR.
CR BCD 2 4501		DUPLICATE KEYWORD.
CR BCD 2 4502		INVALID KEYWORD.
CR BCD 2 4503		ABNORMAL END OF STATEMENT.
CR BCD 2 4504		FORMAT OR PUNCTUATION ERROR.
CR BCD 2 4505		DEVICE PARAMETER INVALID.
CR BCD 2 4506		INVALID DEVICE OR DEVICE NOT SUPPORTED.
CR BCD 2 4507		LINES GREATER THAN 112.
CR BCD 2 4508		LINES PARAMETER MISSING OR IS 0.
CR BCD 2 4509		NO PARAMETERS SPECIFIED.
CR BCD 2 450A		LINES PARAMETER CONTAINS A NON-NUMERIC CHARACTER.
CR BCD 2 450B		LINES OR DEVICE PARAMETER SPECIFIED BY A LIST OF DATA.
CR BCD 2 450C		INVALID CONTINUATION.
		RECOVERY- 2-- CONTROLLED CANCEL. REMAINING OCL IS READ AND CHECKED.
		3-- IMMEDIATE CANCEL. OCL IS READ BUT NOT CHECKED.

BCD 345	23	REASCN- ERROR IN COMPILE STATEMENT.
		PROBABLE USER ERROR.
CR BCD 34501		SOURCE NAME DOES NOT CONSIST OF A SINGLE PARAMETER.
CR BCD 34502		FIRST CHARACTER OF SOURCE NAME INVALID.
CR BCD 34504		SOURCE NAME EXCEEDS SIX CHARACTERS.
CR BCD 34505		UNIT DOES NOT CONSIST OF A SINGLE PARAMETER.
CR BCD 34506		UNIT PARAMETER IS NOT R1, R2, F1, OR R2.
CR BCD 34507		F2 OR R2 SPECIFIED ON UNIT PARAMETER, BUT THESE UNITS ARE NOT ON LINE.
CR BCD 34508		OBJECT PARAMETER DOES NOT CONSIST OF SINGLE PARAMETER.
CR BCD 34509		OBJECT PARAMETER IS NOT R1, R2, F1, OR F2.
CR BCD 3450A		F2 OR R2 SPECIFIED ON OBJECT PARAMETER, BUT THESE UNITS

(HALT CONTINUED ON NEXT PAGE)

BCD123 5	13	REASON- ERROR IN SCRATCH OR REMOVE STATEMENT.
		PROBABLE USER ERROR.
UF BCD123 5A2		DATA PARAMETER NOT DATA-YES OR DATA-NO.
UF BCD123 5A4		DATA-YES USED IN SCRATCH STATEMENT.
UF BCD123 5CX		CONTINUATION IS INDICATED ON THE CONTROL STATEMENT, BUT A CONTINUATION IS NOT VALID.
UF BCD123 5D1		DATE KEYWORD PARAMETER MISSING.
UF BCD123 5D2		DATE KEYWORD PARAMETER NOT A VALID SIX CHARACTER DATE.
UF BCD123 5D3		DATE KEYWORD IS NOT VALID WHEN LABEL PARAMETER CONTAINS MORE THAN ONE NAME OR WHEN THE LABEL PARAMETER IS VTOC.
UF BCD123 5DK		DUPLICATE KEYWORD.
UF BCD123 5IK		KEYWORD INVALID.
UF BCD123 5KM		KEYWORD MISSING- UNIT, LABEL, OR PACK.
UF BCD123 5L1		LABEL KEYWORD PARAMETER MISSING.
UF BCD123 5L2		LABEL KEYWORD PARAMETER IS NOT VTOC OR IS NOT A VALID 8 CHARACTER OR LESS FILE NAME.
UF BCD123 5NP		NO KEYWORDS OR PARAMETERS IN STATEMENT.
UF BCD123 5P1		PACK KEYWORD PARAMETER MISSING.
UF BCD123 5P2		PACK KEYWORD PARAMETER IS NOT A VALID SIX CHARACTER OR LESS ID.
UF BCD123 5PE		WHILE ENTERING PACK AND UNIT KEYWORDS WHERE DUPLICATE UNIT KEYWORDS HAVE BEEN SPECIFIED, DIFFERENT PACK KEYWORD PARAMETERS WERE ENTERED.
UF BCD123 5SE		FORMAT OR PUNCTUATION ERROR.
UF BCD123 5U1		UNIT KEYWORD PARAMETER MISSING.
UF BCD123 5U2		UNIT KEYWORD PARAMETER NOT R1, R2, F1, OR F2.
UF BCD123 5US		THE REQUESTED DISK UNIT IS NOT ONLINE.
		RECOVERY- 1-- RETRY. CORRECT AND RE-ENTER.
		3-- IMMEDIATE CANCEL.
		WARNING- ANY FILES THAT HAVE BEEN SPECIFIED IN PREVIOUS CONTROL STATEMENTS FOR THIS JOB WILL NOT BE REMOVED OR SCRATCHED FROM VTOC IF DATA-YES WAS USED, THE DATA FOR PREVIOUS FILES HAS ALREADY BEEN REMOVED.

BCD12345
CONTINUED)

1235

REASON- THE DISK ERROR OCCURRED IN THE SYSTEM WORK AREA OF THE UNIT INDICATED BY THE ALPHABETIC PART OF THE DISPLAY.

1245

REASON- THE DISK ERROR OCCURRED IN THE SOURCE LIBRARY OF THE UNIT INDICATED BY THE ALPHABETIC PART OF THE DISPLAY.

135

REASON- THE DISK ERROR OCCURRED ON CYLINDER 0 OF THE UNIT INDICATED BY THE ALPHABETIC PART OF THE DISPLAY. THE PACK IS PROBABLY UNUSEABLE.

34

REASON- THE DISK ERROR OCCURRED IN THE OBJECT LIBRARY OF THE UNIT SPECIFIED BY THE ALPHABETIC PART OF THE DISPLAY.

1345

REASON- THE DISK ERROR OCCURRED IN THE INQUIRY WORK AREA OF THE UNIT INDICATED BY THE ALPHABETIC PART OF THE DISPLAY.

RECOVERY---A. PRESS SYSTEM START. ABCD12345 IS THEN DISPLAYED IN THE HALT LIGHTS IF INPUT IS FROM CARDS. READY IS PROMPTED IF THE SYSTEM IS IN CONVERSATIONAL MODE.

