

Diagnostic Information for Itanium-based Systems

First Edition April, 2001)

Before using this information and the product it supports, read the information in "Appendix B. Notices" on page 135.

A reader's comment form is provided at the back of this publication. If the form has been removed, address comments to Publications Department, Internal Zip 9561, 11400 Burnet Road, Austin, Texas 78758-3493. To send comments electronically, use this commercial internet address: aix6kpub@austin.ibm.com. Any information that you supply may be used without incurring any obligation to you.

"©"International Business Machines Corporation . All rights reserved, 2001.

Note to U.S. Government Users, Restricted Rights--Use, duplication, or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

About This Book	v
ISO 9000	v
Trademarks	v
Chapter 1. General Diagnostic Information	1
Operating System Message Files	1
CE Login	1
Diagnostic Programs	2
Periodic Diagnostics	4
Automatic Error Log Analysis (diagela)	4
Log Repair Action	6
Chapter 2. Using the Online Diagnostics	7
Online Diagnostics Operating Considerations	7
Online Diagnostics Mode of Operation	8
Diagnostic Summary	11
Diagnostics Tasks and Resources	12
Chapter 3. Introduction to Tasks and Service Aids	15
Tasks	15
Add Resource to Resource List	16
Use AIX Shell Prompt	16
Back Up and Restore Media	16
Certify Media	16
Change Hardware Vital Product Data	17
Delete Resource from Resource List	17
Disk Maintenance	17
Display Configuration and Resource List	18
Display Hardware Vital Product Data	18
Display or Change Diagnostic Run-Time Options	19
Display Previous Diagnostic Results	19
Display Resource Attributes	20
Display Software Product Data	20
Format Media	20
Generic Microcode Download	22
Log Repair Action	22
Periodic Diagnostics	23
Run Diagnostics	23
Run Error Log Analysis	23
Run Exercisers	23
SCSD Tape Drive Service Aid	25
Update Disk-Based Diagnostics	26
Chapter 4. Using the SRN List	27
How to Use the Service Request Number List	27
Service Request Number Listing	27

Chapter 5. Six-Digit SRNs 2E6-212 through 692-723	29
Chapter 6. Six-Digit SRNs 700-102 through 840-802	63
Chapter 7. Six-Digit SRNs 901-xxx through 998-723	99
Chapter 8. Failing Function Codes (FFCs)	127
Using the Failing Function Code List	127
Failing Function Code List	127
Appendix A. General Attributes Required When Using a TTY Terminal	131
Additional Communication Attributes	132
Additional Keyboard Attributes	133
Additional Printer Attributes	134
Appendix B. Notices	135
Index	137

About This Book

The diagnostic information contained in this book is common to all Itanium-based systems supporting the AIX 5L operating system. Any information or diagnostic procedure that is specific to a certain system unit or device is located in the service guide for that system unit or device.

The purpose of this book is to provide an overview of the AIX 5L hardware diagnostic subsystem. The diagnostic subsystem comes with some built-in support for certain devices. The diagnostic subsystem can be augmented by third-party vendors.

This book combines operating instructions for hardware diagnostic programs with corresponding Service Request Numbers (SRNs). The SRNs are, in turn, keyed to failing function codes (FFCs). This book contains complete lists of SRNs and FFCs.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

- AIX
- LANStreamer
- Portmaster
- RETAIN
- RS/6000
- S/370
- TURBOWAYS

Itanium is a trademark of Intel Corporation in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Chapter 1. General Diagnostic Information

Information in this section is common to all system units using the AIX 5L operating system. For further information about the operating system, see the AIX Documentation library at the following Web address: <http://www-1.ibm.com/servers/aix/library/>. Select **Technical Publications**.

Operating System Message Files

English is the default language displayed by the diagnostic programs when run from disk. If you want to run the diagnostic programs in a language other than English you must install on the system the operating system message locale fileset for the desired language you want displayed.

CE Login

CE login enables a user to perform operating system commands that are required to service the system without being logged in as a root user. CE login must have a role of **RunDiagnostics** and a primary group of **system**. This enables the user to:

- Run the diagnostics including the service aids, such as hot plug tasks, certify, format, and so forth.
- Run all the operating system commands run by **system** group users.
- Configure and unconfigure devices that are not busy.

In addition, CE login can have **shutdown** group enabled to allow use of shutdown and reboot operations.

To use CE login, ask the customer to create a unique user name and configure these characteristics for that name. (Refer to the Users and Groups section of the *AIX 5L Version 5.1 System Management Guide: Operating System and Devices*.) After this is set up, you will need to obtain the user name and password from the customer to log in with these capabilities. The recommended CE login user name is **qserv**.

Diagnostic Programs

This section provides an overview of the various diagnostic programs.

Diagnostic Controller

The diagnostic controller runs as an application program on the operating system. The diagnostic controller carries out the following functions:

- Displays diagnostic menus
- Checks availability of needed resources
- Checks error log entries under certain conditions
- Loads diagnostic application programs
- Loads task and service aid programs
- Displays test results

To test an adapter or device, select the device or adapter from the Diagnostic Selection menu. The diagnostic controller then loads the diagnostic application program for the selected device or adapter.

The diagnostic application program loads and runs test units to check the functions of the device or adapter.

The diagnostic controller checks the results of the tests done by the diagnostic application and determines the action needed to continue the testing.

The amount of testing that the diagnostic application does depends on the mode (service, maintenance, or concurrent) under which the diagnostic programs are running.

Error Log Analysis

When you select **Diagnostics** or **Advanced Diagnostics**, the Diagnostic Selection menu displays (other menus may be displayed before this menu). Use this menu to select the purpose for running diagnostics.

When you select the **Problem Determination** option, the diagnostic programs read and analyze the contents of the error log.

Note: Most hardware errors in the operating system error log contain *sysplanar0* as the resource name. The resource name identifies the resource that detected the error, it does not indicate that the resource is faulty or should be replaced. Use the resource name to determine the appropriate diagnostic to analyze the error.

If the error log contains recent errors (approximately the last 7 days), the diagnostic programs automatically select the diagnostic application program to test the logged function.

If there are no recent errors logged or the diagnostic application program runs without detecting an error, the Diagnostic Selection menu displays. Use this menu to select a resource for testing.

If an error is detected while the diagnostic application program is running, the A PROBLEM WAS DETECTED screen displays a Service Request Number (SRN).

Note: After a FRU is replaced based on an error log analysis program, the error log entries for the problem device must be removed or the program may continue to indicate a problem with the device. To accomplish this task run the **errclear** command from the command line, or use System Management Interface Tool (SMIT) to select **Problem Determination / Error Log / Clear the Error Log**. Fill out the appropriate menu items.

Enhanced FRU Isolation

The diagnostics provide enhanced Field Replaceable Unit (FRU) isolation by automatically selecting associated resources. The typical way in which diagnostics select a resource is to present a list of system resources, and you are then asked to select one. Diagnostics begin with that same type of selection.

If the diagnostic application for the selected resource detects a problem with that resource, the diagnostic controller checks for an associated resource. For example, if the test of a disk drive detects a problem, the diagnostic controller tests a sibling device on the same controller to determine if the drive or the controller is failing. This extra FRU isolation is apparent when you test a resource and notice that the diagnostic controller continues to test another resource that you did not select.

Advanced Diagnostics Function

The advanced diagnostics function is normally used by a service representative. These diagnostics may ask you to disconnect a cable and install a wrap plug.

The advanced diagnostics run in the same modes as the diagnostics used for normal hardware problem determination. The advanced diagnostics provide additional testing by allowing the service representative to do the following:

- Use wrap plugs for testing.
- Loop on a test (not available in concurrent mode) and display the results of the testing.

Task and Service Aid Functions

If a device does not show in the Test List or you think a device's Diagnostic Package is not loaded, check by using the Display Configuration and Resource List task. If the device you want to test has a plus (+) sign or a minus (-) sign preceding its name, the Diagnostic Package is loaded. If the device has an asterisk (*) preceding its name, the Diagnostic Package for the device is not loaded or is not available.

Use tasks and service aids to display data, check media, and check functions without being directed by the hardware problem determination procedure. Refer to "Chapter 3. Introduction to Tasks and Service Aids" on page 15 for information and procedures about tasks and service aids.

System Checkout

The system checkout program uses the configuration list generated by the configuration procedure to determine which devices and features to test. These tests run without interaction. To use system checkout, select **All Resources** on the Resource Selection menu.

Periodic Diagnostics

Periodic testing of the disk drives is enabled by default. The disk diagnostics test any disk drives that are not in use and perform disk error-log analysis on all disks. Problems are reported by a message to the system console and logged in the error log. Diagnostics must be run for an SRN to be reported.

Periodic diagnostics are controlled by the Periodic Diagnostic Service Aid. The Periodic Diagnostic Service Aid allows a hardware resource to be tested once a day. If the resource cannot be tested because it is busy, error log analysis is performed if supported on the resource.

The diagnostics are invoked using the **diag -c -d** *Device* command.

Automatic Error Log Analysis (diagela)

Automatic Error Log Analysis (**diagela**) provides the capability to perform error log analysis when a permanent hardware error is logged, by enabling the **diagela** program on all platforms.

The **diagela** program determines if the error should be analyzed by the diagnostics. If the error should be analyzed, a diagnostic application is invoked and the error is analyzed. No testing is done if the diagnostics determine that the error requires a service action. Instead, it sends a message to your console and to all system groups. The message contains the SRN.

Running diagnostics in this mode is similar to using the **diag -c -e -d** *Device* command.

Notification can also be customized by adding a stanza to the **PDiagAtt** object class. The following example illustrates how a customer's program can be invoked in place of the normal mail message:

```
PDiagAtt:
  DClass = " "
  DSClass = " "
  DType = " "
  attribute = "diag_notify"
  value = "/usr/bin/customer_notify_program $1 $2 $3 $4 $5"
  rep = "s"
```

If DClass, DSClass, and DType are blank, then the `customer_notify_program` applies for *all* devices. Filling in the DClass, DSClass, and DType with specifics causes the `customer_notify_program` to be invoked only for that device type.

After the above stanza is added to the ODM data base, problems are displayed on the system console and the program specified in the value field of the `diag_notify` predefined attribute is invoked. The following keyword is expanded automatically as arguments to the notify program:

- \$1 the keyword `diag_notify`
- \$2 the resource name that reported the problem
- \$3 the Service Request Number
- \$4 the device type
- \$5 the error label from the error log entry

In the case where no diagnostic program is found to analyze the error log entry, or analysis is done but no error was reported, a separate program can be specified to be invoked. This is accomplished by adding a stanza to the **PDiagAtt** object class with an attribute = **diag_analyze**. The following example illustrates how a customer's program can be invoked for this condition:

```
PDiagAtt:
  DClass = " "
  DSClass = " "
  DType= " "
  attribute = "diag_analyze"
  value = "/usr/bin/customer_analyzer_program $1 $2 $3 $4 $5"
  rep = "s"
```

If DClass, DSClass, and DType are blank, then the `customer_analyzer_program` applies for *all* devices. Filling in the DClass, DSClass, and DType with specifics causes the `customer_analyzer_program` to be invoked only for that device type.

After the above stanza is added to the ODM data base, the program specified is invoked if there is no diagnostic program specified for the error, or if analysis was done, but no error found. The following keywords expand automatically as arguments to the analyzer program:

- \$1 the keyword **diag_analyze**
- \$2 the resource name that reported the problem
- \$3 the error label from the error log entry if from ELA, the keyword PERIODIC if from Periodic Diagnostics, or the keyword REMINDER if from a Diagnostic Reminder.
- \$4 the device type
- \$5 the keywords:
 - **no_trouble_found** if the analyzer was run, but no trouble was found.
 - **no_analyzer** if the analyzer is not available.

To activate the Automatic Error log Analysis feature, log in as root user (or use CE login) and type the following command:

```
/usr/lpp/diagnostics/bin/diagela ENABLE
```

To disable the Automatic Error Log Analysis feature, log in as root user (or use CE login) and type the following command:

```
/usr/lpp/diagnostics/bin/diagela DISABLE
```

The **diagela** program can also be enabled and disabled using the Periodic Diagnostic Service Aid.

Log Repair Action

The diagnostics perform error log analysis on most resources. The default time for error log analysis is seven days. However, this time can be changed from 1 to 60 days using the **Display or Change Diagnostic Run Time Options** task. To prevent false problems from being reported when error log analysis is run, repair actions need to be logged whenever a FRU is replaced. A repair action can be logged by using the **Log Repair Action** task or by running diagnostics in System Verification mode.

The Log Repair Action task lists all resources. Replaced resources can be selected from the list, and when **commit** (F7 key) is selected, a repair action is logged for each selected resource.

Chapter 2. Using the Online Diagnostics

This chapter describes online diagnostic operations and options, as well as the equipment required to perform these operations.

Attention: If this system unit is attached to another system, be sure you isolate this system unit before stopping the operating system or running diagnostic programs. Some system-cabling changes (such as installing wrap plugs or removing a device from the configuration) may require action by the operator of the attached system before making the cabling changes on this system.

Online Diagnostics Operating Considerations

Consider the following items before you use the diagnostics:

- Run Online Diagnostics in Service Mode when possible, unless otherwise directed. The operating system error log and certain SMIT functions are only available when diagnostics are run from the disk drive.
- When running Online Diagnostics, device support for some devices may not have been installed. If this is the case, that device does not appear in the resource list.
- Support for some TTY terminals is optionally installed. If you attach a TTY terminal to a system to run diagnostics, it may not work correctly because the operating system support for the terminal might not be installed.

Selecting a Console Display

When you run Online Diagnostics, you may need to select the console display. The diagnostics display instructions on any graphics display and the terminal attached to the S1 serial port.

Identifying the Terminal Type to the Diagnostics Programs

Note: This is a different function from selecting a console display.

When you run diagnostics, you must identify what type of terminal you are using. If the terminal type is not known when the FUNCTION SELECTION menu is displayed, the diagnostics do not allow you to continue until a terminal is selected from the DEFINE TERMINAL option menu. Select **lft** for adapter-attached displays.

Undefined Terminal Types

If you specify an undefined terminal type from the DEFINE TERMINAL option menu, the menu prompts the user to enter a valid terminal type. The menu is redisplayed until either a valid type is entered or the user exits the DEFINE TERMINAL option.

If the user enters a terminal type that is valid (according to the DEFINE TERMINAL option menu) but is not the correct type for the ASCII terminal being used, you might be unable to read the screen, use the function keys or use the Enter key. These difficulties can be bypassed by pressing Ctrl-C to reset the terminal. The screen display that results from this resetting action varies with the mode that the system is being run:

- Online Normal or Maintenance Mode - The command prompt appears.
- Standalone Mode or Online Service Mode - The terminal type is reset to dumb, the Diagnostic Operating Instruction panel is displayed, and the user is required to go through the DEFINE TERMINAL process again.

Running Online Diagnostics From a Disk

Consider the following when you run the Online Diagnostics from a disk:

- The diagnostics cannot be loaded and run from a disk until the operating system has been installed and configured. After the installation of the operating system, all three modes of operation are available.
- If the diagnostics were loaded from disk, you must shut down the operating system before powering off the system unit to prevent possible damage to disk data. This is done by entering the **shutdown -F** command.
- Under some conditions the system may stop, with instructions displayed on attached displays and terminals. Follow the instructions to select a console display.

Running the Diagnostics from a TTY Terminal

Consider the following when you run diagnostics using a TTY-type terminal as the console display:

- See the operator manual for your type of tty terminal to find the key sequences you need to respond to the diagnostics. For the 3151, refer to the *3151 ASCII Display Station Guide to Operations*, form number GA18-2633. For the 3164, refer to the *3164 ASCII Color Display Station Description*, form number GA18-2617.
- When the diagnostics present display information through the S1 serial port, certain attributes are used. These attributes are set as if the diagnostics were using a 3161 display terminal. Refer to the tables in “Appendix A. General Attributes Required When Using a TTY Terminal” on page 131 for a list of attributes for the 3161 ASCII Display Terminal and for two other ASCII display terminals commonly used with the system.
- If you have a TTY terminal other than a 3151, 3161 or 3164 attached to the S1 serial port, your terminal may have different names for the attributes. Refer to the tables in “Appendix A. General Attributes Required When Using a TTY Terminal” on page 131, and use the attribute descriptions to determine the settings for your terminal.

Online Diagnostics Mode of Operation

The Online diagnostics can be run in three modes:

- *Service Mode* allows checking of most system resources.
- *Concurrent Mode* allows the normal system functions to continue while selected resources are being checked.
- *Maintenance Mode* allows checking of most system resources

Running the Online Diagnostics in Service Mode (Service Mode IPL)

Service mode provides the most complete checkout of the system resources. This mode also requires that no other programs be running on the system. All supported

system resources except the SCSI adapter, and the disk drives used for paging can be tested. However, the system memory and the processor are only tested during power-on self-test (POST).

Error log analysis is done in service mode when you select the **Problem Determination** option on the DIAGNOSTIC MODE SELECTION menu.

To run Online diagnostics in service mode, perform the following steps:

1. Stop all programs including the AIX operating system (get help if needed).
2. Remove all tapes, diskettes, and CD-ROM discs.
3. Turn off the system unit power.
4. Turn on the system unit power.
5. Wait for the Boot Loader menu option to appear and then select **Boot Loader**.
 - a. From the Boot Loader menu toggle the Service/Diagnostic Boot option to **On** by entering the associated option number.
 - b. Select the option that allows the boot to proceed.
6. Enter any requested password.
7. Follow any instructions to select a console.
8. After the diagnostic controller loads, DIAGNOSTIC OPERATING INSTRUCTIONS appear on the console display.
9. Follow the displayed instructions to test the desired resources.
10. When testing is complete, use the F3 key to return to the DIAGNOSTIC OPERATING INSTRUCTIONS.
11. Press the F3 key (from a defined terminal) or press 99 (for an undefined terminal) to shut down the diagnostics before turning off the system unit.

Note: Pressing the F3 key (from a defined terminal) produces a Confirm Exit menu that offers two options: continuing with the shutdown by pressing F3; or returning to diagnostics by pressing Enter.

For undefined terminals, pressing 99 produces a full screen menu that offers two options: continuing with the shutdown by pressing 99 and then Enter; or returning to diagnostics by pressing Enter.

Running the Online Diagnostics in Concurrent Mode

Use concurrent mode to run Online diagnostics on some of the system resources while the system is running normal system activity.

Because the system is running in normal operation, the following resources cannot be tested in concurrent mode:

- SCSI adapters connected to paging devices
- Disk drive used for paging
- Any graphics-related device if running X, CDE, or windowing environment
- Memory

- Processor

Three levels of testing exist in concurrent mode:

- The **share-test level** tests a resource while the resource is being shared by programs running in the normal operation. This testing is mostly limited to normal commands that test for the presence of a device or adapter.
- The **sub-test level** tests a portion of a resource while the remaining part of the resource is being used in normal operation. For example, this test could test one port of a multiport device while the other ports are being used in normal operation.
- The **full-test level** requires the device not be assigned to or used by any other operation. This level of testing on a disk drive might require the use of the **varyoff** command. The diagnostics display menus to allow you to vary off the needed resource.

Error log analysis is done in concurrent mode when you select the **Problem Determination** option on the DIAGNOSTIC MODE SELECTION menu.

To run the Online diagnostics in concurrent mode, you must be logged in to the operating system and have proper authority to issue the commands (if needed, get help).

The **diag** command loads the diagnostic controller and displays the Online diagnostic menus.

To run Online diagnostics in concurrent mode, perform the following steps:

1. Log in to the operating system as root user (or use CE login).
2. Enter the **diag** command.
3. When the DIAGNOSTIC OPERATING INSTRUCTIONS display, follow the instructions to test the desired resources.
4. When testing is complete, use the F3 key to return to the DIAGNOSTIC OPERATING INSTRUCTIONS. Press the F3 key again to return to the operating system prompt. Be sure to vary on any resource you have varied to off.
5. Press the Ctrl-D key sequence to log off from root or superuser.