B. RERUN THE JOB. IF THE HALT RECURS, PERFORM THE FOLLOWING-

C. INITIALIZE THE DISK INDICATED BY THE ALPHABETIC PART OF THE DISPLAY USING THE CLEAR TYPE OF INITIALIZATION.

D. REBUILD THE SYSTEM OR DATA ON THE INITIALIZED DISK.

E. RERUN THE JOB. IF THE BCD12345 HALT RECURS, PERFORM THE FOLLOWING-

F. RECORD CONTENTS OF THE ARR. SEE PROCEDURES LATER IN THE DESCRIPTION OF THIS HALT ON HOW TO READ THE ARR.

G. CONTACT IBM FOR HARDWARE SUPPORT.

NOTE- IF THE DISK ERROR OCCURRED ON A REMOVABLE PACK AND THE SYSTEM HAS TWO DISK

(HALT CONTINUED ON NEXT PAGE)

BCD12345
CONTINUED)

TO READ ARR-

A. PRESS SYSTEM STOP.
B. SET LSR DISPLAY SELECTOR ON CE PANEL TO ARR.
C. SET REGISTER DISPLAY UNIT TO LSR HI LSR LO.
D. RECORD CONTENTS OF ARR.
E. SET LSR DISPLAY SELECTOR ON CE PANEL TO NORMAL.

NOTE- SAVE THE CONTENTS OF THE ARR THAT YOU RECORDED. THE CONTENTS OF THE ARR INDICATE THE OPERATION BEING PERFORMED WHEN THE DISK ERROR OCCURRED.

THERE IS ALSO A HALT BCD12345 FOLLOWED BY A SECONDARY HALT ABD2345. THE REASON FOR THE SECONDARY HALT ABD2345 IS THAT THE DISK ERROR OCCURED DURING PROGRAM LOAD. THE RECOVERY IS TO PERFORM THE PROGRAM LOAD PROCEDURE AGAIN. IF THE HALT CONTINUES TO OCCUR, RECORD THE CONTENTS OF THE ARR AND CONTACT IBM FOR HARDWARE SUPPORT.

D | 3

REASON- THE SPECIFIED ACTIVE FILE CANNOT BE FOUND IN THE LIST OF SCRATCH FILES.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B D

RECOVERY- 3-- IMMEDIATE CANCEL. CHECK FILE STATEMENT. IF FILE STATEMENT IS CORRECT, DISPLAY VTOC TO DETERMINE IF FILE IS STILL ON DISK.

B D 4 3 REASON- THE FILE CANNOT BE FOUND AND NO TRACKS OR RECORDS PARAMETERS ARE GIVEN.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B D 4 RECOVERY- 3-- IMMEDIATE CANCEL. TO CORRECT THE PROBLEM-

A. IF THE OLD FILE WAS WANTED, THE JOB WAS PROBABLY STARTED WITH THE WRONG PACK ON LINE. MOUNT CORRECT PACK.

B. IF A NEW FILE WAS DESIRED, EITHER TRACKS OR RECORDS MUST BE SPECIFIED.

B D 5 3 REASON- DISK PACK NOT AVAILABLE. A DISK FILE HAS BEEN REFERENCED BUT THE REQUESTED PACK IS NOT AVAILABLE BECAUSE -

1. AN ATTEMPT IS BEING MADE TO REFERENCE A DISK FILE AND THE PACK NAME OF THE SPECIFIED UNIT DOES NOT MATCH THE // FILE STATEMENT PACK- SPECIFICATION. HOWEVER, THE REFERENCED PACK CANNOT BE DISMOUNTED.

2. THE SAME UNIT WAS PREVIOUSLY REQUESTED IN THE CURRENT OCL WITH A DIFFERENT PACK NAME AND THE OCL DID NOT SPECIFY THAT THE PACK COULD BE CHANGED.

3. AN OFFLINE MULTIVOLUME FILE HAS BEEN SPECIFIED ON THE PROGRAM, SYSTEM, OR IPL PACK.

4. THE PACK MAY NOT BE INITIALIZED.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B D 5 RECOVERY- 3-- IMMEDIATE CANCEL.

B D1 4 — 123

REASCN- RECORD UNIDENTIFIABLE OR OUT OF SEQUENCE. THIS HALT CCCURS ONLY FOR FILES WITH NUMERIC ENTRIES IN COLUMNS 15 AND 16 OF RPG II INPUT SPECIFICATIONS. STATEMENT NUMBER 6 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR.

PROEAELE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

B D1 5 — 123

REASCN- RECORC UNIDENTIFIABLE OR OUT OF SEQUENCE. THIS HALT OCCURS ONLY FOR FILES WITH NUMERIC ENTRIES IN CCLUMNS 15 ANC 16 OF RPG II ,INPUT SPECIFICATIONS. STATEMENT NUMBER 8 ON THE RPG II SOURCE LISTING INDICATES THE FILE IN ERROR.

PROBAELE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE.

2-- CONTROLLEC CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

B D 23 — 0123

REASCN- UNIDENTIFIED RECORD IN FILE. STATEMENT NUMBER 4 ON RPG II SOURCE LISTING INDICATES FILE IN ERROR

PROBAELE USER ERROR.

RECOVERY- 0-- CONTINUE. NEXT RECORD IS READ FROM THE FILE. THIS OPTION IS FOR DEMAND FILES ONLY.

1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION DOES NOT APPLY TO DEMAND FILES. FOR CHAINED FILES, THE READ MAY NOT BE FROM THE SAME FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

NOTE- IF SEQUENCE IS IMPORTANT AND DOUBLE BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.

B D 3 5 0123

REASCN- UNIDENTIFIED RECORD IN FILE. STATEMENT NUMBER 5 ON RPG II SOURCE LISTING INDICATES FILE IN ERROR.

PROBAELE USER ERROR.

RECOVERY- 0-- CONTINUE. NEXT RECORD IS READ FROM THE FILE. THIS OPTION IS FOR DEMAND FILES ONLY.

1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION DOES NOT APPLY TO DEMAND FILES. FOR CHAINED FILES, THE READ MAY NOT BE FROM THE SAME FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

NOTE- IF SEQUENCE IS IMPORTANT AND DOUBLE BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.

B D 45 3

REASCN- A REFERENCED DISK FILE HAS BEEN FOUND ON THE SPECIFIED UNIT. HOWEVER,THE LOCATION IS NOT THE SAME AND NO SPACE WAS SPECIFIED.

PROBAELE USER ERROR.

CI B D 45

RECOVERY- 3-- IMMEDIATE CANCEL. IF THE LOCATION IS GIVEN BUT IS DIFFERENT, A NEW OUTPUT FILE IS TO BE CREATED. THEREFORE EITHER TRACKS OR RECORDS MUST BE SPECIFIED.

B D1 3 5 — OPTIONS: 123

REASON- RECORD UNIDENTIFIABLE OR OUT OF SEQUENCE. THIS THIS HALT OCCURS ONLY FOR FILES WITH NUMERIC ENTRIES IN COLUMNS 15 AND 16 OF RPG II INPUT SPECIFICATIONS. ANY STATEMENT NUMBERS GREATER THAN 9 ON THE RPG II SOURCE LISTING INDICATE THE FILES IN ERROR.

PROBABLE USER ERROR.