Running the Online Diagnostics in Maintenance Mode

Maintenance mode runs the Online diagnostics using the customer's version of the operating system. This mode requires that all activity on the operating system be stopped so the Online diagnostics have most of the resources available to check. All of the system resources except the SCSI adapters, memory, processor, and the disk drive used for paging can be checked.

Error log analysis is done in maintenance mode when you select the **Problem Determination** option on the DIAGNOSTIC MODE SELECTION menu.

The **shutdown -m** command is used to stop all activity on the AIX operating system and put the operating system into maintenance mode. The **diag** command is then used

to invoke the diagnostic controller so you can run the diagnostics. After the diagnostic controller is loaded, follow the normal diagnostic instructions.

To run the Online diagnostics in maintenance mode, you must be logged in to the customer's version of the AIX operating system as *root* or *superuser* and use the **shutdown -m** and **diag** commands. Use the following steps to run the Online diagnostics in maintenance mode:

1. Stop all programs except the AIX operating system (get help if needed).
2. Log in to the AIX operating system as root user or superuser.
3. Enter the **shutdown -m** command.
4. When a message indicates the system is in maintenance mode, enter the **diag** command.

Note: It may be necessary to set *TERM* type again.

5. When DIAGNOSTIC OPERATING INSTRUCTIONS display, follow the displayed instructions to test the desired resources.
6. When testing is complete, use the F3 key to return to DIAGNOSTIC OPERATING INSTRUCTIONS. Then press the F3 key again to return to the AIX operating system prompt.
7. Press Ctrl-D to log off from root or superuser.

Diagnostic Summary

This section summarizes the performance and relationship between various diagnostic modes and Error Log Analysis.

Error Log Analysis

- Error Log Analysis is analysis of the operating system error log.
- Error Log Analysis is part of the diagnostic applications and is invoked by selecting a device from the DIAGNOSTIC SELECTION menu, by using the **diag** command, or selecting the Run Error Log Analysis task.
- Error Log Analysis is only performed when running online diagnostics.
- Error Log Analysis only reports problems if the errors have reached defined thresholds. Thresholds can be from 1 to 100 depending on the error.
- Permanent errors do not necessarily mean that a part should be replaced.
- Automatic Error Log Analysis (**diagela**) provides the capability to do error log analysis whenever a permanent hardware error is logged.

Diagnostic Modes

The Diagnostic Modes consist of Problem Determination Mode and System Verification Mode. The only difference between the two modes is that one performs Error Log Analysis (ELA) and the other does not.

- Problem Determination Mode runs all tests unless the resource is being used. If a problem is not found, then Error Log Analysis is performed.

- In Problem Determination Mode, Error Log Analysis is performed even if a resource is being used.
- A screen always displays, informing the user that the resource needs to be freed if a resource is being used.
- System Verification Mode does not do Error Log Analysis (ELA). This mode should be run when doing a repair verification.

Diagnostics Tasks and Resources

Tasks are operations that can be performed on a resource. Running Diagnostics, Displaying VPD, or Formatting a Device, are examples of tasks. Service aids are also considered tasks. Tasks and service aids are further described in “Chapter 3. Introduction to Tasks and Service Aids” on page 15.

Resources are devices used by the system unit. Diskette drive and CD-ROM drive are examples of resources.

The FUNCTION SELECTION menu contains two selections allowing either all resources, or all tasks to be displayed. When task selection is made and a task has been selected, a list of supporting resources displays. Alternatively, when resource selection is made, and a resource or group of resources are selected, a list of common tasks displays. Also, to aid with backward compatibility, the FUNCTION SELECTION menu contains Diagnostic routines and Advanced Diagnostic routines selection.

The Display or Change Diagnostic Run Time Options task can be used to set advanced mode diagnostics, looping capability, and error log analysis (ELA) mode when running diagnostics from the Task Selection menu.

diag Command Line Options

The following are the **diag** command line options for AIX 4.2 and later:

Usage: diag [[-a] | [-s] | [[-d <device>] [-v] [-c] [-e]

[-A] [-E <days>]] | [-B] | [-T <taskname>] | [-S <testsuite>]

Flags

The **diag** command line flags are as follows:

-a	Perform missing device analysis.
-A	Advanced Diagnostics
-B	Base system test
-c	Machine is unattended. No prompts should be displayed.
-d device	Test the named resource.
-e	Error Log Analysis. Checks the error log for device specified in "resource" of the -d option.
-E days	Number of days to search error log when using -e.
-h	Use diag -h to print out a command usage statement.
-s	Test the system.

```
-S testsuite Test the Test Suite Group:  
  1 - Base system  
  2 - I/O Devices  
  3 - Async Devices  
  4 - Graphics Devices  
  5 - SCSI Devices  
  6 - Storage Devices  
  7 - Commo Devices  
  8 - Multimedia Devices  
-T taskname Fastpath to specific task. Current fast paths are:  
  certify - Certify media task  
  chkspares - Spare sector availability task  
  download - Download microcode task  
  disp_mcode - Display microcode level task  
  format - Format media task  
-v          System Verification mode.  
Default execution mode is non-advanced mode
```

Chapter 3. Introduction to Tasks and Service Aids

The operating system Diagnostic Package contains programs that are called *Tasks*. Tasks can be thought of as performing a specific function on a resource; for example, running diagnostics or performing a service aid on a resource.

To perform one of these tasks, use the Task Selection option from the FUNCTION SELECTION menu.

After a task is selected, a resource menu may be presented showing all resources supported by the task.

A fast path method is also available to perform a task by using the **diag** command and the **-T** flag. By using the fast path, the user can bypass most of the introductory menus to access a particular task. The user is presented with a list of resources available to support the specified task. The fast path tasks are as follows:

- Certify - Certifies media
- Chksparcs - Checks for the availability of spare sectors
- Download - Downloads microcode to an adapter or device
- Format - Formats media

To run these tasks directly from the command line, specify the resource and other task-unique flags. Use the descriptions in this chapter to understand which flags are needed for a given task.

Tasks

The following tasks are described in this chapter:

- Add Resource to Resource List
- Use AIX Shell Prompt
- Back Up and Restore Media
- Certify Media
- Change Hardware Vital Product Data
- Delete Resource from Resource List
- Disk Maintenance
- Display Configuration and Resource List
- Display Hardware Vital Product Data
- Display or Change Diagnostic Run-Time Options
- Display Previous Diagnostic Results
- Display Resource Attributes
- Display Software Product Data
- Format Media
- Generic Microcode Download

- Log Repair Action
- Periodic Diagnostics
- Run Diagnostics
- Run Error Log Analysis
- Run Exercisers
- SCSD Tape Drive Service Aid
- Update Disk-Based Diagnostics

Add Resource to Resource List

Use this task to add resources back to the resource list.

Note: Only resources that were previously detected by the diagnostics and deleted from the Diagnostic Test List are listed. If no resources are available to be added, then none are listed.

Use AIX Shell Prompt

Note: Use this service aid in Online Service Mode only.

This service aid allows access to the operating system command line. To use this service aid, the user must know the root password (when a root password has been established).

Note: Do not use this task to install code or to change the configuration of the system. This task is intended to view files, configuration records, and data. Using this service aid to change the system configuration or install code can produce unexplained system problems after exiting the diagnostics.

Back Up and Restore Media

This service aid allows verification of backup media and devices. It presents a menu of tape and diskette devices available for testing and prompts for selecting the desired device. It then presents a menu of available backup formats and prompts for selecting the desired format. The supported formats are **tar**, **backup**, and **cpio**. After the device and format are selected, the service aid backs up a known file to the selected device, restores that file to **/tmp**, and compares the original file to the restored file. The restored file remains in **/tmp** to allow for visual comparison. All errors are reported.

Certify Media

Use this task to select SCSI hardfiles to be certified.

Certify Hardfile Attached to a SCSI Adapter

This selection reads all of the ID and data fields. It checks for bad data and counts all errors encountered. If the unrecovered data errors exceed the threshold value, the hard

file needs to be formatted and certified. If the recovered data errors, recovered and unrecovered equipment errors exceed the threshold values, the disk needs to be replaced.

This task can be run directly from the AIX command line. See the following command syntax: `diag -c -d deviceName -T "certify"`

Change Hardware Vital Product Data

Use this service aid to display the Display/Alter VPD Selection Menu. The menu lists all resources installed on the system. When a resource is selected, a menu displays that lists all the VPD for that resource.

Note: The user cannot alter the VPD for a specific resource unless it is not machine-readable.

Delete Resource from Resource List

Use this task to delete resources from the resource list.

Note: Only resources that were previously detected by the diagnostics and have not been deleted from the Diagnostic Test List are listed. If no resources are available to be deleted, then none are listed.

Disk Maintenance

This service aid provides the following options for the fixed-disk maintenance:

- Disk to Disk Copy
- Display/Alter Sector

Disk to Disk Copy

Note: This service aid cannot be used to update to a different size drive. The service aid only supports copying from a SCSI drive to another SCSI drive of similar size.

Use the **migratepv** command when copying the contents to other disk drive types. This command also works when copying SCSI disk drives or when copying to a different size SCSI disk drive. See the *AIX System Management Guide: Operating System and Devices* for information on migrating the contents of a physical volume. This publication is available at the following Web address: <http://www-1.ibm.com/servers/aix/library/>. Select **Technical Publications**. This publication is also contained on the AIX Documentation CD. This documentation is made accessible by loading the documentation CD onto the hard disk or by mounting the CD in the CD-ROM drive.

Disk to Disk Copy allows you to recover data from an old drive when replacing it with a new drive. The service aid recovers all logical volume manager (LVM) software

reassigned blocks. To prevent corrupted data from being copied to the new drive, the service aid stops if an unrecoverable read error is detected. To help prevent possible problems with the new drive, the service aid stops if the number of bad blocks being reassigned reaches a threshold.

To use this service aid, both the old and new disks must be installed in or attached to the system with unique SCSI addresses. This requires that the new disk drive SCSI address must be set to an address that is not currently in use and the drive be installed in an empty location. If there are no empty locations, then one of the other drives must be removed. When the copy is complete, only one drive can remain installed. Either remove the target drive to return to the original configuration, or perform the following procedure to complete the replacement of the old drive with the new drive:

1. Remove both drives.
2. Set the SCSI address of the new drive to the SCSI address of the old drive.
3. Install the new drive in the old drive's location.
4. Install any other drives (that were removed) into their original location.

To prevent problems that can occur when running this service aid from disk, it is suggested that this service aid be run, when possible, from the diagnostics that are loaded from removable media.

Display/Alter Sector

Note: Use caution when you use this service aid because inappropriate modification to some disk sectors can result in the total loss of all data on the disk.

This selection allows the user to display and alter information on a disk sector. Sectors are addressed by their decimal sector number. Data is displayed both in hex and in ASCII. To prevent corrupted data from being incorrectly corrected, the service aid does not display information that cannot be read correctly.

Display Configuration and Resource List

If a device is not included in the Test List or if you think a Diagnostic Package for a device is not loaded, check by using the Display Configuration and Resource List task. If the device you want to test has a plus (+) sign or a minus (-) sign preceding its name, the Diagnostic Package is loaded. If the device has an asterisk (*) preceding its name, the Diagnostic Package for the device is not loaded or is not available.

This service aid displays the item header only for all installed resources. Use this service aid when there is no need to see the vital product data (VPD). (No VPD is displayed.)

Display Hardware Vital Product Data

This service aid displays all installed resources, along with any VPD available for those resources. Use this service aid when you want to look at the VPD for a specific resource.

Display or Change Diagnostic Run-Time Options

The Display or Change Diagnostic Run-Time Options task allows the diagnostic run-time options to be set.

Note: The run-time options are used only when selecting the Run Diagnostic task.

The run-time options are:

- Display Diagnostic Mode Selection Menus
This option allows the user to turn on or off displaying the DIAGNOSTIC MODE SELECTION MENU (the default is on).
- Run Tests Multiple Times
This option allows the user to turn on or off running the diagnostic in loop mode (the default is off).

Note: This option is only displayed when you run the Online Diagnostics in Service Mode.

- Include Advanced Diagnostics
This option allows the user to turn on or off including the Advanced Diagnostics (the default is off).
- Include Error Log Analysis
This option allows the user to turn on or off including the Error Log Analysis (ELA) (the default is off).
- Number of Days Used to Search Error Log
This option allows the user to select the number of days for which to search the AIX error log for errors when running the Error Log Analysis. The default is seven days, but it can be changed from one to sixty days.
- Display Progress Indicators
This option allows the user to turn on or off the progress indicators when running the Diagnostic Applications. The progress indicators are in a popup box at the bottom of the screen and indicate that the test being run (the default is on).
- Diagnostic Event Logging
This option allows the user to turn on or off logging information to the Diagnostic Event Log (the default is on).
- Diagnostic Event Log File Size
This option allows the user to select the maximum size of the Diagnostic Event Log. The default size for the Diagnostic Event Log is 100 KB. The size can be increased in 100 KB increments to a maximum of 1 MB.

Display Previous Diagnostic Results

Note: This service aid is not available when you load the diagnostics from a source other than a hard disk drive or a network.

This service aid allows a service representative to display results from a previous diagnostic session. When the Display Previous Diagnostic Results option is selected, the user can view up to 25 no trouble found (NTF) and service request number (SRN) results.

This service aid displays Diagnostic Event Log information. You can display the Diagnostic Event Log in a short version or a long version. The Diagnostic Event Log contains information about events logged by a diagnostic session.

This service aid displays the information in reverse chronological order. If more information is available than can be displayed on one screen, use the Page Down and Page Up keys to scroll through the information.

This information is not from the operating system error log. This information is stored in the **/var/adm/ras** directory.

You can run the command from the AIX command line by typing:
`/usr/lpp/diagnostics/bin/diagrpt [[-o] | [-s mddy] | [-a] | [-r]]`

Flag	Description
-o	Displays the last diagnostic results file stored in the /etc/lpp/diagnostics/data directory
-s mddy	Displays all diagnostic result files logged since the date specified
-a	Displays the long version of the Diagnostic Event Log
-r	Displays the short version of the Diagnostic Event Log

Display Resource Attributes

This task displays the Customized Device Attributes associated with a selected resource. This task is similar to running the **lsattr -E -I resource** command.

Display Software Product Data

This task uses SMIT to display information about the installed software and provides the following functions:

- List Installed Software
- List Applied but Not Committed Software Updates
- Show Software Installation History
- Show Fix (APAR) Installation Status
- List Fileset Requisites
- List Fileset Dependents
- List Files Included in a Fileset
- List File Owner by Fileset

Format Media

This task allows SCSI hardfiles to be formatted.

Hardfile Attached to SCSI Adapter

- Hardfile Format

Writes all of the disk. The pattern written on the disk is device-dependent; for example some drives may write all 0s, while some may write the hexadecimal number 5F. No bad block reassignment occurs

- Hardfile Format and Certify

Performs the same function as Hardfile Format. After the format is completed, Certify is run. Certify then reassigns all bad blocks encountered.

- Hardfile Erase Disk

This option can be used to overwrite (remove) all data currently stored in user-accessible blocks of the disk. The **Erase Disk** option writes one or more patterns to the disk. An additional option allows data in a selectable block to be read and displayed on the system console.

To use the **Erase Disk** option, specify the number (0-3) of patterns to be written. The patterns are written serially; that is, the first pattern is written to all blocks. Then the next pattern is written to all blocks, overlaying the previous pattern. A random pattern is written by selecting the **Write Random Pattern?** option.

Note: The Erase Disk service aid has not been certified as meeting the Department of Defense or any other organization's security guidelines.

Use the following steps to overwrite the data on the drive:

1. Use the **Erase Disk** selection to overwrite the data on the drive.
2. Do a format without certify.
3. Run a second pass of the **Erase Disk** selection.

For a newly installed drive, you can ensure that all blocks on the drive are overwritten with your pattern if you use the following procedure:

1. Format the drive.
2. Check the defect MAP by running the **Erase Disk** selection.

Note: If you use the **Format and Certify** option, there may be some blocks which get placed into the grown defect MAP.

3. If there are bad blocks in the defect MAP, record the information presented and ensure that this information is kept with the drive. This data is used later when the drive is to be overwritten.
4. Use the drive as you would normally.
5. When the drive is no longer needed and is to be erased, run the same version of the **Erase Disk** selection that was used in step 2.

Note: Using the same version of the service aid is only critical if any bad blocks were found in step 3.

6. Compare the bad blocks that were recorded for the drive in step 3 with those that now appear in the grown defect MAP.

Note: If there are differences between the saved data and the newly obtained data, then all sectors on this drive cannot be overwritten. The new bad blocks are not overwritten.

7. If the bad block list is the same, continue running the service aid to overwrite the disk with the chosen pattern(s).

This task can be run directly from the AIX command line. See the command syntax:
`diag -c -d deviceName -T "format [-s* fmtcert | erase -a {read | write}] [-F]"`

Flag	Description
------	-------------

fmtcert	Formats and certifies the disk.
----------------	---------------------------------

Available in no-console mode only.

-F	Force the disk erasure even if all blocks cannot be erased due to errors accessing grown defect map.
-----------	--

Note: The Erase Disk option in command line mode uses default values. To selectively read or write, use the **diag** command in console mode.

Generic Microcode Download

This service aid provides a means of executing a "generic" script from a diskette. The intended purpose for this "generic" script is to load microcode to a supported resource. This script runs whatever program is required in order to download the microcode onto the adapter or device.

This service aid is supported in both concurrent and standalone modes from disk, LAN, or loadable media.

On entry, the service aid displays information about what it does. It then asks for a Genucode diskette to be inserted into the diskette drive. The diskette must be in tar format. The service aid restores the script file **genucode** to the **/tmp** directory and runs the script. The script must at that point pull any other needed files from the diskette. The script should then run whatever program is necessary in order to perform its function. On completion, a status code is returned, and the user is returned to the service aid.

The **genucode** script should have a `#! /usr/bin/ksh` line at the beginning of the file. Return status of 0 should be returned if the program was successful.

Log Repair Action

The Log Repair Action task logs a repair action in the operating system Error Log. A Repair Action log indicates that a FRU has been replaced, and error log analysis should not be done for any errors logged before the repair action. The Log Repair Action task lists all resources. Replaced resources can be selected from the list, and when **commit** (F7 key) is selected, a repair action is logged for each selected resource. For more information see, "Log Repair Action" on page 6.

Periodic Diagnostics

This selection provides a tool for configuring periodic diagnostics and automatic error log analysis. You can select a hardware resource to be tested once a day, at a user-specified time. If the resource cannot be tested because it is busy, error log analysis is performed.

Hardware errors logged against a resource can also be monitored by enabling Automatic Error Log Analysis. This allows error log analysis to be performed every time a hardware error is put into the error log. If a problem is detected, a message is posted to the system console and a mail message sent to the users belonging to the system group containing information about the failure, such as the service request number.

The service aid provides the following functions:

- Add or delete a resource to the periodic test list
- Modify the time to test a resource
- Display the periodic test list
- Modify the error notification mailing list
- Disable or Enable Automatic Error Log Analysis

Run Diagnostics

The Run Diagnostics task invokes the Resource Selection List menu. When the commit key is pressed, diagnostics are run on all selected resources.

The procedures for running the diagnostics depends on the state of the diagnostics run-time options. See “Display or Change Diagnostic Run-Time Options” on page 19.

Run Error Log Analysis

The Run Error Log Analysis task invokes the Resource Selection List menu. When the commit key is pressed, Error Log Analysis is run on all selected resources.

Run Exercisers

Note: The Run Exercisers task is only supported in Online Maintenance Mode only.

This task provides a tool to troubleshoot intermittent system problems. This task provides an exerciser supervisor that controls the selected exercisers.

When you select Run Exercisers from the Task Selection menu, the EXERCISER SELECTION menu displays. Select the exerciser you want to run. Each exerciser has other menus to set options for that exerciser.

Exerciser Commands (CMD)

Use the following commands as needed in the exerciser menus and reports. Not all commands are available in each menu or report.