RECOVERY- 1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

B D1 45 — OPTIONS: 23

REASON- EITHER NO FILE STATEMENT OR AN INCORRECT FILE STATEMENT WAS READ FOR A FILE USED BY THE CURRENT PROGRAM.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B D1 45

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

B D 234 — OPTIONS: 0123

REASON- UNIDENTIFIED RECORD IN FILE. STATEMENT NUMBER 7 ON RPG II SOURCE LISTING INDICATES FILE IN ERROR.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. NEXT RECORD IS READ FROM THE FILE. THIS OPTION IS FOR DEMAND FILES ONLY.

1-- BYPASS TO BEGINNING OF RPG II CYCLE AND READ AGAIN FROM THIS FILE. THIS OPTION DOES NOT APPLY TO DEMAND FILES. FOR CHAINED FILES, THE READ MAY NOT BE FROM THE SAME FILE.

2-- CONTROLLED CANCEL. STORE TABLES AND EXECUTE LR CALCS AND LR OUTPUT IF AVAILABLE.

3-- IMMEDIATE CANCEL.

NOTE- IF SEQUENCE IS IMPORTANT AND DOUBLE BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.

B D 345 — 3

REASON- THE FILE YOU ARE REFERENCING IS A SYSTEM/3 BASIC FILE, OR THE FILE NAME OF THE FILE YOU ARE CREATING IS ALREADY USED BY A SYSTEM/3 BASIC FILE. SYSTEM/3 BASIC FILE NAMES MUST BE UNIQUE.

PROBABLE USER ERROR.

CI B D 345

RECOVERY- 3-- IMMEDIATE CANCEL.

B D1234 — 23

REASON- THERE IS INSUFFICIENT STORAGE AVAILABLE FOR THE NUMBER OF FILES TO BE PROCESSED.

PROBABLE USER ERROR.

CI B D1234

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL. REDUCE THE NUMBER OF FILES TO BE PROCESSED.

B D123 5

REASON- AN ATTEMPT IS BEING MADE TO ALLOCATE SPACE THAT IS NOT AVAILABLE.

B 45 — CI B D123 501 — 23

REASON- THIS HALT OCCURRED FOR ONE OF THE FOLLOWING REASONS:

1. AN ATTEMPT IS BEING MADE TO ALLOCATE A NEW DISK FILE AND EITHER THERE IS INSUFFICIENT SPACE ON THE PACK OR THE SPECIFIED TRACK LOCATION IS NOT AVAILABLE.

2. DURING A DISK COPY WITH WORK-YES OR DURING A DISK SORT WITH A DEFERRED MOUNT OF THE OUTPUT FILE, AN ATTEMPT IS BEING MADE TO ALLOCATE A NEW FILE, AND THE SAME FILE ALREADY EXISTS ON THE REFERENCED VOLUME.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

B D 2345
(CONTINUED)

BUFFERING IS BEING USED TO PROCESS A CARD FILE, THE 3 OPTION SHOULD BE SELECTED FOR THIS HALT. IF THE 0 OR 1 OPTION IS SELECTED, THE CARDS MAY BE PROCESSED OUT OF ORDER.

D12345 — 23

REASON- THIS HALT OCCURRED FOR ONE OF THE FOLLOWING REASONS-

1. AN ATTEMPT IS BEING MADE TO ALLOCATE A NEW FILE, AND THE SAME FILE ALREADY EXISTS ON THE REFERENCED VOLUME IN A DIFFERENT LOCATION. THE EXISTING FILE HAS THE CURRENT SYSTEM DATE OR THE SAME JOB DATE AS THE NEW FILE.

2. DURING A DISK COPY WITH WORK-YES OR DURING A DISK SORT WITH A DEFERRED MOUNT OF THE OUTPUT FILE, AN ATTEMPT IS BEING MADE TO ALLOCATE A NEW FILE, AND THE SAME FILE ALREADY EXISTS ON THE REFERENCED VOLUME. THE EXISTING FILE HAS THE CURRENT SYSTEM DATE OR THE SAME JOB DATE AS THE NEW FILE.

3. AN ATTEMPT IS BEING MADE TO ALLOCATE A MULTIVOLUME FILE, AND THE VOLUME ID IS NOT UNIQUE.

FILE NAME IS LOGGED BEFORE HALT CODE.

PROBABLE USER ERROR.

CI B D12345

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

C 2 | 123

REASON- THE LEDGER CARD EJECTED FROM THE DEVICE IS FULL.

RECOVERY- 1-- WHEN THE LCD INDICATOR LIGHT TURNS ON, INSERT A BLANK LEDGER CARD IN THE INPUT CHUTE TO CONTINUE PROCESSING.

2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE.

3-- IMMEDIATE CANCEL.

C 4 | 23

REASCN- MICR. PERMANENT DISK I/O ERROR WHILE CREATING FILE F1255 FOR THIS JOB.

UM C 4 DE

RECOVERY- 2-- CONTROLLED CANCEL. END OF JOB TOTALS ARE PRINTED. RERUN JOB.

3-- IMMEDIATE CANCEL.

C 5 | 03

REASCN- ERROR FOUND WHEN ATTEMPTING TO PERFORM A LIBRARY FUNCTION.

PROBABLE USER ERROR.

LM C 5EP

ATTEMPTING TO COPY A SYSTEM (LIBRARY-0,NAME-SYSTEM) OR ALL LIBRARIES (LIBRARY-ALL,NAME-ALL) TO A LIBRARY THAT IS:

1. NOT EMPTY,
2. NOT ALLOCATED WITH A SCHEDULER WORK AREA AS LARGE AS THE FROM LIBRARY SCHEDULER WORK AREA, OR
3. NOT ALLOCATED SUFFICIENT SPACE.

LM C 5NS

ATTEMPTING TO COPY A SYSTEM BUT IT DOES NOT EXIST ON THE FROM PACK.

LM C 5S7

ATTEMPTING TO USE A PACK THAT CONTAINS A SYSTEM/7 SYSTEM.

RECOVERY - 0-- CONTINUE. IGNORE THE REQUEST. NEXT CONTROL STATEMENT IS PROCESSED.

3-- IMMEDIATE CANCEL.

HALT/SUBHALT	LOG	OPTIONS	REASON AND RECOVERY
C 34		123	REASON- A FULL LEDGER CARD WAS INSERTED IN THE INPUT CHUTE DURING ERROR RECOVERY PROCEDURES. RECOVERY- 1-- CONTINUE WITH THE RECOVERY PROCEDURES FOR THE HALT THAT PRECEDED THIS C34 HALT. 2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. 3-- IMMEDIATE CANCEL.
C 3 5		23	REASON- AN INVALID COMMAND WAS ISSUED TO THE LEDGER CARD DEVICE. HALT AC235 PRECEDED THIS HALT. RECOVERY- 2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. 3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD. NOTE- IT IS RECOMMENDED THAT A CORE STORAGE DUMP BE TAKEN RATHER THAN SELECTING AN OPTION. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL. CONTACT IBM FOR PROGRAMMING SUPPORT.
C 123		02	REASON- DISK SORT. DURING THE GENERATION PHASE OF THIS JOB, NO SEVERE OR TERMINAL ERRORS WERE FOUND. HOWEVER, A NUMBER OF WARNING ERRORS WERE FOUND. THE OPERATOR MUST DECIDE WHETHER TO CONTINUE OR CANCEL THE JOB. PROBABLE USER ERROR. RECOVERY- 0-- CONTINUE JOB. THE WARNING MESSAGES HAVE BEEN PRINTED IF LOG IS NOT OFF AND THE PRINT OPTION IN THE HEADER STATEMENT IS 0. IF THE WARNINGS WERE EXPECTED AND TOLERABLE, SELECT THIS OPTION. IT IS BEST TO ELIMINATE ALL ERROR CONDITIONS. IF NOT, WARNING MESSAGES SHOULD BE PRINTED BY SETTING THE PRINT OPTION ON HEADER STATEMENT TO 0. THE OPERATOR SHOULD KNOW WHAT MESSAGES TO EXPECT OR, AT LEAST, THE TOTAL NUMBER OF ERRORS TO EXPECT. 2-- CONTROLLED CANCEL.

234	23	REASON- AN UNRECOVERABLE LEDGER CARD DEVICE HARDWARE ERROR HAS OCCURRED. RECOVERY- 2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. 3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD. NOTE- IT IS RECOMMENDED THAT A CORE STORAGE DUMP BE TAKEN RATHER THAN SELECTING AN OPTION. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL. CONTACT IBM FOR PROGRAMMING SUPPORT.
23 5	123	REASON- THE IDENTIFICATION NUMBER OF THE CARD INSERTED TO RECOVER FROM AN ERROR DOES NOT MATCH THE IDENTIFICATION NUMBER OF THE CARD IN ERROR, OR A BLANK CARD WAS INSERTED WHEN AN INITIALIZED CARD WAS REQUIRED. RECOVERY- 1-- CARD WILL BE EJECTED INTO THE OUTPUT TRAY. WHEN THE LCD INDICATOR LIGHT TURNS ON, INSERT THE CORRECT LEDGER CARD IN THE INPUT CHUTE. 2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. 3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

C 1 345 123

REASON- A LEDGER CARD DEVICE UNIT CHECK OCCURRED WHILE A CARD WAS BEING EJECTED DURING ERROR RECOVERY PROCEDURES OF ANOTHER HALT.

RECOVERY- 1-- PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD. CONTINUE WITH THE RECOVERY PROCEDURES FOR THE HALT THAT PRECEEDED THIS C1345 HALT.

2-- CONTROLLED CANCEL. NO FURTHER RPG II PROCESSING OF THE LEDGER CARD WILL BE DONE. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

3-- IMMEDIATE CANCEL. PRESS THE CARD EJECT SWITCH TO MANUALLY REMOVE THE CARD.

C 2345 23

REASON- MICR FILE F1255 CREATED FOR THIS JOB IS FULL.

PROBABLE USER ERROR.

UM C 2345EX

RECOVERY- 2-- CONTROLLED CANCEL. RERUN JOB ASSIGNING MORE TRACKS OR RECORDS TO FILE.

3-- IMMEDIATE CANCEL.

CD 3

REASON- A BLOCK LENGTH GREATER THAN 256 BYTES HAS BEEN FOUND BY THE PSEUDO TAPE ACCESS METHOD.

C 2 DT CD P

RECOVERY- 3-- IMMEDIATE CANCEL. CONTACT IBM FOR PROGRAMMING SUPPORT.

HALT/SUBHALT LOG	OPTIONS	REASON AND RECOVERY
CD1 3	03	REASON- DATE STATEMENT FOUND BETWEEN JOBS. DATE STATEMENT MUST BE BETWEEN LOAD OR CALL STATEMENT, AND RUN STATEMENT. PROBABLE USER ERROR. RECOVERY- 0-- IGNORE DATE STATEMENT AND CONTINUE. 3-- IMMEDIATE CANCEL.
CR CD1 3		
CD 23	0	REASON- DISK SORT IS IN THE DEBUG MODE. SORT HAS EITHER COMPLETED AN INTERNAL GENERATION PHASE OR HAS COMPLETED A PASS. RECOVERY- 0-- CONTINUE WITH THE SORT.
CD 2 5	3	REASON- A DISK SORT PROGRAM ERROR HAS BEEN ENCOUNTERED. RECOVERY- 3-- IMMEDIATE CANCEL. SAVE RELEVANT DATA AND CONTACT IBM FOR PROGRAMMING SUPPORT. NOTE- IF POSSIBLE, TAKE A CORE STORAGE DUMP RATHER THAN SELECTING OPTION 3. FOR INFORMATION ON HOW TO TAKE A CORE STORAGE DUMP, SEE THE INTRODUCTORY SECTION OF THIS MANUAL.
CD 34	23	REASON- DISK SORT. DISK I/O ERROR. A PERMANENT ERROR HAS OCCURRED WHILE WRITING THE SORTED RECORDS ON THE OUTPUT FILE. RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL. NOTE- SORT CANNOT CONTINUE. TO RERUN, CHANGE THE TRACK LOCATION OF THE OUTPUT FILE OR RUN ALTERNATE TRACK ASSIGNMENT PROGRAM.

CD123
(CONTINUED)

PT TO PT

FOR MANUAL DIAL-- CONNECTION NOT MADE WITHIN APPROXIMATELY TWO MINUTES.

FOR AUTO CALL -- 1. CONNECTION NOT MADE WITHIN APPROXIMATELY TWO MINUTES, OR

2. ''ABANDON AND RETRY'' SIGNAL RECEIVED FROM AUTO CALL UNIT.

FOR POINT TO POINT-- LINE IS NOT PROPERLY CONNECTED.

RECOVERY- 1-- RETRY. FOR SWITCHED LINE, ATTEMPT TO ESTABLISH CONNECTION WITHIN TWO MINUTES OF TIME THIS OPTION IS TAKEN.
FOR POINT TO POINT, CHECK LINE CONNECTION.

2-- CONTROLLED CANCEL.

MW CD123 EE 02

REASON- END-OF-EXTENT HAS OCCURRED WHILE WRITING A PERMANENT DISK FILE. THE MESSAGE LOGGED FOR THIS ERROR IS: END-OF-EXTENT CREATING PERMANENT FILE FILENAME, WHERE ''FILENAME'' INDICATES THE FILE ON WHICH END-OF-EXTENT HAS OCCURRED.

RECOVERY- 0-- DEACTIVATE THE PRINTER OR PUNCH TASK. THE VTOC IS UPDATED WITH THE SPECIFIED FILENAME.

2-- DEACTIVATE THE PRINTER OR PUNCH TASK. THE VTOC IS NOT UPDATED.