CMD	Description
a	Acknowledge an error
b	Back one page
c	Toggle between cycle count and last error
e	View the AIX error log
f	Page forward one page
q	Return to Main Menu
r	Refresh screen
s	Enable or disable beep on error
x	Exit system exerciser

Abbreviations

The following list describes abbreviations used in the exerciser reports.

Acronym

Description

COE	Continue on error (use number to select).
CP	Device has run the specified number of cycles and is not running.
DD	The exerciser has been terminated by a signal.
ER	Device has stopped with an error.
HG	The device is hung.
HOE	Halt on error (use number to select).
RN	Device is running.
ST	Device is stopped.

Memory Exerciser

The memory exercisers are labeled memx, where x is a number for the exerciser. Multiple exercisers can be active. To toggle between two states (for example; Activate and Halt Devices), use the number of the device.

The memory exerciser requests as many memory buffers as possible from the operating system. The exerciser then fills the memory buffers with specified bit patterns, then reads and compares the memory buffers to the specified bit patterns.

On systems with multiple processors, a process is started for each processor. The free memory space is split evenly between the available processors, thus reducing the time required to exercise all of the memory.

If the system is working correctly, there are no comparison errors. If an unrecoverable memory error occurs, the system crashes. Recoverable memory errors are logged by the operating system.

The following items must be available to run this service aid:

- Online diagnostics loaded in maintenance mode
- 128 KB of free space in **/etc/lpp/diagnostics/data**
- The following commands must be available:
 - **bootinfo**
 - **lsps**
 - **vmstat**

SCSD Tape Drive Service Aid

This service aid allows you to obtain the status or maintenance information from a SCSD tape drive. Not all models of SCSD tape drive are supported.

The service aid provides the following options:

- Display time since a tape drive was last cleaned. The time since the drive was last cleaned displays on the screen, as well as a message regarding whether the drive is recommended to be cleaned.
- Copy a tape drive's trace table. The trace table of the tape drive is written to diskettes or a file. The diskettes must be formatted for DOS. Writing the trace table may require several diskettes. The actual number of diskettes is determined by the size of the trace table. Label the diskettes as follows:
TRACE x .DAT (where x is a sequential diskette number). The complete trace table consists of the sequential concatenation of all the diskette data files.
When the trace table is written to a disk file, the service aid prompts for a file name. The default name is: **/tmp/TRACE. x** , where x is the AIX name of the SCSD tape drive being tested.
- Display or copy a tape drive's log sense information. The service aid provides options to display the log sense information to the screen, to copy it to a DOS formatted diskette, or to copy it to a file. The file name **LOGSENSE.DAT** is used when the log sense data is written to the diskette. The service aid prompts for a file name when you have selected that the log sense data is to be copied to a file.

This service aid can be run directly from the operating system command line. See the following command syntax (path is **/usr/lpp/diagnostics/bin/utape**):

```
utape [-h | -?] [-d device] [-n | -1 | -t] OR utape -c -d device [-v] {-n | {-1 | -t} { -D | -f[ filename]}}
```

Flag	Description
------	-------------

- | | |
|-----------|---|
| -c | Run the service aid without displaying menus. The return code indicates success or failure. The output is suppressed except for the usage statement and the numeric value for hours since cleaning (if -n and -D flags are used). |
|-----------|---|

- D** Copy data to diskette.
- f** Copy data to the file name given after this flag or to a default file name if no name is specified.
- h, -?** Display a usage statement and/or return code. If the **-c** flag is present, only the return code displays to indicate the service aid did not run. If the **-c** is not used, a usage statement displays and the service aid exits.
- l** Display or copy log sense information.
- n** Display time since drive was last cleaned.
- t** Copy trace table.
- v** Verbose mode. If the **-c** flag is present, the information displays on the screen. If the **-n** flag is present, the information about tape-head cleaning is printed.

Update Disk-Based Diagnostics

This service aid allows fixes (APARs) to be applied.

This task invokes the SMIT Update Software by Fix (APAR) task. The task allows the input device and APARs to be selected. You can install any APAR using this task.

Chapter 4. Using the SRN List

The service request number (SRN) list is in numerical sequence.

The SRNs listed in the following chapters are for all systems and devices for which this version of the diagnostic programs can produce an SRN.

How to Use the Service Request Number List

Accompanying every SRN in the list is one or more FFC (Failing Function Code), as well as a Description and Action(s) required in response to the SRN.

The columns in the table are used as follows:

Service Request Number

A six-digit number representing a specific failure of a specific function.

Failing Function Code

A three-digit number representing a specific device that may be responsible for the failure of a specific function.

Description and Action

A brief description of the failure that this SRN represents. It may also contain instructions about how to continue the problem analysis.

To use the SRN list, do the following:

1. Find your SRN in the table.
2. Record the failing function codes in the order listed.
3. Perform the action shown in the Action column, if any.

Note:

- If you cannot find SRN information in the Service Request Number List, check for the existence of supplemental material supporting the device for which the SRN was generated.
- x in an SRN represents any digit or character.
- If your SRN is not listed, check to see if xxx has been used. The -xxx should always be the last SRN identified within a specific prefix. An example would be 950-xxx. The xxx is the last digit within the 950 prefix.

Service Request Number Listing

The following chapters contain the SRN List. The chapters are broken down into SRN number ranges. The following list identifies each SRN chapter range and the page number on which it begins:

- “Chapter 5. Six-Digit SRNs 2E6-212 through 692-723” on page 29
- “Chapter 6. Six-Digit SRNs 700-102 through 840-802” on page 63
- “Chapter 7. Six-Digit SRNs 901-xxx through 998-723” on page 99

Chapter 5. Six-Digit SRNs 2E6-212 through 692-723

Service Request Number	Failing Function Codes	Description and Action
2E6-212	2E6	Description: FIFO empty bit set.
2E6-213	2E6	Description: FIFO empty bit clear.
2E6-214	2E6	Description: FIFO full bit set.
2E6-215	2E6	Description: FIFO full bit clear.
2E6-216	2E6	Description: FIFO data miscompare.
2E6-217	2E6	Description: SCSI FIFO data miscompare.
2E6-218	2E6	Description: SCSI FIFO underflow.
2E6-219	2E6	Description: SCSI parity error.
2E6-220	2E6	Description: SCSI FIFO flags error.
2E6-221	2E6 221	Description: Miscompare during the write/read of the configuration register.
2E6-222	2E6	Description: Error during the write/read of the memory register.
2E6-223		Description: Miscompare during the write/read of the memory I/O register.
2E6-224	2E6 221	Description: SCSI configuration register read or write error.
2E6-225	2E6	Description: Adapter POST failed.
2E6-226		Description: SCSI wrap or PTC failure.
2E6-227	2E6	Description: SCSI adapter test failure.
2E6-230		Description: Arbitration test failed.
2E6-231		Description: Function could not complete.
2E6-232		Description: SCSI bus data miscompare.
2E6-240		Description: No terminal power.
2E6-242		Description: SCSI bus problem.
2E6-301	2E6 221	Description: The parent device open failed.
2E6-600	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-601	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-602	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-603	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-604	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.

Service Request Number	Failing Function Codes	Description and Action
2E6-605	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-606	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-607	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-701	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-702	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-703	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-704	2E6	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E6-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
2E6-802		Description: Error log analysis indicates a PCI SCSI bus failure.
2E7-212	2E7	Description: FIFO empty bit set.
2E7-213	2E7	Description: FIFO empty bit clear.
2E7-214	2E7	Description: FIFO full bit set.
2E7-215	2E7	Description: FIFO full bit clear.
2E7-216	2E7	Description: FIFO data miscompare.
2E7-217	2E7	Description: SCSI FIFO data miscompare.
2E7-218	2E7	Description: SCSI FIFO underflow.
2E7-219	2E7	Description: SCSI parity error.
2E7-220	2E7	Description: SCSI FIFO flags error.
2E7-221	2E7 221	Description: Miscompare during the write/read of the configuration register.
2E7-222	2E7	Description: Error during the write/read of the memory register.
2E7-223		Description: Miscompare during the write/read of the memory I/O register.
2E7-224	2E7 221	Description: SCSI configuration register read or write error.
2E7-225	2E7	Description: Adapter POST failed.
2E7-226		Description: SCSI wrap or PTC failure.
2E7-227	2E7	Description: SCSI adapter test failure.
2E7-230		Description: Arbitration test failed.
2E7-231		Description: Function could not complete.

Service Request Number	Failing Function Codes	Description and Action
2E7-232		Description: SCSI bus data miscompare.
2E7-240		Description: No terminal power.
2E7-242		Description: SCSI bus problem.
2E7-301	2E7	Description: Configuration open failed for parent bus.
2E7-700	2E7 221	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-701	2E7	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-702	2E7	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-703	2E7	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-704	2E7	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-705	2E7	Description: Error log analysis indicates a PCI SCSI adapter failure.
2E7-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
2E7-802		Description: Error log analysis indicates a PCI SCSI bus failure.
440-098	440 B88	Description: The disk drive indicates an error.
440-099	440 B88	Description: The disk drive not found.
440-102	440	Description: An unrecoverable media error occurred.
440-104	440	Description: The motor failed to restart.
440-105	440	Description: The drive did not become ready.
440-106	440	Description: The electronics card test failed.
440-108	440	Description: The bus test failed.
440-110	440	Description: The media format is corrupted.
440-112	440	Description: The diagnostic test failed.
440-114	440	Description: An unrecoverable hardware error.
440-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
440-117	440	Description: A write-protect error occurred.
440-118	440 B88	Description: A SCSI command time-out occurred.
440-120	440	Description: A SCSI busy or command error.

Service Request Number	Failing Function Codes	Description and Action
440-122	440	Description: A SCSI reservation conflict error.
440-124	440	Description: A SCSI check condition error occurred.
440-126	440 B88	Description: A software error was caused by a hardware failure.
440-128	440	Description: The error log analysis indicates a hardware failure.
440-129	190 440 B88 software	Description: Error log analysis indicates a SCSI bus problem.
440-130	440	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
440-132	440	Description: A disk drive hardware error occurred.
440-134	B88 software	Description: The adapter failed to configure.
440-135	440 B88 software	Description: The device failed to configure.
440-136	440	Description: The certify operation failed.
440-137	440 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
441-098	441 B88	Description: The disk drive indicates an error.
441-099	441 B88	Description: The disk drive not found.
441-102	441	Description: An unrecoverable media error occurred.
441-104	441	Description: The motor failed to restart.
441-105	441	Description: The drive did not become ready.
441-106	441	Description: The electronics card test failed.
441-108	441	Description: The bus test failed.
441-110	441	Description: The media format is corrupted.
441-112	441	Description: The diagnostic test failed.
441-114	441	Description: An unrecoverable hardware error.
441-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
441-117	441	Description: A write-protect error occurred.
441-118	441 B88	Description: A SCSI command time-out occurred.

Service Request Number	Failing Function Codes	Description and Action
441-120	441	Description: A SCSI busy or command error.
441-122	441	Description: A SCSI reservation conflict error.
441-124	441	Description: A SCSI check condition error occurred.
441-126	441 B88	Description: A software error was caused by a hardware failure.
441-128	441	Description: The error log analysis indicates a hardware failure.
441-129	190 441 B88 software	Description: Error log analysis indicates a SCSI bus problem.
441-130	441	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
441-132	441	Description: A disk drive hardware error occurred.
441-134	B88 software	Description: The adapter failed to configure.
441-135	441 B88 software	Description: The device failed to configure.
441-136	441	Description: The certify operation failed.
441-137	441 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
442-098	442 B88	Description: The disk drive indicates an error.
442-099	442 B88	Description: The disk drive not found.
442-102	442	Description: An unrecoverable media error occurred.
442-104	442	Description: The motor failed to restart.
442-105	442	Description: The drive did not become ready.
442-106	442	Description: The electronics card test failed.
442-108	442	Description: The bus test failed.
442-110	442	Description: The media format is corrupted.
442-112	442	Description: The diagnostic test failed.
442-114	442	Description: An unrecoverable hardware error.
442-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
442-117	442	Description: A write-protect error occurred.

Service Request Number	Failing Function Codes	Description and Action
442-118	442 B88	Description: A SCSI command time-out occurred.
442-120	442	Description: A SCSI busy or command error.
442-122	442	Description: A SCSI reservation conflict error.
442-124	442	Description: A SCSI check condition error occurred.
442-126	442 B88	Description: A software error was caused by a hardware failure.
442-128	442	Description: The error log analysis indicates a hardware failure.
442-129	190 442 B88 software	Description: Error log analysis indicates a SCSI bus problem.
442-130	442	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
442-132	442	Description: A disk drive hardware error occurred.
442-134	B88 software	Description: The adapter failed to configure.
442-135	442 B88 software	Description: The device failed to configure.
442-136	442	Description: The certify operation failed.
442-137	442 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
443-098	443 B88	Description: The disk drive indicates an error.
443-099	443 B88	Description: The disk drive not found.
443-102	443	Description: An unrecoverable media error occurred.
443-104	443	Description: The motor failed to restart.
443-105	443	Description: The drive did not become ready.
443-106	443	Description: The electronics card test failed.
443-108	443	Description: The bus test failed.
443-110	443	Description: The media format is corrupted.
443-112	443	Description: The diagnostic test failed.
443-114	443	Description: An unrecoverable hardware error.
443-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.

Service Request Number	Failing Function Codes	Description and Action
443-117	443	Description: A write-protect error occurred.
443-118	443 B88	Description: A SCSI command time-out occurred.
443-120	443	Description: A SCSI busy or command error.
443-122	443	Description: A SCSI reservation conflict error.
443-124	443	Description: A SCSI check condition error occurred.
443-126	443 B88	Description: A software error was caused by a hardware failure.
443-128	443	Description: The error log analysis indicates a hardware failure.
443-129	190 443 B88 software	Description: Error log analysis indicates a SCSI bus problem.
443-130	443	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
443-132	443	Description: A disk drive hardware error occurred.
443-134	B88 software	Description: The adapter failed to configure.
443-135	443 B88 software	Description: The device failed to configure.
443-136	443	Description: The certify operation failed.
443-137	443 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
541-xxx	541	Description: A DLT tape device problem has occurred. Action: Refer to the DLT tape device documentation.
637-212	637	Description: FIFO empty bit set.
637-213	637	Description: FIFO empty bit clear.
637-214	637	Description: FIFO full bit set.
637-215	637	Description: FIFO full bit clear.
637-216	637	Description: FIFO data mismatch.
637-217	637	Description: SCSI FIFO data mismatch.
637-218	637	Description: SCSI FIFO underflow.
637-219	637	Description: SCSI parity error.
637-220	637	Description: SCSI FIFO flags error.
637-221	637 221	Description: Mismatch during the write/read of the configuration register.

Service Request Number	Failing Function Codes	Description and Action
637-222	637	Description: Error during the write/read of the memory register.
637-223		Description: Miscompare during the write/read of the memory I/O register.
637-224	637 221	Description: SCSI configuration register read or write error.
637-225	637	Description: Adapter POST failed.
637-226		Description: SCSI wrap or PTC failure.
637-227	637	Description: SCSI adapter test failure.
637-230		Description: Arbitration test failed.
637-231		Description: Function could not complete.
637-232		Description: SCSI bus data miscompare.
637-240		Description: No terminal power.
637-242		Description: SCSI bus problem.
637-301	637 221	Description: The parent device open failed.
637-600	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-601	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-602	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-603	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-604	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-605	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-606	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-607	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-701	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-702	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-703	637	Description: Error log analysis indicates a PCI SCSI adapter failure.
637-704	637	Description: Error log analysis indicates a PCI SCSI adapter failure.

Service Request Number	Failing Function Codes	Description and Action
637-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
637-802		Description: Error log analysis indicates a PCI SCSI bus failure.
638-098	638 B88	Description: The disk drive indicates an error.
638-099	638 B88	Description: The disk drive not found.
638-102	638	Description: An unrecoverable media error occurred.
638-104	638	Description: The motor failed to restart.
638-105	638	Description: The drive did not become ready.
638-106	638	Description: The electronics card test failed.
638-108	638	Description: The bus test failed.
638-110	638	Description: The media format is corrupted.
638-112	638	Description: The diagnostic test failed.
638-114	638	Description: An unrecoverable hardware error.
638-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
638-117	638	Description: A write-protect error occurred.
638-118	638 B88	Description: A SCSI command time-out occurred.
638-120	638	Description: A SCSI busy or command error.
638-122	638	Description: A SCSI reservation conflict error.
638-124	638	Description: A SCSI check condition error occurred.
638-126	638 B88	Description: A software error was caused by a hardware failure.
638-128	638	Description: The error log analysis indicates a hardware failure.
638-129	190 638 B88 software	Description: Error log analysis indicates a SCSI bus problem.
638-130	638	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
638-132	638	Description: A disk drive hardware error occurred.
638-134	B88 software	Description: The adapter failed to configure.

Service Request Number	Failing Function Codes	Description and Action
638-135	638 B88 software	Description: The device failed to configure.
638-136	638	Description: The certify operation failed.
638-137	638 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
639-098	639 B88	Description: The disk drive indicates an error.
639-099	639 B88	Description: The disk drive not found.
639-102	639	Description: An unrecoverable media error occurred.
639-104	639	Description: The motor failed to restart.
639-105	639	Description: The drive did not become ready.
639-106	639	Description: The electronics card test failed.
639-108	639	Description: The bus test failed.
639-110	639	Description: The media format is corrupted.
639-112	639	Description: The diagnostic test failed.
639-114	639	Description: An unrecoverable hardware error.
639-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
639-117	639	Description: A write-protect error occurred.
639-118	639 B88	Description: A SCSI command time-out occurred.
639-120	639	Description: A SCSI busy or command error.
639-122	639	Description: A SCSI reservation conflict error.
639-124	639	Description: A SCSI check condition error occurred.
639-126	639 B88	Description: A software error was caused by a hardware failure.
639-128	639	Description: The error log analysis indicates a hardware failure.
639-129	190 639 B88 software	Description: Error log analysis indicates a SCSI bus problem.
639-130	639	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
639-132	639	Description: A disk drive hardware error occurred.

Service Request Number	Failing Function Codes	Description and Action
639-134	B88 software	Description: The adapter failed to configure.
639-135	639 B88 software	Description: The device failed to configure.
639-136	639	Description: The certify operation failed.
639-137	639 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63A-098	63A B88	Description: Disk drive indicates an error.
63A-099	63A B88	Description: Disk drive not found.
63A-102	63A	Description: An unrecoverable media error.
63A-104	63A	Description: The motor failed to restart.
63A-105	63A	Description: The drive did not become ready.
63A-106	63A	Description: The electronics card test failed.
63A-108	63A	Description: The bus test failed.
63A-110	63A	Description: The media format is corrupted.
63A-112	63A	Description: The diagnostic test failed.
63A-114	63A	Description: An unrecoverable hardware error.
63A-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63A-117	63A	Description: A write-protect error occurred.
63A-118	63A B88	Description: A SCSI command time-out.
63A-120	63A	Description: A SCSI busy or command error.
63A-122	63A	Description: A SCSI reservation conflict error.
63A-124	63A	Description: A SCSI check condition error.
63A-126	63A B88	Description: A software error was caused by a hardware failure.
63A-128	63A	Description: The error log analysis indicates a hardware failure.
63A-129	190 63A B88 software	Description: Error log analysis indicates a SCSI bus problem.
63A-130	63A	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.

Service Request Number	Failing Function Codes	Description and Action
63A-132	63A	Description: A disk drive hardware error occurred.
63A-134	B88 software	Description: The adapter failed to configure.
63A-135	63A B88 software	Description: The device failed to configure.
63A-136	63A	Description: The certify operation failed.
63A-137	63A B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63B-098	63B B88	Description: Disk drive indicates an error.
63B-099	63B B88	Description: Disk drive not found.
63B-102	63B	Description: An unrecoverable media error.
63B-104	63B	Description: The motor failed to restart.
63B-105	63B	Description: The drive did not become ready.
63B-106	63B	Description: The electronics card test failed.
63B-108	63B	Description: The bus test failed.
63B-110	63B	Description: The media format is corrupted.
63B-112	63B	Description: The diagnostic test failed.
63B-114	63B	Description: An unrecoverable hardware error.
63B-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63B-117	63B	Description: A write-protect error occurred.
63B-118	63B B88	Description: A SCSI command time-out.
63B-120	63B	Description: A SCSI busy or command error.
63B-122	63B	Description: A SCSI reservation conflict error.
63B-124	63B	Description: A SCSI check condition error.
63B-126	63B B88	Description: A software error was caused by a hardware failure.
63B-128	63B	Description: The error log analysis indicates a hardware failure.
63B-129	190 63B B88 software	Description: Error log analysis indicates a SCSI bus problem.