MW CD123 FM 01

REASON- THE ERROR HAS OCCURRED FOR ONE OF THE FOLLOWING REASONS:

1. A REQUEST TO MOUNT FORMS HAS BEEN RECEIVED. THE MESSAGE LOGGED FOR THIS ERROR IS: MOUNT FORMS NNNN ON DEVICE NAME, WHERE ''NNNN'' INDICATES THE FORMS TO BE LOADED AND ''DEVICE NAME'' INDICATES THE DEVICE ON WHICH TO LOAD THEM.

2. A REQUEST TO MOUNT FORMS HAS BEEN RECEIVED WHILE THE DEVICE IS SPOOLING TO DISK. THE MESSAGE LOGGED FOR THIS ERROR IS: FORMS MOUNT NNNN ON DEVICE NAME SUSPENDED, WHERE ''NNNN'' INDICATES THE FORMS TO BE LOADED AND THE ''DEVICE NAME'' INDICATES THE DEVICE ON WHICH TO LOAD THEM.

RECOVERY- 0-- CONTINUE. THE MRJE/WS PROGRAM ISSUES A CENTRAL SYSTEM START COMMAND TO START THE OUTPUT.

(HALT CONTINUED ON NEXT PAGE)

CD123
CONTINUED)

IN A READFILE. INPUT FROM THE READFILE WILL CONTINUE.

1-- THE COMMAND IS IGNORED. BEGIN READING FROM THE PRIMARY READER.

MW CD123 IU 01

REASON- THE ERROR HAS OCCURRED FOR ONE OF THE FOLLOWING REASONS:

1. A CARRIAGE COMMAND HAS BEEN ISSUED AND THE PRINTER IS BEING USED.

2. A CONFIG COMMAND HAS BEEN ISSUED AND THE SCHEDULER WORK AREA IS INTERLOCKED.

3. A CONFIG COMMAND HAS BEEN ISSUED AND THE TASK REFERENCED IS BUSY.

THE MESSAGE LOGGED FOR THESE ERRORS IS: DEVICE/ PROCESSOR/SWA IN USE.

RECOVERY- 0-- THE COMMAND IS IGNORED. CONTINUE READING FROM THE SAME DEVICE. IF THE COMMAND WAS FROM A READFILE, INPUT FROM THE READFILE WILL CONTINUE.

1-- THE COMMAND IS IGNORED. IF THE COMMAND IS ENTERED FROM THE READER, BEGIN READING FROM THE PRIMARY READER.

MW CD123 LF 01

REASON- A DISK PACK IS TO BE MOUNTED FOR A DEFERRED READFILE REQUEST. THE MESSAGE LOGGED IS:

MOUNT PACK ID ON UNIT.

RECOVERY- 0-- CONTINUE READFILE PROCESSING. THE READER WAITS UNTIL THE DISK UNIT IS READY.

1-- THE MOUNT MESSAGE IS IGNORED. THE SYSTEM BEGINS READING FROM THE PRIMARY READER.

MW CD123 NF 1

REASON- THE FILE SPECIFIED ON THE READFILE COMMAND CANNOT BE FOUND ON THE DISK. THE MESSAGE LOGGED FOR THIS ERROR IS: READFILE FILENAME FILE NOT FOUND.

RECOVERY- 1-- RETRY. BEGIN READING FROM THE PRIMARY READER AND ALLOW THE OPERATOR TO CORRECT AND RE-ENTER THE READFILE COMMAND.

MW CD123 UC 12

REASON- A UNIT CHECK HAS OCCURRED ON BSCA WHILE ATTEMPTING TO ESTABLISH COMMUNICATION WITH THE CENTRAL PROCESSOR. THE MESSAGE LOGGED FOR THIS ERROR IS: BSCA UNIT CHECK ON ENQ.

RECOVERY- 1-- RETRY. AN ATTEMPT IS MADE TO RETRY THE ENQ OPERATION.

(HALT CONTINUED ON NEXT PAGE)

CD1 3 5 23

REASCN- DISK HARDWARE MALFUNCTION. A CYCLE STEAL OVER-RUN CONDITION HAS OCCURRED.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

ID CD1 3 5XX

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

NOTE- IT MAY BE NECESSARY TO ASSIGN AN ALTERNATE TRACK TO THE TRACK ON WHICH THE PROBLEM OCCURRED.

WARNING- IF THIS HALT OCCURS DURING A LIBRARY MAINTENANCE RUN OR DURING SYSTEM GENERATION, THE 2 OPTION SHOULD BE TAKEN. THE SYSTEM WILL THEN PROCEED TO HALT D134- SEE HALT D134 FOR EXPOSURES IF THE 3 OPTION IS TAKEN.

CD1 45

REASCN- INVALID OPTION TAKEN FOR HALT THAT JUST OCCURRED

PROBABLE USER ERROR.

RECOVERY- PRESS PROG START. ORIGINAL HALT WILL BE DISPLAYED. SELECT VALID OPTION.

CD 234 23

REASCN- THE SECTOR ID FIELD IS UNREADABLE. A DISK OPERATION WAS CALLED FOR, BUT A DATA CHECK OCCURRED WHILE READING THE SECTOR ADDRESS.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

ID CD 234 XX

RECOVERY- 2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

NOTE- IT MAY BE NECESSARY TO ASSIGN AN ALTERNATE TRACK TO THE TRACK ON WHICH THE PROBLEM OCCURRED.

WARNING- IF THIS HALT OCCURS DURING A LIBRARY MAINTENANCE RUN OR DURING SYSTEM GENERATION, THE 2 OPTION SHOULD BE TAKEN. THE SYSTEM WILL THEN PROCEED TO HALT D134- SEE HALT D134 FOR EXPOSURES IF THE 3 OPTION IS TAKEN.

CD123 5 23

REASON- DISK WRITE DATA CHECK. AN ATTEMPT HAS BEEN MADE TO WRITE ON DISK, BUT VALID DATA CANNOT BE PUT CNTO DISK AT THE SPECIFIED LOCATION.

IF LOG IS ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.

ID CD123 5XX

RECOVERY- 2-- CONTROLLED CANCEL. A PERMANENT ERROR IS INDICATED TO THE CURRENT PROGRAM.

3-- IMMEDIATE CANCEL.

NOTE- IT MAY BE NECESSARY TO ASSIGN AN ALTERNATE TRACK TO THE TRACK ON WHICH THE PROBLEM OCCURRED. THE ALTERNATE TRACK ASSIGNMENT PROGRAM CAN BE USED FOR THE TRACK ASSIGNMENT.

WARNING- IF THIS HALT OCCURS DURING A LIBRARY MAINTENANCE RUN OR DURING SYSTEM GENERATION, THE 2 OPTION SHOULD BE TAKEN. THE SYSTEM WILL THEN PROCEED TO HALT D134- SEE HALT D134 FOR EXPOSURES IF THE 3 OPTION IS TAKEN.

CD12 45

REASON- DIRECTLY ATTACHED 3741 IS NOT READY.

B 45 IK CD12 4501 123

RECOVERY- 1-- READY THE 3741 AND PLACE IT IN THE CORRECT MODE; THEN RETRY. FOR INFORMATION ON HOW TO READY THE 3741, SEE THE IBM SYSTEM/3 3741 REFERENCE MANUAL, GC21-5113.

2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

CD1 4 IK CD12 4502 123

REASON- DIRECTLY ATTACHED 3741 IS IN THE WRONG MODE.

RECOVERY- 1-- SELECT THE CORRECT MODE AND RETRY.

2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL.

D12 4 IK CD12 4503 123

REASON- DIRECTLY ATTACHED 3741 HAS A PARITY ERROR.

RECOVERY- 1-- TAKE THE 3741 OFFLINE AND POSITION IT BACK TO THE RECORD WHICH WAS IN ERROR. SELECT THE CORRECT MODE.

2-- CONTROLLED CANCEL.

3-- IMMEDIATE CANCEL. IF THE ERROR PERSISTS, CONTACT IBM FOR HARDWARE SUPPORT.

CD12 5 IK CD12 4505 123

REASON- THE RECORD LENGTH IN THE DIRECTLY ATTACHED 3741 DATA SET DOES NOT MATCH THE RECORD LENGTH

(HALT CONTINUED ON NEXT PAGE)

CD12345			23	REASON- A DISK OPERATION WAS CALLED FOR, BUT THE SECTOR NUMBER WAS INVALID. IF LOG IF ON, THE LAST TWO CHARACTERS OF THE PRINTED MESSAGE DESIGNATE THE UNIT NUMBER.
	ID	CD12345XX		RECOVERY- 2-- CONTROLLED CANCEL. 3-- IMMEDIATE CANCEL. NOTE-- IF YOU ARE USING IBM-SUPPLIED PROGRAMS, A PROGRAM TROUBLE IS INDICATED. YOU CAN TRY RUNNING OTHER JOBS OR RERUNNING THE SAME JOB. IF THE SAME HALT OCCURS, CONTACT IBM FOR PROGRAMMING SUPPORT.

D1			013	REASON- ERROR IN RECORDS BEING PLACED IN LIBRARY. PROBABLE USER ERROR.
	LM	D1	CS	CHECK SUM ERROR. ALL RECORDS IN OBJECT DECKS HAVE A SELF-CHECK NUMBER IN COLUMNS 86-88.
	LM	D1	DR	IT CANNOT BE DETERMINED IF THE REMOVE STATEMENT IS A DATA RECORD OR A CONTROL STATEMENT.
	LM	D1	EF	FROM, TO, OR AFTER SEQUENCE NUMBER DOES NOT EXIST OR IS NOT IN ASCENDING SEQUENCE.
	LM	D1	ND	NO DATA RECORDS FOLLOW THE INSERT OR REPLACE CONTROL STATEMENTS.
	LM	D1	NH	HEADER RECORD MISSING ON OBJECT DECK.
	LM	D1	SQ	RECORDS OUT OF SEQUENCE.
	LM	D1	TP	INCORRECT TYPE RECORD.
				RECOVERY- 0-- FOR LOG LMD1DR, THE REMOVE STATEMENT IS PLACED IN THE SOURCE LIBRARY ENTRY WITH NO FURTHER CHECKING DONE. FOR ALL OTHER LOGS, CONTINUE. IGNORE THE REQUEST. RECORDS ARE READ THROUGH //CEND, AND THE NEXT CONTROL STATEMENT IS PROCESSED. 1-- FOR LMD1CS, IGNORE THE ERROR, ACCEPT THE RECORD, AND CONTINUE. NO FURTHER ATTEMPTS ARE MADE TO DETECT CHECK SUM ERRORS. OTHERWISE, CORRECT THE RECORD AND RETRY. 3-- IMMEDIATE CANCEL. NOTE- FOR LMD1CS, LMD1SQ, AND LMD1TP, IF OPTION 0 OR 3 WAS SELECTED WHEN A MODULE WAS BEING REPLACED, IT MAY HAVE BEEN DELETED, BUT THE NEW MODULE WILL NOT HAVE BEEN COPIED INTO THE LIBRARY.

D 5 23 REASON- SECOND SWITCH STATEMENT FOUND. A SWITCH STATEMENT HAS ALREADY BEEN SPECIFIED FOR THIS JOB.

PROBABLE USER ERROR.

CR D 5 RECOVERY- 2-- REMAINING OCL WILL BE READ AND SCANNED, BUT JOB WILL NOT BE EXECUTED.

3-- IMMEDIATE CANCEL.

D12 03 REASON- DIRECTORY ENTRY ERROR.

LM D12 DE AN ATTEMPT HAS BEEN MADE TO REMOVE AN ENTIRE DIRECTORY ENTRY USING MODIFY.

LM D12 NF THE DIRECTORY ENTRY CANNOT BE FOUND, OR IF THE ENTRY IN THE DELETE STATEMENT EXISTS, THE ATTRIBUTES DO NOT MATCH.

PROBABLE USER ERROR.

RECOVERY- 0-- CONTINUE. IGNORE THE REQUEST. ENTER NEXT CONTROL STATEMENT.

NOTE- IF THIS WAS A DELETE STATEMENT, THE 0 OPTION WILL HAVE BEEN ASSUMED IF THIS HALT WAS BYPASSED. SEE 'BYPASSED HALTS' IN THIS MANUAL FOR PROCEDURES ON HOW TO BYPASS A HALT.

3-- IMMEDIATE CANCEL.

D1 3 3 REASON- LOG DEVICE REQUIRED FOR THIS PROGRAM.

PROBABLE USER ERROR.

UA D1 3 LOG DEVICE MUST BE ON.

UI D1 3 LOG DEVICE MUST BE ON.

RECOVERY- 3-- IMMEDIATE CANCEL. SUPPLY LOG ON STATEMENT AND RERUN JOB.

D 23 (CONTINUED)			NOT JUST READ, AND THEN THE NEXT CONTROL STATEMEMT IS PROCESSED. 3-- IMMEDIATE CANCEL. NOTE- IF A MODULE WAS BEING REPLACED, IT MAY HAVE BEEN DELETED BUT THE NEW MODULE WILL NOT HAVE BEEN COPIED INTO THE LIBRARY.
	LM D 23 ND	03	REASON- NO DATA RECORDS BETWEEN THE COPY AND CEND CONTROL STATEMENTS. RECOVERY- 0-- CONTINUE. IGNORE THE REQUEST. THE NEXT CONTROL STATEMENT IS PROCESSED. 3-- IMMEDIATE CANCEL.
D 3 5		0	REASON- DESIRED SYSTEM INPUT OR OUTPUT DEVICE WAS NOT DEFINED AS PART OF SYSTEM AT SYSTEM GENERATION. PROBABLE USER ERROR.
	CR D 3 5		RECOVERY- 0-- CONTINUE. SYSTEM INPUT OR OUTPUT DEVICE IS NOT CHANGED.
D12 4			REASON- ERROR IN LIBRARY MAINTENANCE CONTROL STATEMENTS. PROBABLE USER ERROR.
	LM D12 4 AL	13	REASON- SOURCE OR OBJECT KEYWORD OR KEYWORD PARAMETER IS MISSING OR INVALID. RECOVERY- 1-- CORRECT STATEMENT AND RETRY. 3-- IMMEDIATE CANCEL.
	LM D12 4 AZ	13	REASON- SYSTEM KEYWORD OR KEYWORD PARAMETER IS MISSING OR INVALID. RECOVERY- 1-- CORRECT STATEMENT AND RETRY. 3-- IMMEDIATE CANCEL.
	LM D12 4 D2	13	REASON- FROM, TO, OR WORK PARAMETER IS R2 OR F2 AND THAT UNIT IS NOT AVAILABLE. RECOVERY- 1-- CORRECT STATEMENT AND RETRY. 3-- IMMEDIATE CANCEL.
	LM D12 4 DK	13	REASON- CONTROL STATEMENT CONTAINS A DUPLICATE KEYWORD. RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