Service Request Number	Failing Function Codes	Description and Action
63B-130	63B	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
63B-132	63B	Description: A disk drive hardware error occurred.
63B-134	B88 software	Description: The adapter failed to configure.
63B-135	63B B88 software	Description: The device failed to configure.
63B-136	63B	Description: The certify operation failed.
63B-137	63B B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63C-098	63C B88	Description: Disk drive indicates an error.
63C-099	63C B88	Description: Disk drive not found.
63C-102	63C	Description: An unrecoverable media error.
63C-104	63C	Description: The motor failed to restart.
63C-105	63C	Description: The drive did not become ready.
63C-106	63C	Description: The electronics card test failed.
63C-108	63C	Description: The bus test failed.
63C-110	63C	Description: The media format is corrupted.
63C-112	63C	Description: The diagnostic test failed.
63C-114	63C	Description: An unrecoverable hardware error.
63C-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63C-117	63C	Description: A write-protect error occurred.
63C-118	63C B88	Description: A SCSI command time-out.
63C-120	63C	Description: A SCSI busy or command error.
63C-122	63C	Description: A SCSI reservation conflict error.
63C-124	63C	Description: A SCSI check condition error.
63C-126	63C B88	Description: A software error was caused by a hardware failure.
63C-128	63C	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
63C-129	190 63C B88 software	Description: Error log analysis indicates a SCSI bus problem.
63C-130	63C	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
63C-132	63C	Description: A disk drive hardware error occurred.
63C-134	B88 software	Description: The adapter failed to configure.
63C-135	63C B88 software	Description: The device failed to configure.
63C-136	63C	Description: The certify operation failed.
63C-137	63C B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63D-098	63D B88	Description: Disk drive indicates an error.
63D-099	63D B88	Description: Disk drive not found.
63D-102	63D	Description: An unrecoverable media error.
63D-104	63D	Description: The motor failed to restart.
63D-105	63D	Description: The drive did not become ready.
63D-106	63D	Description: The electronics card test failed.
63D-108	63D	Description: The bus test failed.
63D-110	63D	Description: The media format is corrupted.
63D-112	63D	Description: The diagnostic test failed.
63D-114	63D	Description: An unrecoverable hardware error.
63D-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63D-117	63D	Description: A write-protect error occurred.
63D-118	63D B88	Description: A SCSI command time-out.
63D-120	63D	Description: A SCSI busy or command error.
63D-122	63D	Description: A SCSI reservation conflict error.
63D-124	63D	Description: A SCSI check condition error.
63D-126	63D B88	Description: A software error was caused by a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
63D-128	63D	Description: The error log analysis indicates a hardware failure.
63D-129	190 63D B88 software	Description: Error log analysis indicates a SCSI bus problem.
63D-130	63D	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
63D-132	63D	Description: A disk drive hardware error occurred.
63D-134	B88 software	Description: The adapter failed to configure.
63D-135	63D B88 software	Description: The device failed to configure.
63D-136	63D	Description: The certify operation failed.
63D-137	63D B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63E-098	63E B88	Description: Disk drive indicates an error.
63E-099	63E B88	Description: Disk drive not found.
63E-102	63E	Description: An unrecoverable media error.
63E-104	63E	Description: The motor failed to restart.
63E-105	63E	Description: The drive did not become ready.
63E-106	63E	Description: The electronics card test failed.
63E-108	63E	Description: The bus test failed.
63E-110	63E	Description: The media format is corrupted.
63E-112	63E	Description: The diagnostic test failed.
63E-114	63E	Description: An unrecoverable hardware error.
63E-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63E-117	63E	Description: A write-protect error occurred.
63E-118	63E B88	Description: A SCSI command time-out.
63E-120	63E	Description: A SCSI busy or command error.
63E-122	63E	Description: A SCSI reservation conflict error.
63E-124	63E	Description: A SCSI check condition error.

Service Request Number	Failing Function Codes	Description and Action
63E-126	63E B88	Description: A software error was caused by a hardware failure.
63E-128	63E	Description: The error log analysis indicates a hardware failure.
63E-129	190 63E B88 software	Description: Error log analysis indicates a SCSI bus problem.
63E-130	63E	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
63E-132	63E	Description: A disk drive hardware error occurred.
63E-134	B88 software	Description: The adapter failed to configure.
63E-135	63E B88 software	Description: The device failed to configure.
63E-136	63E	Description: The certify operation failed.
63E-137	63E B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
63F-098	63F B88	Description: Disk drive indicates an error.
63F-099	63F B88	Description: Disk drive not found.
63F-102	63F	Description: An unrecoverable media error.
63F-104	63F	Description: The motor failed to restart.
63F-105	63F	Description: The drive did not become ready.
63F-106	63F	Description: The electronics card test failed.
63F-108	63F	Description: The bus test failed.
63F-110	63F	Description: The media format is corrupted.
63F-112	63F	Description: The diagnostic test failed.
63F-114	63F	Description: An unrecoverable hardware error.
63F-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
63F-117	63F	Description: A write-protect error occurred.
63F-118	63F B88	Description: A SCSI command time-out.
63F-120	63F	Description: A SCSI busy or command error.
63F-122	63F	Description: A SCSI reservation conflict error.

Service Request Number	Failing Function Codes	Description and Action
63F-124	63F	Description: A SCSI check condition error.
63F-126	63F B88	Description: A software error was caused by a hardware failure.
63F-128	63F	Description: The error log analysis indicates a hardware failure.
63F-129	190 63F B88 software	Description: Error log analysis indicates a SCSI bus problem.
63F-130	63F	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
63F-132	63F	Description: A disk drive hardware error occurred.
63F-134	B88 software	Description: The adapter failed to configure.
63F-135	63F B88 software	Description: The device failed to configure.
63F-136	63F	Description: The certify operation failed.
63F-137	63F B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
640-102	640	Description: An unrecoverable media error occurred.
640-104	640	Description: The motor failed to restart.
640-105	640	Description: The drive did not become ready.
640-106	640	Description: The electronics card test failed.
640-108	640	Description: The bus test failed.
640-110	640	Description: The media format is corrupted.
640-112	640	Description: The diagnostic test failed.
640-114	640	Description: An unrecoverable hardware error.
640-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
640-117	640	Description: A write-protect error occurred.
640-118	640 B88	Description: A SCSI command time-out occurred.
640-120	640	Description: A SCSI busy or command error.
640-122	640	Description: A SCSI reservation conflict error.
640-124	640	Description: A SCSI check condition error occurred.
640-126	640 B88	Description: A software error was caused by a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
640-128	640	Description: The error log analysis indicates a hardware failure.
640-129	190 640 B88 software	Description: Error log analysis indicates a SCSI bus problem.
640-130	640	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
640-132	640	Description: A disk drive hardware error occurred.
640-134	B88 software	Description: The adapter failed to configure.
640-135	640 B88 software	Description: The device failed to configure.
640-136	640	Description: The certify operation failed.
640-137	640 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
643-098	643 B88	Description: The disk drive indicates an error.
643-099	643 B88	Description: The disk drive not found.
643-102	643	Description: An unrecoverable media error occurred.
643-104	643	Description: The motor failed to restart.
643-105	643	Description: The drive did not become ready.
643-106	643	Description: The electronics card test failed.
643-108	643	Description: The bus test failed.
643-110	643	Description: The media format is corrupted.
643-112	643	Description: The diagnostic test failed.
643-114	643	Description: An unrecoverable hardware error.
643-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
643-117	643	Description: A write-protect error occurred.
643-118	643 B88	Description: A SCSI command time-out occurred.
643-120	643	Description: A SCSI busy or command error.
643-122	643	Description: A SCSI reservation conflict error.
643-124	643	Description: A SCSI check condition error occurred.

Service Request Number	Failing Function Codes	Description and Action
643-126	643 B88	Description: A software error was caused by a hardware failure.
643-128	643	Description: The error log analysis indicates a hardware failure.
643-129	190 643 B88 software	Description: Error log analysis indicates a SCSI bus problem.
643-130	643	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
643-132	643	Description: A disk drive hardware error occurred.
643-134	B88 software	Description: The adapter failed to configure.
643-135	643 B88 software	Description: The device failed to configure.
643-136	643	Description: The certify operation failed.
643-137	643 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
644-098	644 B88	Description: The disk drive indicates an error.
644-099	644 B88	Description: The disk drive not found.
644-102	644	Description: An unrecoverable media error occurred.
644-104	644	Description: The motor failed to restart.
644-105	644	Description: The drive did not become ready.
644-106	644	Description: The electronics card test failed.
644-108	644	Description: The bus test failed.
644-110	644	Description: The media format is corrupted.
644-112	644	Description: The diagnostic test failed.
644-114	644	Description: An unrecoverable hardware error.
644-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
644-117	644	Description: A write-protect error occurred.
644-118	644 B88	Description: A SCSI command time-out occurred.
644-120	644	Description: A SCSI busy or command error.
644-122	644	Description: A SCSI reservation conflict error.

Service Request Number	Failing Function Codes	Description and Action
644-124	644	Description: A SCSI check condition error occurred.
644-126	644 B88	Description: A software error was caused by a hardware failure.
644-128	644	Description: The error log analysis indicates a hardware failure.
644-129	190 644 B88 software	Description: Error log analysis indicates a SCSI bus problem.
644-130	644	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
644-132	644	Description: A disk drive hardware error occurred.
644-134	B88 software	Description: The adapter failed to configure.
644-135	644 B88 software	Description: The device failed to configure.
644-136	644	Description: The certify operation failed.
644-137	644 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
646-101	D46	Description: External Test Failure.
646-102	240	Description: External Test Failure.
646-103	646	Description: I/O Test Failure.
646-104	646	Description: Adapter On-card Test Failure.
646-105	646	Description: Wrap Test Failure.
646-201	646 221	Description: Configuration Register Test Failure.
646-202	646 221	Description: Wrap Test Failure.
646-204	D46 240	Description: External Test Failure.
646-205	D46 646	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain a correct problem resolution.
646-302	240 D46 221	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain a correct problem resolution.
646-303	D46 646 221	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain a correct problem resolution.

Service Request Number	Failing Function Codes	Description and Action
646-401	240 D46 646 221	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain a correct problem resolution.
646-701	646	Description: Error log analysis indicates that an adapter error has occurred.
646-702	646	Description: Error log analysis indicates that an adapter check has occurred.
646-703	646 221	Description: Error log analysis indicates that a DMA failure has occurred.
646-704	646 221	Description: Error log analysis indicates that a PCI Bus error has occurred.
646-705	646 221	Description: Error log analysis indicates that a Programmed I/O error has occurred.
646-706	646	Description: ELA indicates a command write failure occurred.
646-707	646	Description: ELA indicates an internal adapter error has occurred.
650-xxx	650	Description: Disk drive configuration failed.
653-098	653 B88	Description: The disk drive indicates an error.
653-099	653 B88	Description: The disk drive not found.
653-102	653	Description: An unrecoverable media error occurred.
653-104	653	Description: The motor failed to restart.
653-105	653	Description: The drive did not become ready.
653-106	653	Description: The electronics card test failed.
653-108	653	Description: The bus test failed.
653-110	653	Description: The media format is corrupted.
653-112	653	Description: The diagnostic test failed.
653-114	653	Description: An unrecoverable hardware error.
653-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
653-117	653	Description: A write-protect error occurred.
653-118	653 B88	Description: A SCSI command time-out occurred.
653-120	653	Description: A SCSI busy or command error.
653-122	653	Description: A SCSI reservation conflict error.
653-124	653	Description: A SCSI check condition error occurred.

Service Request Number	Failing Function Codes	Description and Action
653-126	653 B88	Description: A software error was caused by a hardware failure.
653-128	653	Description: The error log analysis indicates a hardware failure.
653-129	190 653 B88 software	Description: Error log analysis indicates a SCSI bus problem.
653-130	653	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
653-132	653	Description: A disk drive hardware error occurred.
653-134	B88 software	Description: The adapter failed to configure.
653-135	653 B88 software	Description: The device failed to configure.
653-136	653	Description: The certify operation failed.
653-137	653 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
662-212	662	Description: FIFO empty bit set.
662-213	662	Description: FIFO empty bit clear.
662-214	662	Description: FIFO full bit set.
662-215	662	Description: FIFO full bit clear.
662-216	662	Description: FIFO data miscompare.
662-217	662	Description: SCSI FIFO data miscompare.
662-218	662	Description: SCSI FIFO underflow.
662-219	662	Description: SCSI parity error.
662-220	662	Description: SCSI FIFO flags error.
662-221	662 221	Description: Miscompare during the write/read of the configuration register.
662-222	662	Description: Error during the write/read of the memory register.
662-223		Description: Miscompare during the write/read of the memory I/O register.
662-224	662 221	Description: SCSI configuration register read or write error.
662-225	662	Description: Adapter POST failed.
662-226		Description: SCSI wrap or PTC failure.
662-227	662	Description: SCSI adapter test failure.

Service Request Number	Failing Function Codes	Description and Action
662-230		Description: Arbitration test failed.
662-231		Description: Function could not complete.
662-232		Description: SCSI bus data miscompare.
662-240		Description: No terminal power.
662-242		Description: SCSI bus problem.
662-301	662 221	Description: The parent device open failed.
662-600	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-601	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-602	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-603	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-604	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-605	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-606	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-607	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-701	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-702	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-703	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-704	662	Description: Error log analysis indicates a PCI SCSI adapter failure.
662-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
662-802		Description: Error log analysis indicates a PCI SCSI bus failure.
664-111	664 B88	Description: Unable to reserve device.
664-112	664 B88	Description: Unable to do configuration.
664-113	664 B88	Description: Unable to open the device driver.

Service Request Number	Failing Function Codes	Description and Action
664-121	664	Description: The CD-ROM drive indicates an error.
664-122	664	Description: The CD-ROM drive indicates an error.
664-123	664	Description: The CD-ROM drive indicates an error.
664-125	664 B88	Description: The CD-ROM drive indicates an error.
664-126	664	Description: The CD-ROM drive indicates an error.
664-127	664	Description: The CD-ROM drive indicates an error.
664-128	664	Description: The CD-ROM drive indicates an error.
664-129	664	Description: The CD-ROM drive indicates an error.
664-150	Test Disc 664	Description: A media error was detected.
664-151	664 B88	Description: A command timeout was detected.
664-152	664	Description: A command reservation conflict was detected.
664-162	664	Description: The CD-ROM drive indicates an error.
664-171	664	Description: Unable to reserve device.
664-172	664	Description: Unable to do configuration.
664-173	664	Description: Unable to open device driver.
664-175	664	Description: The CD-ROM drive indicates an error.
664-198	664 B88	Description: Undefined error detected.
664-199	664	Description: Undefined error detected.
664-211	664	Description: The LED test failed.
664-281	664	Description: No tone during audio test.
664-301	664	Description: Errors found during ELA.
664-302	664 B88	Description: Errors found during ELA.
669-201	669 221	Description: Configuration register test failure.
669-202	669 221	Description: I/O register test failure.
669-203	669 221	Description: Adapter memory test failure.
669-204	669 221	Description: Adapter initialization test failure.
669-205	669 221	Description: Internal loopback test failure.
669-206	669 221	Description: External loopback test failure.

Service Request Number	Failing Function Codes	Description and Action
669-701	669	Description: Error log analysis indicates that this device failed to initialize because it is not the IBM version of the adapter. Operating system cannot configure the non-IBM version of this adapter
669-702	669 221	Description: Error Log Analysis indicates that this device failed to initialize due to a problem with the EEPROM on the adapter.
669-703	669 221	Description: Error Log Analysis indicates that this device has failed to initialize due to a self-test failure.
669-704	669 221	Description: Error Log Analysis indicates that this device has failed to initialize due to firmware download error.
677-101	677	Description: The Fibre Channel Adapter configuration failed.
677-102	677	Description: The Reset test failed.
677-103	677	Description: The Register test failed.
677-104	677	Description: The SRAM test failed.
677-105	677	Description: The Internal Wrap test failed.
677-106	677	Description: The Gigabaud Link Module (GLM) failed
677-107	677	Description: The External Wrap test failed.
677-201	677 221	Description: The Configuration Register test failed.
677-202	677 221	Description: The Interrupt test failed.
677-203	677 221	Description: The PCI Wrap test failed.
677-204	677 221	Description: The DMA test failed.
677-205	677 221	Description: I/O error on a read/write operation.
677-701	677 221	Description: Error log analysis indicates that an error has occurred with the adapter.
677-702	Microcode 677	Description: Error log analysis indicates that an adapter microcode error has occurred
677-703	677	Description: Error log analysis indicates that an unknown adapter error has occurred
678-098	678	Description: Tape drive indicates an error.
678-099	678 B88	Description: Tape drive not found.
678-101	678	Description: Timeout while attempting to communicate with SCSI device.
678-102	678	Description: The SCSI device indicates busy.

Service Request Number	Failing Function Codes	Description and Action
678-103	678	Description: The SCSI device indicates a reservation conflict.
678-104	678	Description: The SCSI device indicates a check condition.
678-105	678	Description: An error is detected in request sense data.
678-107	678	Description: Sense data from the SCSI drive has unexpected data.
678-110	678	Description: The Reserve command failed.
678-111	678	Description: Invalid condition from the drive after a reserve.
678-112	678	Description: The write-protect sensor test failed.
678-113	678	Description: Invalid condition from drive after a request sense.
678-114	678	Description: Timeout while attempting to communicate with the SCSI device.
678-120	678	Description: The Inquiry command failed.
678-130	678 media	Description: The Load command failed.
678-134	B88 software	Description: The adapter failed to configure.
678-135	678 media	Description: The Unload command failed.
678-140	678	Description: The Mode Select command failed.
678-150	678 media	Description: The Test Unit Ready command failed.
678-160	678 media	Description: The Send Diagnostic command failed.
678-161	678 B88	Description: Invalid condition from the drive after a reserve.
678-163	678 B88	Description: Invalid condition from the drive after a request sense.
678-164	678 B88	Description: Timeout while attempting to communicate with the SCSI device.
678-165	678 B88 276	Description: Write, Read and Compare Test failed.
678-166	678 B88 software	Description: Unable to configure the device.
678-167	678 B88	Description: An unexpected SCSI error occurred.
678-168	B88 software	Description: The adapter failed to configure.

Service Request Number	Failing Function Codes	Description and Action
678-169	678 media	Description: The send diagnostic command failed.
678-170	678 B88 media	Description: The Read, Write and Compare test failed.
678-180	678 media	Description: The Load command failed.
678-185	678 media	Description: The Unload command failed.
678-190	678	Description: The Mode Select command failed.
678-200	678 media	Description: The Test Unit Ready command failed.
678-201	678 B88	Description: Error diagnosed from error log analysis.
678-210	678 B88	Description: The device configuration failed.
678-211	678 B88	Description: The device open failed.
678-220	678	Description: The Release command failed.
678-230	678	Description: The Request Sense command failed.
678-240	678	Description: The Openx command failed.
678-260	678	Description: The device configuration failed.
678-261	678	Description: The device open failed.
678-300	678 software	Description: The device configuration failed.
678-310	B88 678 software	Description: SCSI adapter configuration failed.
678-320	678 media	Description: Error log analysis indicates a failure.
678-411 to 678-423	678 B88 software	Description: A reservation conflict occurred.
678-511 to 678-523	678 B88	Description: The drive returned bad or non-extended sense data.
678-611 to 678-623	678 B88 software	Description: An adapter or bus I/O error occurred.
678-711 to 678-723	678 B88 software	Description: A device timeout error occurred.