(HALT CONTINUED ON NEXT PAGE)

D12 4
ONTINUED)

3-- IMMEDIATE CANCEL.

LM D12 4 NK 13 REASON- NO KEYWORDS OR KEYWORD PARAMETERS EXIST ON CONTROL STATEMENT.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 NM 13 REASON- INVALID OR MISSING NAME KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 NU 13 REASCN- INVALID OR MISSING NEWNAME KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 OM 13 REASON- INVALID CMIT KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 RL 13 REASON- INVALID RECL KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 RS 13 REASON- INVALID OR MISSING RESER KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 RT 13 REASON- INVALID CR MISSING RETAIN KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 SF 13 REASCN- INVALID SEQFLD KEYWORD OR KEYWORD PARAMETER.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

LM D12 4 SQ 13 REASON- INVALID OR MISSING FROM, TO, OR AFTER KEYWORD CR KEYWCRD PARAMETER.

(HALT CONTINUED ON NEXT PAGE)

D12 4
CONTINUED)

3-- IMMEDIATE CANCEL.

LM D12 4 XL 013 REASON- THE LIBRARY KEYWORD IS MISSING.

RECOVERY- 0-- CONTINUE. RECORDS ARE READ THROUGH //CEND AND THEN NEXT CONTROL STATEMENT FROM THE FILE IS PROCESSED.

1-- NO FURTHER RECORDS ARE READ FROM THIS FILE. THE NEXT CONTROL STATEMENT IS READ FROM THE SYSTEM INPUT DEVICE OR PROCEDURE

3-- IMMEDIATE CANCEL.

LM D12 4 XM 013 REASON- THE NAME KEYWORD IS MISSING.

RECOVERY- 0-- CONTINUE. RECORDS ARE READ THROUGH //CEND AND THEN NEXT CONTROL STATEMENT FROM THE FILE IS PROCESSED.

1-- NC FURTHER RECORDS ARE READ FROM THIS FILE. THE NEXT CONTROL STATEMENT IS READ FROM THE SYSTEM INPUT DEVICE OR PROCEDURE

3-- IMMEDIATE CANCEL.

LM D12 4 XN 013 REASON- THE NAME PARAMETER IS INVALID.

RECOVERY- 0-- CONTINUE. RECORDS ARE READ THROUGH //CEND AND THEN NEXT CONTROL STATEMENT FROM THE FILE IS PROCESSED.

1-- NC FURTHER RECORDS ARE READ FROM THIS FILE. THE NEXT CONTROL STATEMENT IS READ FROM THE SYSTEM INPUT DEVICE OR PROCEDURE

3-- IMMEDIATE CANCEL.

LM D12 4 XP 013 REASON- THE LIBRARY DCES NOT EXIST ON THE PACK.

RECOVERY- 0-- CONTINUE. RECORDS ARE READ THROUGH //CEND AND THEN NEXT CONTROL STATEMENT FROM THE FILE IS PROCESSED.

1-- NC FURTHER RECORDS ARE READ FROM THIS FILE. THE NEXT CONTROL STATEMENT IS READ FROM THE SYSTEM INPUT DEVICE OR PROCEDURE

3-- IMMEDIATE CANCEL.

LM D12 4 XS 013 REASON- A SYNTAX ERROR HAS BEEN DETECTED. A HYPHEN (-) MUST SEPARATE THE KEYWORD AND PARAMETER.

RECOVERY- 0-- CONTINUE. RECORDS ARE READ THROUGH //CEND AND THEN NEXT CONTROL STATEMENT FROM THE FILE IS PROCESSED.

(HALT CONTINUED ON NEXT PAGE)

D1 34 3 REASON- UNRECOVERABLE DISK ERROR WHILE USING A DISK LIBRARY.

NOTE- FOR THE LMD134HE LOG, WHEN THE LOGGING DEVICE IS ON, THE UNIT IN ERROR WAS DISPLAYED BY THE CDXXXXX HALT. THE PACK IS REFERENCED ON THE LAST LIBRARY STATEMENT USED. THE PACK IS DEFECTIVE AND THE LIBRARY USED BY THE EXECUTING PROGRAM MUST BE RECREATED.

1. IF THE ERROR IS ON THE TO PACK, THE TO PACK IS DEFECTIVE AND THE LIBRARY MUST BE RE-CREATED FROM THE MASTER. RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM TO CHECK FOR A DEFECTIVE TRACK.

2. IF THE ERROR IS ON THE FROM PACK, RUN THE ALTERNATE TRACK ASSIGNMENT PROGRAM TO CHECK FOR A DEFECTIVE TRACK. IF NO ALTERNATE IS ASSIGNED, RERUN THE PROGRAM. IF THE ALTERNATE TRACK ASSIGNMENT PROGRAM INDICATES ERRORS DURING TRANSFER OF DATA, RECREATE THE LIBRARY.

3. IF THE ERROR IS ON THE WORK PACK, CONSIDER THAT THE WORK AND TO PACKS ARE DEFECTIVE. ASSIGN AN ALTERNATE TRACK TO THE WORK PACK, IF NECESSARY, AND RERUN THE PROGRAM.

XX D1 34 HE RECOVERY- 3-- IMMEDIATE CANCEL.

NOTE- XX MAY BE EITHER EL, EO, OR LM.

D1 3 5 REASON- CONTROL STATEMENTS ARE MISSING OR INVALID.

PROBABLE USER ERROR.

LM D1 3 5CC 13 REASON- CONTROL STATEMENTS BETWEEN THE RUN AND END STATEMENTS ARE MISSING OR INVALID.

RECOVERY- 1-- INSERT OR CORRECT THE STATEMENTS AND RETRY.

3-- IMMEDIATE CANCEL.

LM D1 3 5CS 013 REASON- CONTROL STATEMENTS BETWEEN THE MODIFY AND CEND STATEMENTS ARE MISSING OR INVALID.

RECOVERY- 0-- CONTINUE. IGNORE THE REQUEST. THE NEXT CONTROL STATEMENT IS PROCESSED.