Service Request Number	Failing Function Codes	Description and Action
679-098	679 B88	Description: The disk drive indicates an error.
679-099	679 B88	Description: The disk drive not found.
679-102	679	Description: An unrecoverable media error occurred.
679-104	679	Description: The motor failed to restart.
679-105	679	Description: The drive did not become ready.
679-106	679	Description: The electronics card test failed.
679-108	679	Description: The bus test failed.
679-110	679	Description: The media format is corrupted.
679-112	679	Description: The diagnostic test failed.
679-114	679	Description: An unrecoverable hardware error.
679-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
679-117	679	Description: A write-protect error occurred.
679-118	679 B88	Description: A SCSI command time-out occurred.
679-120	679	Description: A SCSI busy or command error.
679-122	679	Description: A SCSI reservation conflict error.
679-124	679	Description: A SCSI check condition error occurred.
679-126	679 B88	Description: A software error was caused by a hardware failure.
679-128	679	Description: The error log analysis indicates a hardware failure.
679-129	190 679 B88 software	Description: Error log analysis indicates a SCSI bus problem.
679-130	679	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
679-132	679	Description: A disk drive hardware error occurred.
679-134	B88 software	Description: The adapter failed to configure.
679-135	679 B88 software	Description: The device failed to configure.
679-136	679	Description: The certify operation failed.

Service Request Number	Failing Function Codes	Description and Action
679-137	679 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
681-102	681	Description: An unrecoverable media error occurred.
681-104	681	Description: The motor failed to restart.
681-105	681	Description: The drive did not become ready.
681-106	681	Description: The electronics card test failed.
681-108	681	Description: The bus test failed.
681-110	681	Description: The media format is corrupted.
681-112	681	Description: The diagnostic test failed.
681-114	681	Description: An unrecoverable hardware error.
681-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
681-117	681	Description: A write-protect error occurred.
681-118	681 B88	Description: A SCSI command time-out occurred.
681-120	681	Description: A SCSI busy or command error.
681-122	681	Description: A SCSI reservation conflict error.
681-124	681	Description: A SCSI check condition error occurred.
681-126	681 B88	Description: A software error was caused by a hardware failure.
681-128	681	Description: The error log analysis indicates a hardware failure.
681-129	190 681 B88 software	Description: Error log analysis indicates a SCSI bus problem.
681-130	681	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
681-132	681	Description: A disk drive hardware error occurred.
681-134	B88 software	Description: The adapter failed to configure.
681-135	681 B88 software	Description: The device failed to configure.
681-136	681	Description: The certify operation failed.
681-137	681 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.

Service Request Number	Failing Function Codes	Description and Action
682-098	682 B88 221	Description: IPLROS detected a problem with the CD-ROM drive
682-099	682 B88	Description: IPLROS detected a problem with the CD-ROM drive
682-111	682 B88	Description: Unable to reserve device.
682-112	682 B88	Description: Unable to do configuration.
682-113	682 B88	Description: Unable to open the device driver.
682-121	682	Description: The CD-ROM drive indicates an error.
682-122	682	Description: The CD-ROM drive indicates an error.
682-123	682	Description: The CD-ROM drive indicates an error.
682-125	682 B88	Description: The CD-ROM drive indicates an error.
682-126	682	Description: The CD-ROM drive indicates an error.
682-127	682	Description: The CD-ROM drive indicates an error.
682-128	682	Description: The CD-ROM drive indicates an error.
682-129	682	Description: The CD-ROM drive indicates an error.
682-150	Test Disc 682	Description: A media error was detected.
682-151	682 B88	Description: A command timeout was detected.
682-152	682	Description: A command reservation conflict was detected.
682-162	682	Description: The CD-ROM drive indicates an error.
682-171	682	Description: Unable to reserve device.
682-172	682	Description: Unable to do configuration.
682-173	682	Description: Unable to open device driver.
682-175	682	Description: The CD-ROM drive indicates an error.
682-198	682 B88	Description: Undefined error detected.
682-199	682	Description: Undefined error detected.
682-211	682	Description: The LED test failed.
682-281	682	Description: No tone during audio test.
682-301	682	Description: Errors found during ELA.
682-302	682 B88	Description: Errors found during ELA.

Service Request Number	Failing Function Codes	Description and Action
689-098	689 B88	Description: The disk drive indicates an error.
689-099	689 B88	Description: The disk drive not found.
689-102	689	Description: An unrecoverable media error occurred.
689-104	689	Description: The motor failed to restart.
689-105	689	Description: The drive did not become ready.
689-106	689	Description: The electronics card test failed.
689-108	689	Description: The bus test failed.
689-110	689	Description: The media format is corrupted.
689-112	689	Description: The diagnostic test failed.
689-114	689	Description: An unrecoverable hardware error.
689-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
689-117	689	Description: A write-protect error occurred.
689-118	689 B88	Description: A SCSI command time-out occurred.
689-120	689	Description: A SCSI busy or command error.
689-122	689	Description: A SCSI reservation conflict error.
689-124	689	Description: A SCSI check condition error occurred.
689-126	689 B88	Description: A software error was caused by a hardware failure.
689-128	689	Description: The error log analysis indicates a hardware failure.
689-129	190 689 B88 software	Description: Error log analysis indicates a SCSI bus problem.
689-130	689	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
689-132	689	Description: A disk drive hardware error occurred.
689-134	B88 software	Description: The adapter failed to configure.
689-135	689 B88 software	Description: The device failed to configure.
689-136	689	Description: The certify operation failed.

Service Request Number	Failing Function Codes	Description and Action
689-137	689 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
690-099	690 B88	Description: The disk drive not found.
690-102	690	Description: An unrecoverable media error occurred.
690-104	690	Description: The motor failed to restart.
690-105	690	Description: The drive did not become ready.
690-106	690	Description: The electronics card test failed.
690-108	690	Description: The bus test failed.
690-110	690	Description: The media format is corrupted.
690-112	690	Description: The diagnostic test failed.
690-114	690	Description: An unrecoverable hardware error.
690-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
690-117	690	Description: A write-protect error occurred.
690-118	690 B88	Description: A SCSI command time-out occurred.
690-120	690	Description: A SCSI busy or command error.
690-122	690	Description: A SCSI reservation conflict error.
690-124	690	Description: A SCSI check condition error occurred.
690-126	690 B88	Description: A software error was caused by a hardware failure.
690-128	690	Description: The error log analysis indicates a hardware failure.
690-129	190 690 B88 software	Description: Error log analysis indicates a SCSI bus problem.
690-130	690	Description: Error log analysis indicates a problem reported by the disk drive's self-monitoring function.
690-132	690	Description: A disk drive hardware error occurred.
690-134	B88 software	Description: The adapter failed to configure.
690-135	690 B88 software	Description: The device failed to configure.
690-136	690	Description: The certify operation failed.

Service Request Number	Failing Function Codes	Description and Action
690-137	690 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
692-110	692	Description: The Reserve command failed.
692-120	692	Description: The Inquiry command failed.
692-130	692 media	Description: The Load command failed.
692-135	692 media	Description: The Unload command failed.
692-140	692	Description: The Mode Select command failed.
692-150	692 media	Description: The Test Unit Ready command failed.
692-160	692 media	Description: The Send Diagnostic command failed.
692-169	692 media	Description: The Send Diagnostic command failed.
692-170	692 B88 media	Description: The Read, Write and Compare test failed.
692-180	692 media	Description: The Load command failed.
692-185	692 media	Description: The Unload command failed.
692-190	692	Description: The Mode Select command failed.
692-200	692 media	Description: The Test Unit Ready command failed.
692-210	692 B88	Description: The device configuration failed.
692-220	692	Description: The Release command failed.
692-230	692	Description: The Request Sense command failed.
692-240	692	Description: The Openx command failed.
692-300	692 software	Description: The device configuration failed.
692-310	B88 692 software	Description: SCSI adapter configuration failed.
692-320	692 media	Description: Error log analysis indicates a failure.
692-411 to 692-423	692 B88 software	Description: A reservation conflict occurred.

Service Request Number	Failing Function Codes	Description and Action
692-511 to 692-523	692 B88	Description: The drive returned bad or non-extended sense data.
692-611 to 692-623	692 B88 software	Description: An adapter or bus I/O error occurred.
692-711 to 692-723	692 B88 software	Description: A device timeout error occurred.

Chapter 6. Six-Digit SRNs 700-102 through 840-802

Service Request Number	Failing Function Codes	Description and Action
700-102 to 700-114	700	Description: 1.1 GB single-ended disk drive problem.
700-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
700-117	700	Description: A write protect error occurred.
700-118	700 B88	Description: A SCSI command time-out.
700-120 to 700-124	700	Description: A SCSI error.
700-126	700 B88	Description: A software error was caused by a hardware failure.
700-128	700	Description: The error log analysis indicates a hardware failure.
700-129	190 700 B88 software	Description: Error log analysis indicates a SCSI bus problem.
700-130	700	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
700-132	700	Description: A disk drive hardware error occurred.
700-134	B88 software	Description: The adapter failed to configure.
700-135	700 B88 software	Description: The device failed to configure.
700-136	700	Description: The certify operation failed.
700-137	700 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
701-102 to 701-114	701	Description: 1.1 GB 16-bit single-ended disk drive problem.
701-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
701-117	701	Description: A write protect error occurred.

Service Request Number	Failing Function Codes	Description and Action
701-118	701 B88	Description: A SCSI command time-out.
701-120 to 701-124	701	Description: A SCSI error.
701-126	701 B88	Description: A software error was caused by a hardware failure.
701-128	701	Description: The error log analysis indicates a hardware failure.
701-129	190 701 B88 software	Description: Error log analysis indicates a SCSI bus problem.
701-130	701	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
701-132	701	Description: A disk drive hardware error occurred.
701-134	B88 software	Description: The adapter failed to configure.
701-135	701 B88 software	Description: The device failed to configure.
701-136	701	Description: The certify operation failed.
701-137	701 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
702-102 to 702-114	702	Description: 1.1 GB 16-bit differential disk drive problem.
702-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
702-117	702	Description: A write protect error occurred.
702-118	702 B88	Description: A SCSI command time-out.
702-120 to 702-124	702	Description: A SCSI error.
702-126	702 B88	Description: A software error was caused by a hardware failure.
702-128	702	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
702-129	190 702 B88 software	Description: Error log analysis indicates a SCSI bus problem.
702-130	702	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
702-132	702	Description: A disk drive hardware error occurred.
702-134	B88 software	Description: The adapter failed to configure.
702-135	702 B88 software	Description: The device failed to configure.
702-136	702	Description: The certify operation failed.
702-137	702 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
703-102 to 703-114	703	Description: 2.2 GB single-ended disk drive problem.
703-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
703-117	703	Description: A write protect error occurred.
703-118	703 B88	Description: A SCSI command time-out.
703-120 to 703-124	703	Description: A SCSI error.
703-126	703 B88	Description: A software error was caused by a hardware failure.
703-128	703	Description: The error log analysis indicates a hardware failure.
703-129	190 703 B88 software	Description: Error log analysis indicates a SCSI bus problem.
703-130	703	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
703-132	703	Description: A disk drive hardware error occurred.
703-134	B88 software	Description: The adapter failed to configure.

Service Request Number	Failing Function Codes	Description and Action
703-135	703 B88 software	Description: The device failed to configure.
703-136	703	Description: The certify operation failed.
703-137	703 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
704-102 to 704-114	704	Description: 2.2 GB 16-bit single-ended disk drive problem.
704-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
704-117	704	Description: A write protect error occurred.
704-118	704 B88	Description: A SCSI command time-out.
704-120 to 704-124	704	Description: A SCSI error.
704-126	704 B88	Description: A software error was caused by a hardware failure.
704-128	704	Description: The error log analysis indicates a hardware failure.
704-129	190 704 B88 software	Description: Error log analysis indicates a SCSI bus problem.
704-130	704	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
704-132	704	Description: A disk drive hardware error occurred.
704-134	B88 software	Description: The adapter failed to configure.
704-135	704 B88 software	Description: The device failed to configure.
704-136	704	Description: The certify operation failed.
704-137	704 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
705-102 to 705-114	705	Description: 2.2 GB 16-bit differential disk drive problem.

Service Request Number	Failing Function Codes	Description and Action
705-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
705-117	705	Description: A write protect error occurred.
705-118	705 B88	Description: A SCSI command time-out.
705-120 to 705-124	705	Description: A SCSI error.
705-126	705 B88	Description: A software error was caused by a hardware failure.
705-128	705	Description: The error log analysis indicates a hardware failure.
705-129	190 705 B88 software	Description: Error log analysis indicates a SCSI bus problem.
705-130	705	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
705-132	705	Description: A disk drive hardware error occurred.
705-134	B88 software	Description: The adapter failed to configure.
705-135	705 B88 software	Description: The device failed to configure.
705-136	705	Description: The certify operation failed.
705-137	705 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
706-102 to 706-114	706	Description: 4.5 GB 16-bit single-ended disk drive problem.
706-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
706-117	706	Description: A write protect error occurred.
706-118	706 B88	Description: A SCSI command time-out.
706-120 to 706-124	706	Description: A SCSI error.

Service Request Number	Failing Function Codes	Description and Action
706-126	706 B88	Description: A software error was caused by a hardware failure.
706-128	706	Description: The error log analysis indicates a hardware failure.
706-129	190 706 B88 software	Description: Error log analysis indicates a SCSI bus problem.
706-130	706	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
706-132	706	Description: A disk drive hardware error occurred.
706-134	B88 software	Description: The adapter failed to configure.
706-135	706 B88 software	Description: The device failed to configure.
706-136	706	Description: The certify operation failed.
706-137	706 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
707-102 to 707-114	707	Description: Any of the following may have occurred: an unrecoverable media error, motor failed to restart, the drive did not become ready, electronics card test failed, bus test failed, media format failed, or diagnostic test failed.
707-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
707-117	707	Description: A write protect error occurred.
707-118	707 B88	Description: A SCSI command time-out.
707-120 to 707-124	707	Description: A SCSI error.
707-126	707 B88	Description: A software error was caused by a hardware failure.
707-128	707	Description: The error log analysis indicates a hardware failure.
707-129	190 707 B88 software	Description: Error log analysis indicates a SCSI bus problem.

Service Request Number	Failing Function Codes	Description and Action
707-130	707	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
707-132	707	Description: A disk drive hardware error occurred.
707-134	B88 software	Description: The adapter failed to configure.
707-135	707 B88 software	Description: The device failed to configure.
707-136	707	Description: The certify operation failed.
707-137	707 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
721-098	721 B88	Description: The disk drive indicates an error.
721-099	721 B88	Description: The disk drive not found.
721-102	721	Description: An unrecoverable media error occurred.
721-104	721	Description: The motor failed to restart.
721-105	721	Description: The drive did not become ready.
721-106	721	Description: The electronics card test failed.
721-108	721	Description: The bus test failed.
721-110	721	Description: The media format is corrupted.
721-112	721	Description: The diagnostic test failed.
721-114	721	Description: An unrecoverable hardware error.
721-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
721-117	721	Description: A write protect error occurred.
721-118	721 B88	Description: A SCSI command time-out occurred.
721-120	721	Description: A SCSI busy or command error.
721-122	721	Description: A SCSI reservation conflict error.
721-124	721	Description: A SCSI check condition error occurred.
721-126	721 B88	Description: A software error was caused by a hardware failure.
721-128	721	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
721-129	190 721 B88 software	Description: Error log analysis indicates a SCSI bus problem.
721-130	721	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
721-132	721	Description: A disk drive hardware error occurred.
721-134	B88 software	Description: The adapter failed to configure.
721-135	721 B88 software	Description: The device failed to configure.
721-136	721	Description: The certify operation failed.
721-137	721 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
722-xxx	722	Description: Unknown disk drive type is failing.
723-xxx	723	Description: Unknown CD-ROM type is failing.
724-xxx	724	Description: Unknown tape drive failure.
733-110 to 733-120	733	Description: The Reserve command failed, or the Inquiry command failed.
733-130 to 733-135	733 media	Description: The Load command failed, or the Unload command failed.
733-140	733	Description: The Mode Select command failed.
733-150 to 733-169	733 media	Description: The Test Unit Ready command failed, or the Send Diagnostic command failed.
733-170	733 B88 media	Description: The Read, Write and Compare test failed.
733-180 to 733-185	733 media	Description: The Load command failed, or the Unload command failed.
733-190	733	Description: The Mode Select command failed.
733-200	733 media	Description: The Test Unit Ready command failed.
733-210	733 B88	Description: The device configuration failed.
733-220 to 733-240	733	Description: 140 GB 8 mm tape drive failed.

Service Request Number	Failing Function Codes	Description and Action
733-300	733 software	Description: The device configuration failed.
733-310	B88 733 software	Description: SCSI adapter configuration failed.
733-320	733 media	Description: Error log analysis indicates a failure.
733-411 to 733-423	733 B88 software	Description: A reservation conflict occurred.
733-511 to 733-523	733 B88	Description: The drive returned bad or non-extended sense data.
733-611 to 733-723	733 B88 software	Description: An adapter, device, or bus I/O error occurred.
734-111	734 B88	Description: Unable to reserve device.
734-112	734 B88	Description: Unable to do configuration.
734-113	734 B88	Description: Unable to open the device driver.
734-121	734	Description: The CD-ROM drive indicates an error.
734-122	734	Description: The CD-ROM drive indicates an error.
734-123	734	Description: The CD-ROM drive indicates an error.
734-125	734 B88	Description: The CD-ROM drive indicates an error.
734-126	734	Description: The CD-ROM drive indicates an error.
734-127	734	Description: The CD-ROM drive indicates an error.
734-128	734	Description: The CD-ROM drive indicates an error.
734-129	734	Description: The CD-ROM drive indicates an error.
734-150	Test Disc 734	Description: A media error was detected.
734-151	734 B88	Description: A command timeout was detected.
734-152	734	Description: A command reservation conflict was detected.
734-162	734	Description: The CD-ROM drive indicates an error.
734-171	734	Description: Unable to reserve device.
734-172	734	Description: Unable to do configuration.
734-173	734	Description: Unable to open device driver.
734-175	734	Description: The CD-ROM drive indicates an error.

Service Request Number	Failing Function Codes	Description and Action
734-198	734 B88	Description: Undefined error detected.
734-199	734	Description: Undefined error detected.
734-211	734	Description: The LED test failed.
734-281	734	Description: No tone during audio test.
734-301	734	Description: Errors found during ELA.
734-302	734 B88	Description: Errors found during ELA.
736-101	821	Description: An unexpected adapter error occurred.
736-102	736 821	Description: An unexpected device or adapter error occurred.
736-103	736 821	Description: The keyboard reset failed.
736-104	736	Description: Unknown keyboard.
736-105	736 821	Description: The keyboard light on test failed.
736-106	736 821	Description: The keyboard light off test failed.
736-201	821	Description: An unexpected adapter error occurred.
736-202	736 821	Description: An unexpected device or adapter error occurred.
736-203	736 821	Description: The read keyboard ID test failed.
736-204	736	Description: The keyboard layout ID test failed.
736-205	736 821	Description: The keyboard echo test failed.
736-206	736 821	Description: The select scan code set test failed.
736-301	821	Description: An unexpected adapter error occurred.
736-302	736 821	Description: An unexpected device or adapter error occurred.
736-303	736	Description: An error occurred in turning on the lamps.
736-304	736	Description: An error occurred in turning off the lamps.
736-401	821	Description: An unexpected adapter error occurred.
736-402	736 821	Description: An unexpected device or adapter error occurred.
736-403	736	Description: Unable to recognize the keyboard.
736-404	736 821	Description: The keyboard is failing.

Service Request Number	Failing Function Codes	Description and Action
736-701	736 821	Description: Error configuring the device.
736-901	821	Description: The error log analysis indicates an adapter failure.
736-902	736 821	Description: The error log analysis indicates a device failure.
736-903	736 821	Description: The error log analysis indicates an unknown failure.
741-102 to 741-114	741	Description: SCSI disk drive problems.
741-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
741-117	741	Description: A write protect error occurred.
741-118	741 B88	Description: A SCSI command timeout.
741-120 to 741-124	741	Description: SCSI disk drive problems.
741-126	741 B88	Description: A software error was caused by a hardware failure.
741-128	741	Description: The error log analysis indicates a hardware failure.
741-129	190 741 B88 software	Description: Error log analysis indicates a SCSI bus problem.
741-130	741	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
741-132	741	Description: A disk drive hardware error occurred.
741-134	B88 software	Description: The adapter failed to configure.
741-135	741 B88 software	Description: The device failed to configure.
741-137	741 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
745-100	media 745	Description: Recovered error. Action: No action required.

Service Request Number	Failing Function Codes	Description and Action
745-200	media 745	Description: Drive Not Ready. Action: Install media, refer to the tape autoloader service guide.
745-300 to 745-350	media 745	Description: 4mm Tape Auto Loader problem. Action: Replace media, clean drive, refer to the tape autoloader service guide.
745-400	745 magazine media	Description: General Hardware Failure. Action: Replace media, clean drive, refer to the tape autoloader service guide.
745-410 to 745-435	745 media	Description: Internal Hardware Failure Action: Replace drive, refer to the tape autoloader service guide.
745-440	745 SCSI Adapter	Description: SCSI Hardware Failure. Action: Replace drive, refer to the tape autoloader service guide.
745-441 to 745-443	745 media	Description: 4mm Tape Auto Loader problem. Action: Replace drive, refer to the tape autoloader service guide.
745-444	745 environ- ment media	Description: Humidity too High Action: Lower humidity, replace media, refer to the tape autoloader service guide.
745-445	clean media drive	Description: Drive Requires Cleaning Action: Clean drive, replace media, refer to the tape autoloader service guide.
745-460 to 745-465	745 magazine media	Description: Magazine Movement Failure Action: Check magazine and media, clean rollers, refer to the tape autoloader service guide.
745-470 to 745-475	745 magazine media	Description: Media Insert/Eject Failure Action: Check clean magazine and media, clean rollers, refer to the tape autoloader service guide.
745-480 to 745-485	745 magazine media	Description: Drawer Open/Close Failure Action: Check magazine and media, refer to the tape autoloader service guide.
745-500	745 system	Description: Illegal request to drive Action: Software conflict, refer to the tape autoloader service guide.
745-600	745 system	Description: Unit Attention Action: Software conflict, media changed, refer to the tape autoloader service guide.
745-700	745 media	Description: Not Writeable Action: Check media for write protect, refer to the tape autoloader service guide.
745-800	745 media	Description: Blank Media Action: Check media, refer to the tape autoloader service guide.
745-B00	745 SCSI Adapter	Description: SCSI Interface Failure Action: Check SCSI interface, refer to the tape autoloader service guide.

Service Request Number	Failing Function Codes	Description and Action
745-D00	745 media	Description: Tape Full Action: Check replace media, refer to the tape autoloader service guide.
746-212	746	Description: FIFO empty bit set.
746-213	746	Description: FIFO empty bit clear.
746-214	746	Description: FIFO full bit set.
746-215	746	Description: FIFO full bit clear.
746-216	746	Description: FIFO data miscompare.
746-217	746	Description: SCSI FIFO data miscompare.
746-218	746	Description: SCSI FIFO underflow.
746-219	746	Description: SCSI parity error.
746-220	746	Description: SCSI FIFO flags error.
746-221	746 221	Description: Miscompare during the write/read of the configuration register.
746-222	746	Description: Error during the write/read of the memory register.
746-223		Description: Miscompare during the write/read of the memory I/O register.
746-224	746 221	Description: SCSI configuration register read or write error.
746-225	746	Description: Adapter POST failed.
746-226		Description: SCSI wrap or PTC failure.
746-227	746	Description: SCSI adapter test failure.
746-230		Description: Arbitration test failed.
746-231		Description: Function could not complete.
746-232		Description: SCSI bus data miscompare.
746-240		Description: No terminal power.
746-242		Description: SCSI bus error.
746-301	746 221	Description: The parent device open failed.
746-600	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-601	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-602	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-603	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-604	746	Description: Error log analysis indicates a PCI SCSI adapter failure.

Service Request Number	Failing Function Codes	Description and Action
746-605	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-606	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-607	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-701	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-702	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-703	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-704	746	Description: Error log analysis indicates a PCI SCSI adapter failure.
746-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
746-802		Description: Error log analysis indicates a PCI SCSI bus failure.
747-212	747	Description: FIFO empty bit set.
747-213	747	Description: FIFO empty bit clear.
747-214	747	Description: FIFO full bit set.
747-215	747	Description: FIFO full bit clear.
747-216	747	Description: FIFO data miscompare.
747-217	747	Description: SCSI FIFO data miscompare.
747-218	747	Description: SCSI FIFO underflow.
747-219	747	Description: SCSI parity error.
747-220	747	Description: SCSI FIFO flags error.
747-221	747 221	Description: Miscompare during the write/read of the configuration register.
747-222	747	Description: Error during the write/read of the memory register.
747-223		Description: Miscompare during the write/read of the memory I/O register.
747-224	747 221	Description: SCSI configuration register read or write error.
747-225	747	Description: Adapter POST failed.
747-226		Description: SCSI wrap or PTC failure.
747-227	747	Description: SCSI adapter test failure.
747-230		Description: Arbitration test failed.
747-231		Description: Function could not complete.

Service Request Number	Failing Function Codes	Description and Action
747-232		Description: SCSI bus data miscompare.
747-240		Description: No terminal power.
747-242		Description: SCSI bus error.
747-301	747 221	Description: The parent device open failed.
747-600	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-601	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-602	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-603	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-604	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-605	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-606	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-607	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-701	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-702	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-703	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-704	747	Description: Error log analysis indicates a PCI SCSI adapter failure.
747-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
747-802		Description: Error log analysis indicates a PCI SCSI bus failure.
749-xxx	749	Description: 7331 Model 205 Tape Library. Refer to service documentation for this device.
757-110	757	Description: The Reserve command failed.
757-120	757	Description: The Inquiry command failed.
757-130	757 media	Description: The Load command failed.
757-135	757 media	Description: The Unload command failed.

Service Request Number	Failing Function Codes	Description and Action
757-140	757	Description: The Mode Select command failed.
757-150	757 media	Description: The Test Unit Ready command failed.
757-160	757 media	Description: The Send Diagnostic command failed.
757-169	757 media	Description: The Send Diagnostic command failed.
757-170	757 B88 media	Description: The Read, Write and Compare test failed.
757-180	757 media	Description: The Load command failed.
757-185	757 media	Description: The Unload command failed.
757-190	757	Description: The Mode Select command failed.
757-200	757 media	Description: The Test Unit Ready command failed.
757-210	757 B88	Description: The device configuration failed.
757-220	757	Description: The Release command failed.
757-230	757	Description: The Request Sense command failed.
757-240	757	Description: The Openx command failed.
757-300	757 software	Description: The device configuration failed.
757-310	B88 757 software	Description: SCSI adapter configuration failed.
757-320	757 media	Description: Error log analysis indicates a failure.
757-411 to 757-423	757 B88 software	Description: A reservation conflict occurred.
757-511 to 757-523	757 B88	Description: The drive returned bad or non-extended sense data.
757-611 to 757-623	757 B88 software	Description: An adapter or bus I/O error occurred.
757-711 to 757-723	757 B88 software	Description: A device timeout error occurred.

Service Request Number	Failing Function Codes	Description and Action
772-098	772 B88	Description: Disk drive indicates an error.
772-099	772 B88	Description: Disk drive not found.
772-102	772	Description: An unrecoverable media error.
772-104	772	Description: The motor failed to restart.
772-105	772	Description: The drive did not become ready.
772-106	772	Description: The electronics card test failed.
772-108	772	Description: The bus test failed.
772-110	772	Description: The media format is corrupted.
772-112	772	Description: The diagnostic test failed.
772-114	772	Description: An unrecoverable hardware error.
772-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
772-117	772	Description: A write protect error occurred.
772-118	772 B88	Description: A SCSI command time-out.
772-120	772	Description: A SCSI busy or command error.
772-122	772	Description: A SCSI reservation conflict error.
772-124	772	Description: A SCSI check condition error.
772-126	772 B88	Description: A software error was caused by a hardware failure.
772-128	772	Description: The error log analysis indicates a hardware failure.
772-129	190 772 B88 software	Description: Error log analysis indicates a SCSI bus problem.
772-130	772	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
772-132	772	Description: A disk drive hardware error occurred.
772-134	B88 software	Description: The adapter failed to configure.
772-135	772 B88 software	Description: The device failed to configure.
772-136	772	Description: The certify operation failed.

Service Request Number	Failing Function Codes	Description and Action
772-137	772 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
773-098	773 B88	Description: Disk drive indicates an error.
773-099	773 B88	Description: Disk drive not found.
773-102	773	Description: An unrecoverable media error.
773-104	773	Description: The motor failed to restart.
773-105	773	Description: The drive did not become ready.
773-106	773	Description: The electronics card test failed.
773-108	773	Description: The bus test failed.
773-110	773	Description: The media format is corrupted.
773-112	773	Description: The diagnostic test failed.
773-114	773	Description: An unrecoverable hardware error.
773-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
773-117	773	Description: A write protect error occurred.
773-118	773 B88	Description: A SCSI command time-out.
773-120	773	Description: A SCSI busy or command error.
773-122	773	Description: A SCSI reservation conflict error.
773-124	773	Description: A SCSI check condition error.
773-126	773 B88	Description: A software error was caused by a hardware failure.
773-128	773	Description: The error log analysis indicates a hardware failure.
773-129	190 773 B88 software	Description: Error log analysis indicates a SCSI bus problem.
773-130	773	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
773-132	773	Description: A disk drive hardware error occurred.
773-134	B88 software	Description: The adapter failed to configure.
773-135	773 B88 software	Description: The device failed to configure.

Service Request Number	Failing Function Codes	Description and Action
773-136	773	Description: The certify operation failed.
773-137	773 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
774-098	774 B88	Description: Disk drive indicates an error.
774-099	774 B88	Description: Disk drive not found.
774-102	774	Description: An unrecoverable media error.
774-104	774	Description: The motor failed to restart.
774-105	774	Description: The drive did not become ready.
774-106	774	Description: The electronics card test failed.
774-108	774	Description: The bus test failed.
774-110	774	Description: The media format is corrupted.
774-112	774	Description: The diagnostic test failed.
774-114	774	Description: An unrecoverable hardware error.
774-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
774-117	774	Description: A write protect error occurred.
774-118	774 B88	Description: A SCSI command time-out.
774-120	774	Description: A SCSI busy or command error.
774-122	774	Description: A SCSI reservation conflict error.
774-124	774	Description: A SCSI check condition error.
774-126	774 B88	Description: A software error was caused by a hardware failure.
774-128	774	Description: The error log analysis indicates a hardware failure.
774-129	190 774 B88 software	Description: Error log analysis indicates a SCSI bus problem.
774-130	774	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
774-132	774	Description: A disk drive hardware error occurred.
774-134	B88 software	Description: The adapter failed to configure.

Service Request Number	Failing Function Codes	Description and Action
774-135	774 B88 software	Description: The device failed to configure.
774-136	774	Description: The certify operation failed.
774-137	774 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
776-101	D46	Description: External Test Failure.
776-102	240	Description: External Test Failure.
776-103	776	Description: I/O Test Failure.
776-104	776	Description: Adapter On-card Test Failure.
776-105	776	Description: Wrap Test Failure.
776-106	D46	Description: Wrap Test Failure.
776-201	776 221	Description: Configuration Register Test Failure.
776-202	776 221	Description: Wrap Test Failure.
776-203	D46 776	Description: Wrap Test Failure.
776-204	776 221	Description: Connect Test Failure.
776-205	D46 776	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain correct problem isolation.
776-206	776 221	Description: Wrap Test Failure.
776-301	D46 240 776	Description: External Test Failure.
776-302	D46 776 221	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain correct problem isolation.
776-303	240 D46 776	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain correct problem isolation.
776-304	D46 776 221	Description: Connect Wrap Test Failure.
776-305	D46 776 221	Description: Wrap Test Failure.

Service Request Number	Failing Function Codes	Description and Action
776-306	D46 776 221	Description: Wrap Test Failure.
776-401	240 D46 776 221	Description: External Test Failure. Action: Run advanced diagnostics with wrap test for this resource to obtain correct problem isolation.
776-404	240 D46 776 221	Description: Connect Test Failure.
776-405	240 D46 776 221	Description: Wrap Test Failure.
776-406	240 D46 776 221	Description: Wrap Test Failure.
776-414	240 D46 776 221	Description: Connect Test Failure. This failure occurs if not connected to a functional Token-Ring network. Action: Run advanced diagnostics for this resource to obtain correct problem isolation.
776-415	240 D46 776 221	Description: Wrap Test Failure. This failure occurs if not connected to a functional Token-Ring network. Action: Run advanced diagnostics for this resource to obtain correct problem isolation.
776-416	240 D46 776 221	Description: Wrap Test Failure. This failure occurs if not connected to a functional Token-Ring network. Action: Run advanced diagnostics for this resource to obtain correct problem isolation.
776-701	776	Description: ELA indicates an adapter error occurred.
776-702	776 221	Description: ELA indicates an adapter check occurred.
776-703	776 221	Description: ELA indicates a DMA failure occurred.
776-704	776 221	Description: ELA indicates a PCI bus failure occurred.
776-705	776 221	Description: ELA indicates a Programmed I/O failure occurred.
776-706	776	Description: ELA indicates a command write failure occurred.
776-707	776	Description: ELA indicates an internal adapter error has occurred.

Service Request Number	Failing Function Codes	Description and Action
777-101	777	Description: Configuration Register Test Failure.
777-102	777	Description: I/O Test Failure.
777-103	777	Description: Adapter initialization test failure.
777-104	777	Description: Internal wrap test failure.
777-105	777	Description: External wrap (10 Mbps) test failure.
777-106	777	Description: External wrap (100 Mbps) test failure.
777-201	777 221	Description: Configuration Register Test Failure.
777-202	777 221	Description: I/O Test Failure.
777-203	777 221	Description: Adapter initialization test failure.
777-204	777 221	Description: Internal wrap test failure.
777-205	777 221	Description: Internal wrap test failure.
777-206	777 221	Description: External wrap (10 Mbps) test failure.
777-207	777 221	Description: Internal wrap test failure.
777-208	777 221	Description: External wrap (100 Mbps) test failure.
777-701	777 221	Description: Error log analysis indicates that the adapter is not responding to initialization commands.
777-702	777 221	Description: Error Log Analysis indicates that the device driver has detected a PIO error which it was unable to correct.
777-703	777 221	Description: Error log analysis indicates that the adapter has been shut down due to an unrecoverable error.
777-704	777 221	Description: Error Log Analysis indicates a problem with the EEPROM on the adapter
77B-101	77B	Description: Configuration Register Test Failure.
77B-102	77B	Description: I/O Test Failure.
77B-103	77B	Description: Adapter initialization test failure.
77B-104	77B	Description: Internal wrap test failure.
77B-105	77B	Description: External wrap (10 Mbps) test failure.
77B-106	77B	Description: External wrap (100 Mbps) test failure.
77B-701	77B	Description: Error log analysis indicates that the adapter is not responding to initialization commands.

Service Request Number	Failing Function Codes	Description and Action
77B-702	77B	Description: Error Log Analysis indicates that the device driver has detected a PIO error which it was unable to correct.
77B-703	77B	Description: Error log analysis indicates that the adapter has been shut down due to an unrecoverable error.
77B-704	77B	Description: Error Log Analysis indicates a problem with the EEPROM on the adapter
77B-705	77B	Description: Error Log Analysis indicates a non-critical problem with the VPD and the EEPROM on the adapter Action: Schedule deferred maintenance.
783-110	783	Description: The Reserve command failed.
783-120	783	Description: The Inquiry command failed.
783-130	783 media	Description: The Load command failed.
783-135	783 media	Description: The Unload command failed.
783-140	783	Description: The Mode Select command failed.
783-150	783 media	Description: The Test Unit Ready command failed.
783-160	783 media	Description: The Send Diagnostic command failed.
783-169	783 media	Description: The Send Diagnostic command failed.
783-170	783 B88 media	Description: The Read, Write and Compare test failed.
783-180	783 media	Description: The Load command failed.
783-185	783 media	Description: The Unload command failed.
783-190	783	Description: The Mode Select command failed.
783-200	783 media	Description: The Test Unit Ready command failed.
783-210	783 B88	Description: The device configuration failed.
783-220	783	Description: The Release command failed.
783-230	783	Description: The Request Sense command failed.
783-240	783	Description: The Openx command failed.
783-300	783 software	Description: The device configuration failed.

Service Request Number	Failing Function Codes	Description and Action
783-310	B88 783 software	Description: SCSI adapter configuration failed.
783-320	783 media	Description: Error log analysis indicates a failure.
783-411 to 783-423	783 B88 software	Description: A reservation conflict occurred.
783-511 to 783-523	783 B88	Description: The drive returned bad or non-extended sense data.
783-611 to 783-623	783 B88 software	Description: An adapter or bus I/O error occurred.
783-711 to 783-723	783 B88 software	Description: A device timeout error occurred.
784-102	784	Description: An unrecoverable media error.
784-104	784	Description: The motor failed to restart.
784-105	784	Description: The drive did not become ready.
784-106	784	Description: The electronics card test failed.
784-108	784	Description: The bus test failed.
784-110	784	Description: The media format is corrupted.
784-112	784	Description: The diagnostic test failed.
784-114	784	Description: An unrecoverable hardware error.
784-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
784-117	784	Description: A write protect error occurred.
784-118	784 B88	Description: A SCSI command time-out.
784-120	784	Description: A SCSI busy or command error.
784-122	784	Description: A SCSI reservation conflict error.
784-124	784	Description: A SCSI check condition error.
784-126	784 B88	Description: A software error was caused by a hardware failure.
784-128	784	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
784-129	190 784 B88 software	Description: Error log analysis indicates a SCSI bus problem.
784-130	784	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
784-132	784	Description: A disk drive hardware error occurred.
784-134	B88 software	Description: The adapter failed to configure.
784-135	784 B88 software	Description: The device failed to configure.
784-136	784	Description: The certify operation failed.
784-137	784 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
785-111	785 227	Could not do the test because the device driver detected a hardware error.
791-102	791	Description: An unrecoverable media error occurred.
791-104	791	Description: The motor failed to restart.
791-105	791	Description: The drive did not become ready.
791-106	791	Description: The electronics card test failed.
791-108	791	Description: The bus test failed.
791-110	791	Description: The media format is corrupted.
791-112	791	Description: The diagnostic test failed.
791-114	791	Description: An unrecoverable hardware error.
791-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
791-117	791	Description: A write protect error occurred.
791-118	791 B88	Description: A SCSI command time-out occurred.
791-120	791	Description: A SCSI busy or command error.
791-122	791	Description: A SCSI reservation conflict error.
791-124	791	Description: A SCSI check condition error occurred.
791-126	791 B88	Description: A software error was caused by a hardware failure.
791-128	791	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
791-129	190 791 B88 software	Description: Error log analysis indicates a SCSI bus problem.
791-130	791	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
791-132	791	Description: A disk drive hardware error occurred.
791-134	B88 software	Description: The adapter failed to configure.
791-135	791 B88 software	Description: The device failed to configure.
791-136	791	Description: The certify operation failed.
791-137	791 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
792-102	792	Description: An unrecoverable media error occurred.
792-104	792	Description: The motor failed to restart.
792-105	792	Description: The drive did not become ready.
792-106	792	Description: The electronics card test failed.
792-108	792	Description: The bus test failed.
792-110	792	Description: The media format is corrupted.
792-112	792	Description: The diagnostic test failed.
792-114	792	Description: An unrecoverable hardware error.
792-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
792-117	792	Description: A write protect error occurred.
792-118	792 B88	Description: A SCSI command time-out occurred.
792-120	792	Description: A SCSI busy or command error.
792-122	792	Description: A SCSI reservation conflict error.
792-124	792	Description: A SCSI check condition error occurred.
792-126	792 B88	Description: A software error was caused by a hardware failure.
792-128	792	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
792-129	190 792 B88 software	Description: Error log analysis indicates a SCSI bus problem.
792-130	792	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
792-132	792	Description: A disk drive hardware error occurred.
792-134	B88 software	Description: The adapter failed to configure.
792-135	792 B88 software	Description: The device failed to configure.
792-136	792	Description: The certify operation failed.
792-137	792 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
793-102	793	Description: An unrecoverable media error occurred.
793-104	793	Description: The motor failed to restart.
793-105	793	Description: The drive did not become ready.
793-106	793	Description: The electronics card test failed.
793-108	793	Description: The bus test failed.
793-110	793	Description: The media format is corrupted.
793-112	793	Description: The diagnostic test failed.
793-114	793	Description: An unrecoverable hardware error.
793-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
793-117	793	Description: A write protect error occurred.
793-118	793 B88	Description: A SCSI command time-out occurred.
793-120	793	Description: A SCSI busy or command error.
793-122	793	Description: A SCSI reservation conflict error.
793-124	793	Description: A SCSI check condition error occurred.
793-126	793 B88	Description: A software error was caused by a hardware failure.
793-128	793	Description: The error log analysis indicates a hardware failure.