1-- INSERT OR CORRECT THE STATEMENTS AND RETRY.

3-- IMMEDIATE CANCEL.

D 23 5

REASON- NO ROOM IN LIBRARY OR DIRECTORY.

PROBABLE USER ERROR.

EL D 23 5DF 03

REASON- SYSTEM CONTROL PROGRAM DETECTED THAT NO MORE DIRECTORY SPACE IS AVAILABLE FOR THE ENTRY.

RECOVERY- 0-- THE REQUEST IS IGNORED AND THE MODULE IS COPIED TO THE SYSTEM OUTPUT DEVICE.

3-- IMMEDIATE CANCEL.

NOTE- IF A 5496 DATA RECORDER OR DIRECTLY ATTACHED 3741 SYSTEM IS ATTACHED TO YOUR SYSTEM, RECOVERY 0 MAY BE SELECTED FOR THIS HALT.

EL D 23 5LF 03

REASON- SYSTEM CONTROL PROGRAM DETECTED THAT NOT ENOUGH ROOM EXISTS IN THE LIBRARY TO CONTAIN THE NEW ENTRY.

RECOVERY- 0-- THE REQUEST IS IGNORED AND THE MODULE IS COPIED TO THE SYSTEM OUTPUT DEVICE.

3-- IMMEDIATE CANCEL.

NOTE- IF A 5496 DATA RECORDER OR DIRECTLY ATTACHED 3741 SYSTEM IS ATTACHED TO YOUR SYSTEM, RECOVERY 0 MAY BE SELECTED FOR THIS HALT.

EO D 23 5DF 03

REASON- OVERLAY LINKAGE EDITOR DETECTED THAT NO MORE DIRECTORY SPACE IS AVAILABLE FOR THE ENTRY.

RECOVERY- 0-- THE REQUEST IS IGNORED AND THE MODULE IS COPIED TO THE SYSTEM OUTPUT DEVICE.

3-- IMMEDIATE CANCEL.

NOTE- IF A 5496 DATA RECORDER OR DIRECTLY ATTACHED 3741 SYSTEM IS ATTACHED TO YOUR SYSTEM, RECOVERY 0 MAY BE SELECTED FOR THIS HALT.

EO D 23 5LF 03

REASON- OVERLAY LINKAGE EDITOR DETECTED THAT NO MORE LIBRARY SPACE IS AVAILABLE FOR THE ENTRY.

RECOVERY- 0-- THE REQUEST IS IGNORED AND THE MODULE IS COPIED TO THE SYSTEM OUTPUT DEVICE.

3-- IMMEDIATE CANCEL.

NOTE- IF A 5496 DATA RECORDER OR DIRECTLY ATTACHED 3741 SYSTEM IS ATTACHED TO YOUR SYSTEM, RECOVERY 0 MAY BE SELECTED FOR THIS HALT.

LM D 23 5DF 03

REASON- LIBRARY MAINTENANCE PROGRAM DETECTED THAT NO MORE DIRECTORY SPACE IS AVAILABLE FOR THE

(HALT CONTINUED ON NEXT PAGE)

D 345		3	REASON- MORE THAN NINE LEVELS OF PROCEDURES HAVE BEEN CALLED. PROBAELE USER ERROR.
	CR D 345		RECOVERY- 3-- IMMEDIATE CANCEL.

D1234		13	REASCN- FUNCTICN OR SYNTAX ERROR IN ALLOCATE STATEMENT. PROBAELE USER ERROR.
	LM D1234 DS		ATTEMPTING TO CHANGE TO A DIRECTORY SIZE THAT IS TOO SMALL FOR THE ACTIVE PERMANENT DIRECTORY ENTRIES.
	LM D1234 MN		ATTEMPTING TO ALLOCATE AN OBJECT LIBRARY THAT IS LESS THAN THE MINIMUM SIZE REQUIRED.
	LM D1234 NO		OBJECT-R SPECIFIED ON ALLOCATE STATEMENT, BUT THERE IS NO OBJECT LIBRARY.
	LM D1234 NS		SOURCE-R SPECIFIED ON ALLOCATE STATEMENT, BUT THERE IS NO SOURCE LIBRARY.
	LM D1234 OA		ATTEMPT IS BEING MADE TO REALLOCATE THE OBJECT LIBRARY, BUT IT IS BEING MADE TOO SMALL TO CONTAIN ALL PERMANENT ENTRIES.
	LM D1234 SA		ATTEMPT IS EEING MADE TO REALLOCATE THE SOURCE LIBRARY, BUT IT IS BEING MADE TOO SMALL TO CONTAIN ALL PERMANENT ENTRIES.
			RECOVERY- 1-- CORRECT STATEMENT AND RETRY. 3-- IMMEDIATE CANCEL.

D1 345

REASON- PACK SPECIFIED THAT IS NOT INITIALIZED.

PROBABLE USER ERROR.

EL D1 345UN 03

REASON- RPGII LINKAGE EDITOR DETECTED AN ATTEMPT TO CATALOG A MODULE ON A PACK THAT WAS NOT INITIALIZED.

RECOVERY- 0-- CATALOG ATTEMPT IS IGNORED. MODULE IS PUNCHED.

3-- IMMEDIATE CANCEL.

EO D1 345UN 03

REASON- OVERLAY LINKAGE EDITOR DETECTED AN ATTEMPT TO CATALOG A MODULE ON A PACK THAT WAS NOT INITIALIZED.

RECOVERY- 0-- CATALOG ATTEMPT IS IGNORED. MODULE IS PUNCHED.

3-- IMMEDIATE CANCEL.

LM D1 345UN 13

REASON- LIBRARY MAINTENANCE PROGRAM DETECTED AN ATTEMPT TO USE AN UNINITIALIZED PACK.

RECOVERY- 1-- CORRECT STATEMENT AND RETRY.

3-- IMMEDIATE CANCEL.

D 2345 03

REASON- ERROR OCCURRED WHEN COPYING OR MODIFYING AN ENTRY.

PROBABLE USER ERROR.

LM D 23450F

AN OVERFLOW HAS OCCURRED IN THE SEQUENCE FIELD DURING RESERIALIZATION.

XX D 2345DP

AN ENTRY WITH THE SAME NAME ALREADY EXISTS IN THE LIBRARY.

RECOVERY- 0-- CONTINUE. FOR LOG XXD2345DP, THE OLD ENTRY IS DELETED AND REPLACED WITH THE NEW ENTRY. FOR LOG LMD23450F, THE HIGH ORDER DIGIT(S) OF THE SEQUENCE VALUE WILL BE DROPPED.

3-- IMMEDIATE CANCEL.

NOTE- XX CAN BE EL, EO, OR LM.

D1234513

REASON- COND STATEMENT EXPECTED BUT NOT FOUND.

PROBABLE USER ERROR.

LM D12345CE

RECOVERY- 1-- RETRY. INSERT COND STATEMENT.

3-- IMMEDIATE CANCEL.

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