Service Request Number	Failing Function Codes	Description and Action
793-129	190 793 B88 software	Description: Error log analysis indicates a SCSI bus problem.
793-130	793	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
793-132	793	Description: A disk drive hardware error occurred.
793-134	B88 software	Description: The adapter failed to configure.
793-135	793 B88 Software	Description: The device failed to configure.
793-136	793	Description: The certify operation failed.
793-137	793 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
801-101 to 801-102		Description: The diagnostics did not detect an installed resource.
801-103		Description: The system detected resources that were not installed.
802-xxx	xxx E10 227	Description: The diagnostics did not detect an installed resource. Note: To obtain the FFC substitute the last three digits of the SRN for xxx. (The substituted xxx is the FFC.)
803-xxx	Use the xxx number	Description: An error occurred while running the diagnostics.
804-111	804 B88	Description: Unable to reserve device.
804-112	804 B88	Description: Unable to do configuration.
804-113	804 B88	Description: Unable to open the device driver.
804-121	804	Description: The CD-ROM drive indicates an error.
804-122	804	Description: The CD-ROM drive indicates an error.
804-123	804	Description: The CD-ROM drive indicates an error.
804-125	804 B88	Description: The CD-ROM drive indicates an error.
804-126	804	Description: The CD-ROM drive indicates an error.
804-127	804	Description: The CD-ROM drive indicates an error.
804-128	804	Description: The CD-ROM drive indicates an error.
804-129	804	Description: The CD-ROM drive indicates an error.

Service Request Number	Failing Function Codes	Description and Action
804-150	Test Disc 804	Description: A media error was detected.
804-151	804 B88	Description: A command timeout was detected.
804-152	804	Description: A command reservation conflict was detected.
804-162	804	Description: The CD-ROM drive indicates an error.
804-171	804	Description: Unable to reserve device.
804-172	804	Description: Unable to do configuration.
804-173	804	Description: Unable to open device driver.
804-175	804	Description: The CD-ROM drive indicates an error.
804-198	804 B88	Description: Undefined error detected.
804-199	804	Description: Undefined error detected.
804-211	804	Description: The LED test failed.
804-281	804	Description: No tone during audio test.
804-301	804	Description: Errors found during ELA.
804-302	804 B88	Description: Errors found during ELA.
804-xxx	Use the xxx number	Description: An unexpected halt occurred while running the diagnostics. Note: If your 804-xxx SRN is listed in this section, use the procedure for that SRN instead of this one.
815-100	815	Description: The floating-point processor test failed.
815-101	815	Description: Floating point processor failed.
815-102	815	Description: Floating point processor failed.
821-111	821 B31	Description: Unexpected results from the test.
821-332	821 software	Description: Cannot open device.
823-111	823	Description: Standard Mouse adapter failed.
823-134	823 software	Description: Cannot open device.
823-211	925 823	Description: Standard mouse adapter failed.
826-111	221	Description: Cannot run the test because the device driver detected a hardware error.
826-112	221	Description: Unable to determine the type of adapter from the VPD.
826-113	826	Description: The VPD verification test failed.
826-114	826	Description: The register verification test failed.

Service Request Number	Failing Function Codes	Description and Action
826-121	221	Description: Cannot run the test because the device driver detected a hardware error.
826-122	221	Description: The data-wrap communications test failed.
826-123	221	Description: The modem control line test failed.
826-131	221	Description: Cannot run the test because the device driver detected a hardware error.
826-132	221	Description: The data wrap communications test failed.
826-133	221	Description: The modem control line test failed.
826-161	252	Description: Cannot run the test because the device driver detected a hardware error.
826-162	252	Description: The data wrap communications test failed.
826-163	252	Description: The modem control line test failed.
826-171	259	Description: Cannot run the test because the device driver detected a hardware error.
826-172	259	Description: The data wrap communications test failed.
826-173	259	Description: The modem control line test failed.
826-181	261	Description: Cannot run the test because the device driver detected a hardware error.
826-182	261	Description: The data wrap communications test failed.
826-183	261	Description: The modem control line test failed.
826-271	826 259	Description: Cannot run the test because the device driver detected a hardware error.
826-272	826 259	Description: The data wrap communications test failed.
826-273	826 259	Description: The modem control line test failed.
826-281	826 259	Description: Cannot run the test because the device driver detected a hardware error.
826-282	826 259	Description: The data wrap communications test failed.
826-283	826 259	Description: The modem control line test failed.
826-321	826	Description: Cannot run the test because the device driver detected a hardware error.
826-322	826	Description: The data wrap communications test failed.
826-323	826	Description: The modem control line test failed.
826-331	826	Description: Cannot run the test because the device driver detected a hardware error.
826-332	826	Description: The data wrap communications test failed.
826-333	826	Description: The modem control line test failed.

Service Request Number	Failing Function Codes	Description and Action
826-371	826	Description: Cannot run the test because the device driver detected a hardware error.
826-372	826	Description: The data wrap communications test failed.
826-373	826	Description: The modem control line test failed.
826-381	826	Description: Could not do the test because the device driver detected a hardware error.
826-382	826	Description: The data wrap communication test failed.
826-383	826	Description: The modem control line test failed.
826-481	D56	Description: Could not do the test because the device driver detected a hardware error.
826-482	D56	Description: The data wrap communication test failed.
826-483	D56	Description: The modem control line test failed.
826-581	826 D56	Description: Could not do the test because the device driver detected a hardware error.
826-582	826 D56	Description: The data wrap communication test failed.
826-583	826 D56	Description: The modem control line test failed.
826-901 to 826-920	software 826	Description: An unexpected error occurred that can be attributed to software or hardware.
826-921	826 software	Description: The adapter failed to configure
826-922 to 826-924	software 826	Description: An unexpected error occurred that can be attributed to software or hardware.
826-925	826 software	Description: The adapter failed to configure
826-926 to 826-943	software 826	Description: An unexpected error occurred that can be attributed to software or hardware.
827-112	221	Description: The parallel port data register write/read test failed.
827-121	827	Description: Cannot run the test because the device driver detected a hardware error.
827-122	827	Description: The parallel port data register write/read test failed.
827-123	827	Description: The parallel port control register write/read test failed.
827-124	827	Description: The parallel port data register read test failed.
827-125	827	Description: The parallel port control register read test failed.

Service Request Number	Failing Function Codes	Description and Action
827-126	827	Description: The parallel port control register read test failed.
827-131	827	Description: Cannot run the test because the device driver detected a hardware error.
827-132	827	Description: The control port register direction bit (write) test with BIDI enabled failed.
827-133	827	Description: The control port register direction bit (read) test with BIDI enabled failed.
827-141	827	Description: Cannot run the test because the device driver detected a hardware error.
827-142	827	Description: The parallel port control register write/read test with BIDI enabled failed.
827-151	221	Description: Cannot run the test because the device driver detected a hardware error.
827-152	827	Description: The parallel port status register read test failed.
827-161	827	Description: Cannot run the test because the device driver detected a hardware error.
827-162	221	Description: The parallel port interrupt test failed.
827-163	221	Description: The parallel port interrupt test failed.
827-201	827	Description: The extend control register of the parallel port failed a read/write test.
827-202	827	Description: Input/output to the FIFO (without interrupts) failed.
827-203	827	Description: Input/output to the FIFO (with interrupts) failed.
827-204	827	Description: Direct memory access to the FIFO failed.
831-111	221	Description: Cannot run the test because the device driver detected a hardware error.
831-112	221	Description: Unable to determine the type of adapter from the VPD.
831-113	831	Description: The VPD verification test failed.
831-114	831	Description: The register verification test failed.
831-121	221	Description: Cannot run the test because the device driver detected a hardware error.
831-122	221	Description: The data wrap communications test failed.
831-123	221	Description: The modem control line test failed.
831-131	221	Description: Cannot run the test because the device driver detected a hardware error.
831-132	221	Description: The data wrap communications test failed.
831-133	221	Description: The modem control line test failed.

Service Request Number	Failing Function Codes	Description and Action
831-161	252	Description: Cannot run the test because the device driver detected a hardware error.
831-162	252	Description: The data wrap communications test failed.
831-163	252	Description: The modem control line test failed.
831-164	221 252	Description: Cannot run the test because the device driver detected a hardware error.
831-165	221 252	Description: The data wrap communications test failed.
831-166	221 252	Description: The modem control line test failed.
831-171	259	Description: Cannot run the test because the device driver detected a hardware error.
831-172	259	Description: The data wrap communications test failed.
831-173	259	Description: The modem control line test failed.
831-181	261	Description: Cannot run the test because the device driver detected a hardware error.
831-182	261	Description: The data wrap communications test failed.
831-183	261	Description: The modem control line test failed.
831-271	831 259	Description: Cannot run the test because the device driver detected a hardware error.
831-272	831 259	Description: The data wrap communication test failed.
831-273	831 259	Description: The modem control line test failed.
831-281	831 259	Description: Cannot run the test because the device driver detected a hardware error.
831-282	831 259	Description: The data wrap communications test failed.
831-283	831 259	Description: The modem control line test failed.
831-321	831	Description: Cannot run the test because the device driver detected a hardware error.
831-322	831	Description: The data wrap communications test failed.
831-323	831	Description: The modem control line test failed.
831-331	831	Description: Cannot run the test because the device driver detected a hardware error.
831-332	831	Description: The data wrap communications test failed.
831-333	831	Description: The modem control line test failed.
831-371	831	Description: Cannot run the test because the device driver detected a hardware error.

Service Request Number	Failing Function Codes	Description and Action
831-372	831	Description: The data wrap communications test failed.
831-373	831	Description: The modem control line test failed.
831-381	831	Description: Cannot run the test because the device driver detected a hardware error.
831-382	831	Description: The data wrap communications test failed.
831-383	831	Description: The modem control line test failed.
831-481	D56	Description: Could not do the test because the device driver detected a hardware error.
831-482	D56	Description: The data wrap communication test failed.
831-483	D56	Description: The modem control line test failed.
831-581	831 D56	Description: Could not do the test because the device driver detected a hardware error.
831-582	831 D56	Description: The data wrap communication test failed.
831-583	831 D56	Description: The modem control line test failed.
831-901 to 831-920	software 831	Description: An unexpected error occurred that can be attributed to software or hardware.
831-921	831 software	Description: The adapter failed to configure
831-922 to 831-924	software 831	Description: An unexpected error occurred that can be attributed to software or hardware.
831-925	831 software	Description: The adapter failed to configure
831-926 to 831-943	software 831	Description: An unexpected error occurred that can be attributed to software or hardware.
840-212	840	Description: FIFO empty bit set.
840-213	840	Description: FIFO empty bit clear.
840-214	840	Description: FIFO full bit set.
840-215	840	Description: FIFO full bit clear.
840-216	840	Description: FIFO data miscompare.
840-217	840	Description: SCSI FIFO data miscompare.
840-218	840	Description: SCSI FIFO underflow.
840-219	840	Description: SCSI parity error.
840-220	840	Description: SCSI FIFO flags error.
840-221	840 221	Description: Miscompare during the write/read of the configuration register.

Service Request Number	Failing Function Codes	Description and Action
840-222	840	Description: Error during the write/read of the memory register.
840-223		Description: Miscompare during the write/read of the memory I/O register.
840-224	840 221	Description: SCSI configuration register read or write error.
840-225	840	Description: Adapter POST failed.
840-226		Description: SCSI wrap or PTC failure.
840-227	840	Description: SCSI adapter test failure.
840-230		Description: Arbitration test failed.
840-231		Description: Function could not complete.
840-232		Description: SCSI bus data miscompare.
840-240		Description: No terminal power.
840-242		Description: SCSI bus error.
840-301	840 221	Description: The parent device open failed.
840-600	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-601	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-602	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-603	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-604	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-605	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-606	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-607	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-701	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-702	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-703	840	Description: Error log analysis indicates a PCI SCSI adapter failure.
840-704	840	Description: Error log analysis indicates a PCI SCSI adapter failure.

Service Request Number	Failing Function Codes	Description and Action
840-800		Description: Error log analysis indicates a PCI SCSI adapter PTC failure.
840-802		Description: Error log analysis indicates a PCI SCSI bus failure.

Chapter 7. Six-Digit SRNs 901-xxx through 998-723

Service Request Number	Failing Function Codes	Description and Action
901-xxx		Description: Vendor SCSI device problem. Refer to the service documentation for this device.
902-xxx		Description: Vendor display problem. Refer to the service documentation for this display.
903-xxx		Description: Vendor Async device problem. Refer to the service documentation for this device.
904-xxx		Description: Vendor Parallel device problem. Refer to the service documentation for this device.
905-xxx		Description: Vendor device problem. Refer to the service documentation for this device.
912-102	912	Description: An unrecoverable media error.
912-104	912	Description: The motor failed to restart.
912-105	912	Description: The drive did not become ready.
912-106	912	Description: The electronics card test failed.
912-108	912	Description: The bus test failed.
912-110	912	Description: The media format is corrupted.
912-112	912	Description: The diagnostic test failed.
912-114	912	Description: An unrecoverable hardware error.
912-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
912-117	912	Description: A write protect error occurred.
912-118	912 B88	Description: A SCSI command time-out.
912-120	912	Description: A SCSI busy or command error.
912-122	912	Description: A SCSI reservation conflict error.
912-124	912	Description: A SCSI check condition error.
912-126	912 B88	Description: A software error was caused by a hardware failure.
912-128	912	Description: The error log analysis indicates a hardware failure.
912-129	190 912 B88 software	Description: Error log analysis indicates a SCSI bus problem.
912-130	912	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.

Service Request Number	Failing Function Codes	Description and Action
912-132	912	Description: A disk drive hardware error occurred.
912-134	B88 software	Description: The adapter failed to configure.
912-137	912 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
913-102	913	Description: An unrecoverable media error.
913-104	913	Description: The motor failed to restart.
913-105	913	Description: The drive did not become ready.
913-106	913	Description: The electronics card test failed.
913-108	913	Description: The bus test failed.
913-110	913	Description: The media format is corrupted.
913-112	913	Description: The diagnostic test failed.
913-114	913	Description: An unrecoverable hardware error.
913-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
913-117	913	Description: A write protect error occurred.
913-118	913 B88	Description: A SCSI command time-out.
913-120	913	Description: A SCSI busy or command error.
913-122	913	Description: A SCSI reservation conflict error.
913-124	913	Description: A SCSI check condition error.
913-126	913 B88	Description: A software error was caused by a hardware failure.
913-128	913	Description: The error log analysis indicates a hardware failure.
913-129	190 913 B88 software	Description: Error log analysis indicates a SCSI bus problem.
913-130	913	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
913-132	913	Description: A disk drive hardware error occurred.
913-134	B88 software	Description: The adapter failed to configure.
913-137	913 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
914-110	914	Description: The Reserve command failed.

Service Request Number	Failing Function Codes	Description and Action
914-120	914	Description: The Inquiry command failed.
914-130	914 media	Description: The Load command failed.
914-135	914 media	Description: The Unload command failed.
914-140	914	Description: The Mode Select command failed.
914-150	914 media	Description: The Test Unit Ready command failed.
914-160	914 media	Description: The Send Diagnostic command failed.
914-170	914 B88 media	Description: The Read, Write and Compare test failed.
914-180	914 media	Description: The Load command failed.
914-185	914 media	Description: The Unload command failed.
914-190	914	Description: The Mode Select command failed.
914-200	914 media	Description: The Test Unit Ready command failed.
914-210	914 B88	Description: The device configuration failed.
914-220	914	Description: The Release command failed.
914-230	914	Description: The Request Sense command failed.
914-240	914	Description: The Openx command failed.
914-300	914 software	Description: The device configuration failed.
914-310	B88 914 software	Description: SCSI adapter configuration failed.
914-320	914 media	Description: Error log analysis indicates a failure.
914-411 to 914-423	914 B88 software	Description: A reservation conflict occurred.
914-511 to 914-523	914 B88	Description: The drive returned bad or non-extended sense data.
914-611 to 914-623	914 B88 software	Description: An adapter or bus I/O error occurred.

Service Request Number	Failing Function Codes	Description and Action
914-711 to 914-723	914 B88 software	Description: A device timeout error occurred.
915-110	915	Description: The Reserve command is corrupted.
915-120	915	Description: The Inquiry command failed.
915-130	915 media	Description: The Load command failed.
915-135	915 media	Description: The Unload command failed.
915-140	915	Description: The Mode Select command failed.
915-150	915 media	Description: The Test Unit Ready command failed.
915-160	915 media	Description: The Send Diagnostic command failed.
915-169	915 media	Description: The Send Diagnostic command failed.
915-170	915 B88 media	Description: The Read, Write and Compare test failed.
915-180	915 media	Description: The Load command failed.
915-185	915 media	Description: The Unload command failed.
915-190	915	Description: The Mode Select command failed.
915-200	915 media	Description: The Test Unit Ready command failed.
915-210	915 B88	Description: The device configuration failed.
915-220	915	Description: The Replace command failed.
915-230	915	Description: The Request Sense command failed.
915-240	915	Description: The Openx command failed.
915-300	915 software	Description: The device configuration failed.
915-310	B88 915 software	Description: SCSI adapter configuration failed.
915-320	915 media	Description: Error log analysis indicates a failure.
915-411 to 915-423	915 B88 software	Description: A reservation conflict occurred.

Service Request Number	Failing Function Codes	Description and Action
915-511 to 915-523	915 B88	Description: The drive returned bad or non-extended sense data.
915-611 to 915-623	915 B88 software	Description: An adapter or bus I/O error occurred.
915-711 to 915-723	915 B88 software	Description: A device timeout error occurred.
917-102	917	Description: An unrecoverable media error.
917-104	917	Description: The motor failed to restart.
917-105	917	Description: The drive did not become ready.
917-106	917	Description: The electronics card test failed.
917-108	917	Description: The bus test failed.
917-110	917	Description: The media format is corrupted.
917-112	917	Description: The diagnostic test failed.
917-114	917	Description: An unrecoverable hardware error.
917-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
917-117	917	Description: A write protect error occurred.
917-118	917 B88	Description: A SCSI command time-out.
917-120	917	Description: A SCSI busy or command error.
917-122	917	Description: A SCSI reservation conflict error.
917-124	917	Description: A SCSI check condition error.
917-126	917 B88	Description: A software error was caused by a hardware failure.
917-128	917	Description: The error log analysis indicates a hardware failure.
917-129	190 917 B88 software	Description: Error log analysis indicates a SCSI bus problem.
917-130	917	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
917-132	917	Description: A disk drive hardware error occurred.
917-134	B88 software	Description: The adapter failed to configure.

Service Request Number	Failing Function Codes	Description and Action
917-135	917 B88 software	Description: The device failed to configure.
917-136	917	Description: The certify operation failed.
917-137	917 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
918-102	918	Description: An unrecoverable media error.
918-104	918	Description: The motor failed to restart.
918-105	918	Description: The drive did not become ready.
918-106	918	Description: The electronics card test failed.
918-108	918	Description: The bus test failed.
918-110	918	Description: The media format is corrupted.
918-112	918	Description: The diagnostic test failed.
918-114	918	Description: An unrecoverable hardware error.
918-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
918-117	918	Description: A write-protect error occurred.
918-118	918 B88	Description: A SCSI command time-out.
918-120	918	Description: A SCSI busy or command error.
918-122	918	Description: A SCSI reservation conflict error.
918-124	918	Description: A SCSI check condition error.
918-126	918 B88	Description: A software error was caused by a hardware failure.
918-128	918	Description: The error log analysis indicates a hardware failure.
918-129	190 918 B88 software	Description: Error log analysis indicates a SCSI bus problem.
918-130	918	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
918-132	918	Description: A disk drive hardware error occurred.
918-134	B88 software	Description: The adapter failed to configure.
918-135	918 B88 software	Description: The device failed to configure.

Service Request Number	Failing Function Codes	Description and Action
918-136	918	Description: The certify operation failed.
918-137	918 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
921-101	821	Description: An unexpected adapter error occurred.
921-102	921 821	Description: An unexpected device or adapter error occurred.
921-103	921 821	Description: The keyboard reset failed.
921-104	921	Description: Unknown keyboard.
921-105	921 821	Description: The keyboard light-on test failed.
921-106	921 821	Description: The keyboard light-off test failed.
921-201	821	Description: An unexpected adapter error occurred.
921-202	921 821	Description: An unexpected device or adapter error occurred.
921-203	921 821	Description: The read keyboard ID test failed.
921-204	921	Description: The keyboard layout ID test failed.
921-205	921 821	Description: The keyboard echo test failed.
921-206	921 821	Description: The select scan code set test failed.
921-301	821	Description: An unexpected adapter error occurred.
921-302	921 821	Description: An unexpected device or adapter error occurred.
921-303	921	Description: An error occurred in turning on the lamps.
921-304	921	Description: An error occurred in turning off the lamps.
921-401	821	Description: An unexpected adapter error occurred.
921-402	921 821	Description: An unexpected device or adapter error occurred.
921-403	921	Description: Unable to recognize the keyboard.
921-404	921 821	Description: The keyboard is failing.
921-501	821	Description: An unexpected adapter error occurred.
921-502	921 821	Description: An unexpected device or adapter error occurred.
921-503	921	Description: The auto-click cannot be disabled.
921-504	921	Description: The auto-click cannot be enabled.

Service Request Number	Failing Function Codes	Description and Action
921-505	921	Description: Unable to recognize the keyboard.
921-601	821	Description: An unexpected adapter error occurred.
921-602	921 821	Description: An unexpected device or adapter error occurred.
921-603	921	Description: The speaker test failed.
921-701	921 821	Description: Error configuring the device.
921-901	821	Description: The error log analysis indicates an adapter failure.
921-902	921 821	Description: The error log analysis indicates a device failure.
921-903	921 821	Description: The error log analysis indicates an unknown failure.
922-101	821	Description: An unexpected adapter error occurred.
922-102	922 821	Description: An unexpected device or adapter error occurred.
922-103	922 821	Description: The keyboard reset failed.
922-104	922	Description: Unknown keyboard.
922-105	922 821	Description: The keyboard light-on test failed.
922-106	922 821	Description: The keyboard light-off test failed.
922-201	821	Description: An unexpected adapter error occurred.
922-202	922 821	Description: An unexpected device or adapter error occurred.
922-203	922 821	Description: The read keyboard ID test failed.
922-204	922	Description: The keyboard layout ID test failed.
922-205	922 821	Description: The keyboard echo test failed.
922-206	922 821	Description: The select scan code set test failed.
922-301	821	Description: An unexpected adapter error occurred.
922-302	922 821	Description: An unexpected device or adapter error occurred.
922-303	922	Description: An error occurred in turning on the lamps.
922-304	922	Description: An error occurred in turning off the lamps.
922-401	821	Description: An unexpected adapter error occurred.

Service Request Number	Failing Function Codes	Description and Action
922-402	922 821	Description: An unexpected device or adapter error occurred.
922-403	922	Description: The keyboard is failing.
922-404	922 821	Description: Unable to recognize the keyboard.
922-501	821	Description: An unexpected adapter error occurred.
922-502	922 821	Description: An unexpected device or adapter error occurred.
922-503	921	Description: The auto-click cannot be disabled.
922-504	922	Description: The auto-click cannot be enabled.
922-505	922	Description: Unable to recognize the keyboard.
922-601	821	Description: An unexpected adapter error occurred.
922-602	922 821	Description: An unexpected device or adapter error occurred.
922-603	922	Description: The speaker test failed.
922-701	922 821	Description: Error configuring the device.
922-901	821	Description: The error log indicates an adapter failed.
922-902	922 821	Description: The error log indicates a device failed.
922-903	922 821	Description: The error log analysis indicates an unknown failure.
923-101	821	Description: An unexpected adapter error occurred.
923-102	923 821	Description: An unexpected device or adapter error occurred.
923-103	923 821	Description: The keyboard reset failed.
923-104	923	Description: Unknown keyboard.
923-105	923 821	Description: The keyboard light-on test failed.
923-106	923 821	Description: The keyboard light-off test failed.
923-201	821	Description: An unexpected adapter error occurred.
923-202	923 821	Description: An unexpected device or adapter error occurred.
923-203	923 821	Description: The read keyboard ID test failed.
923-204	923	Description: The keyboard layout ID test failed.
923-205	923 821	Description: The keyboard echo test failed.

Service Request Number	Failing Function Codes	Description and Action
923-206	923 821	Description: The select scan code set test failed.
923-301	821	Description: An unexpected adapter error occurred.
923-302	923 821	Description: An unexpected device or adapter error occurred.
923-303	923	Description: An error occurred in turning on the lamps.
923-304	923	Description: An error occurred in turning off the lamps.
923-401	821	Description: An unexpected adapter error occurred.
923-402	923 821	Description: An unexpected device or adapter error occurred.
923-403	923	Description: The keyboard is failing.
923-404	923 821	Description: Unable to recognize the keyboard.
923-501	821	Description: An unexpected adapter error occurred.
923-502	923 821	Description: An unexpected device or adapter error occurred.
923-503	923	Description: The auto-click cannot be disabled.
923-504	923	Description: The auto-click cannot be enabled.
923-505	923	Description: Unable to recognize the keyboard.
923-601	821	Description: An unexpected adapter error occurred.
923-602	923 821	Description: An unexpected device or adapter error occurred.
923-603	923	Description: The speaker test failed.
922-701	923 821	Description: Error configuring the device.
923-901	821	Description: The error log indicates an adapter failed.
923-902	923 821	Description: The error log analysis indicates a device failure.
923-903	923 821	Description: The error log analysis indicates an unknown failure.
925-111	925 823	Description: An unexpected device error occurred.
925-112	925 823	Description: The device disable test failed.
925-113	925	Description: Could not reset the device.
925-114	925 823	Description: The Read Status command failed.
925-115	925	Description: The device test failed.
925-116	925	Description: Unknown Mouse type.

Service Request Number	Failing Function Codes	Description and Action
925-117	925 823	Description: Mouse wrap mode failed.
925-118	925 823	Description: Error setting mouse parameters.
925-121 to 925-171	925	Description: The device test failed.
925-200	925 823	Description: A software error was caused by a hardware failure.
925-300	925	Description: The error log analysis indicates a hardware failure.
925-301	925 823	Description: The error log analysis indicates a hardware failure.
945-102 to 945-114	990	Description: 1 GB 16-bit SCSI differential disk drive problem.
945-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
945-117	990	Description: A write protect error occurred.
945-118	990 B88	Description: A SCSI command time-out.
945-120 to 945-124	990	Description: 1 GB 16-bit SCSI differential disk drive problem.
945-126	990 B88	Description: A software error was caused by a hardware failure.
945-128	990	Description: The error log analysis indicates a hardware failure.
945-129	950 B88 software	Description: Error log analysis indicates a SCSI bus problem.
945-132	990	Description: A disk drive hardware error occurred.
945-134	B88 software	Description: The adapter failed to configure.
945-136	990	Description: The certify operation failed.
946-111	946 227	Description: Cannot run the test because the device driver detected a hardware error.
946-114	946	Description: The register verification test failed.
946-121	946 227	Description: Cannot run the test because the device driver detected a hardware error.

Service Request Number	Failing Function Codes	Description and Action
946-122	946 227	Description: The data wrap communications test failed.
946-123	946 227	Description: The modem control line test failed.
946-131	946	Description: Cannot run the test because the device driver detected a hardware error.
946-132	946 227	Description: The data wrap communications test failed.
946-133	946	Description: The modem control line test failed.
946-161	252	Description: Cannot run the test because the device driver detected a hardware error.
946-162	252	Description: The data wrap communication test failed.
946-163	252	Description: The modem control line test failed.
946-171	259	Description: Cannot run the test because the device driver detected a hardware error.
946-172	259	Description: The data wrap communications test failed.
946-173	259	Description: The modem control line test failed.
946-181	261	Description: Cannot run the test because the device driver detected a hardware error.
946-182	261	Description: The data wrap communications test failed.
946-183	261	Description: The modem control line test failed.
946-271	946 259	Description: Cannot run the test because the device driver detected a hardware error.
946-272	946 259	Description: The data wrap communication test failed.
946-273	946 259	Description: The modem control line test failed.
946-281	946 261	Description: Cannot run the test because the device driver detected a hardware error.
946-282	946 261	Description: The data wrap communications test failed.
946-283	946 261	Description: The modem control line test failed.
946-321	946	Description: Cannot run the test because the device driver detected a hardware error.
946-322	946	Description: The data wrap communications test failed.
946-323	946	Description: The modem control line test failed.
946-331	946	Description: Cannot run the test because the device driver detected a hardware error.
946-332	946	Description: The data wrap communications test failed.

Service Request Number	Failing Function Codes	Description and Action
946-333	946	Description: The modem control line test failed.
946-371	946	Description: Cannot run the test because the device driver detected a hardware error.
946-372	946	Description: The data wrap communications test failed.
946-373	946	Description: The modem control line test failed.
946-381	946	Description: Cannot run the test because the device driver detected a hardware error.
946-382	946	Description: The data wrap communications test failed.
946-383	946	Description: The modem control line test failed.
946-481	D56	Description: Cannot run the test because the device driver detected a hardware error.
946-482	D56	Description: The data wrap communication test failed.
946-483	D56	Description: The modem control line test failed.
946-581	946 D56	Description: Cannot run the test because the device driver detected a hardware error.
946-582	946 D56	Description: The data wrap communication test failed.
946-583	946 D56	Description: The modem control line test failed.
946-901 to 946-920	software 946	Description: An unexpected error occurred that can be attributed to software or hardware.
946-921	946 software	Description: The adapter failed to configure.
946-922 to 946-924	software 946	Description: An unexpected error occurred that can be attributed to software or hardware.
946-925	946 software	Description: The adapter failed to configure.
946-926 to 946-943	software 946	Description: An unexpected error occurred that can be attributed to software or hardware.
960-102	960	Description: An unrecoverable media error.
960-104	960	Description: The motor failed to restart.
960-105	960	Description: The drive did not become ready.
960-106	960	Description: The electronics card test failed.
960-108	960	Description: The bus test failed.
960-110	960	Description: The media format is corrupted.
960-112	960	Description: The diagnostic test failed.
960-114	960	Description: An unrecoverable hardware error.

Service Request Number	Failing Function Codes	Description and Action
960-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
960-117	960	Description: A write protect error occurred.
960-118	960 B88	Description: A SCSI command time-out.
960-120	960	Description: A SCSI busy or command error.
960-122	960	Description: A SCSI reservation conflict error.
960-124	960	Description: A SCSI check condition error.
960-126	960 B88	Description: A software error was caused by a hardware failure.
960-128	960	Description: The error log analysis indicates a hardware failure.
960-129	190 960 B88 software	Description: Error log analysis indicates a SCSI bus problem.
960-130	960	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
960-132	960	Description: A disk drive hardware error occurred.
960-134	B88 software	Description: The adapter failed to configure.
960-135	960 B88 software	Description: The device failed to configure.
960-136	960	Description: The certify operation failed.
960-137	960 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
964-098	964	Description: Tape drive indicates an error.
964-099	964 B88	Description: Tape drive not found.
964-101	964	Description: Timeout while attempting to communicate with SCSI device.
964-102	964	Description: The SCSI device indicates busy.
964-103	964	Description: The SCSI device indicates a reservation conflict.
964-104	964	Description: The SCSI device indicates a check condition.
964-105	964	Description: An error is detected in request sense data.
964-107	964	Description: Sense data from the SCSI drive has unexpected data.

Service Request Number	Failing Function Codes	Description and Action
964-110	964	Description: The Reserve command failed.
964-111	964	Description: Invalid condition from the drive after a reserve.
964-112	964	Description: The write protect sensor test failed.
964-113	964	Description: Invalid condition from drive after a request sense.
964-114	964	Description: Timeout while attempting to communicate with the SCSI device.
964-120	964	Description: The Inquiry command failed.
964-130	964 media	Description: The Load command failed.
964-134	B88 software	Description: The adapter failed to configure.
964-135	964 media	Description: The Unload command failed.
964-140	964	Description: The Mode Select command failed.
964-150	964 media	Description: The Test Unit Ready command failed.
964-160	964 media	Description: The Send Diagnostic command failed.
964-161	964 B88	Description: Invalid condition from the drive after a reserve.
964-163	964 B88	Description: Invalid condition from the drive after a request sense.
964-164	964 B88	Description: Timeout while attempting to communicate with the SCSI device.
964-165	964 B88 276	Description: Write, Read and Compare Test failed.
964-166	964 B88 software	Description: Unable to configure the device.
964-167	964 B88	Description: An unexpected SCSI error occurred.
964-168	B88 software	Description: The adapter failed to configure.
964-169	964 media	Description: The Send Diagnostic command failed.
964-170	964 B88 media	Description: The Read, Write and Compare test failed.

Service Request Number	Failing Function Codes	Description and Action
964-180	964 media	Description: The Load command failed.
964-185	964 media	Description: The Unload command failed.
964-190	964	Description: The Mode Select command failed.
964-200	964 media	Description: The Test Unit Ready command failed.
964-201	964 B88	Description: Error diagnosed from error log analysis.
964-210	964 B88	Description: The device configuration failed.
964-211	964 B88	Description: The device open failed.
964-220	964	Description: The Release command failed.
964-230	964	Description: The Request Sense command failed.
964-240	964	Description: The Openx command failed.
964-260	964	Description: The device configuration failed.
964-261	964	Description: The device open failed.
964-300	964 software	Description: The device configuration failed.
964-310	B88 964 software	Description: SCSI adapter configuration failed.
964-320	964 media	Description: Error log analysis indicates a failure.
964-411 to 964-423	964 B88 software	Description: A reservation conflict occurred.
964-511 to 964-523	964 B88	Description: The drive returned bad or non-extended sense data.
964-611 to 964-623	964 B88 software	Description: An adapter or bus I/O error occurred.
964-711 to 964-723	964 B88 software	Description: A device timeout error occurred.
968-102	968	Description: An unrecoverable media error.
968-104	968	Description: The motor failed to restart.
968-105	968	Description: The drive did not become ready.
968-106	968	Description: The electronics card test failed.

Service Request Number	Failing Function Codes	Description and Action
968-108	968	Description: The bus test failed.
968-110	968	Description: The media format is corrupted.
968-112	968	Description: The diagnostic test failed.
968-114	968	Description: An unrecoverable hardware error.
968-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
968-117	968	Description: A write protect error occurred.
968-118	968 B88	Description: A SCSI command time-out.
968-120	968	Description: A SCSI busy or command error.
968-122	968	Description: A SCSI reservation conflict error.
968-124	968	Description: A SCSI check condition error.
968-126	968 B88	Description: A software error was caused by a hardware failure.
968-128	968	Description: The error log analysis indicates a hardware failure.
968-129	190 968 B88 software	Description: Error log analysis indicates a SCSI bus problem.
968-130	968	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
968-132	968	Description: A disk drive hardware error occurred.
968-134	B88 software	Description: The adapter failed to configure.
968-135	968 B88 software	Description: The device failed to configure.
968-136	968	Description: The certify operation failed.
968-137	968 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
972-101	972	Description: Timeout while attempting to communicate with SCSI device.
972-102	972	Description: The SCSI device indicates busy.
972-103	972	Description: The SCSI device indicates a reservation conflict.
972-104	972	Description: The SCSI device indicates a check condition.
972-105	972	Description: An error is detected in request sense data.

Service Request Number	Failing Function Codes	Description and Action
972-107	972	Description: The drive has returned unexpected sense data.
972-110	972	Description: The Reserve command failed.
972-111	972	Description: Invalid condition from the drive after a reserve.
972-112	972	Description: The write protect sensor test failed.
972-113	972	Description: Invalid condition from the drive after a request sense.
972-114	972	Description: Timeout while attempting to communicate with the SCSI device.
972-120	972	Description: The Inquiry command failed.
972-130	972 media	Description: The Load command failed.
972-135	972 media	Description: The Unload command failed.
972-140	972	Description: The Mode Select command failed.
972-150	972 media	Description: The Test Unit Ready command failed.
972-160	972 media	Description: The Send Diagnostic command failed.
972-161	972 B88	Description: Invalid condition from the drive after a reserve.
972-163	972 B88	Description: Invalid condition from the drive after a request sense.
972-164	972 B88 276	Description: Timeout while attempting communication with SCSI device.
972-165	972 B88 276	Description: Write, Read and Compare Test failed.
972-166	972 B88 software	Description: Unable to configure the device.
972-167	972 B88	Description: An unexpected SCSI error occurred.
972-168	B88 software	Description: The adapter failed to configure.
972-169	972 media	Description: The Send Diagnostic command failed.
972-170	972 B88 media	Description: The Read, Write and Compare test failed.

Service Request Number	Failing Function Codes	Description and Action
972-180	972 media	Description: The Load command failed.
972-185	972 media	Description: The Unload command failed.
972-190	972	Description: The Mode Select command failed.
972-200	972 media	Description: The Test Unit Ready command failed.
972-201	972 B88	Description: An error is diagnosed from the error log analysis.
972-210	972 B88	Description: The device configuration failed.
972-211	972 B88	Description: The device open test failed.
972-220	972	Description: The Release command failed.
972-230	972	Description: The Request Sense command failed.
972-240	972	Description: The Openx command failed.
972-260	972	Description: The device configuration test failed.
972-261	972	Description: The device open test failed.
972-300	972 software	Description: The device configuration failed.
972-310	B88 972 software	Description: SCSI adapter configuration failed.
972-320	972 media	Description: Error log analysis indicates a failure.
972-411 to 972-423	972 B88 software	Description: A reservation conflict occurred.
972-511 to 972-523	972 B88	Description: The drive returned bad or non-extended sense data.
972-611 to 972-623	972 B88 software	Description: An adapter or bus I/O error occurred.
972-711 to 972-723	972 B88 software	Description: A device timeout error occurred.
973-110	973	Description: The Reserve command failed.
973-120	973	Description: The Inquiry command failed.
973-130	973 media	Description: The Load command failed.

Service Request Number	Failing Function Codes	Description and Action
973-135	973 media	Description: The Unload command failed.
973-140	973	Description: The Mode Select command failed.
973-150	973 media	Description: The Test Unit Ready command failed.
973-160	973 media	Description: The Send Diagnostic command failed.
973-169	973 media	Description: The Send Diagnostic command failed.
973-170	973 B88 media	Description: The Read, Write and Compare test failed.
973-180	973 media	Description: The Load command failed.
973-185	973 media	Description: The Unload command failed.
973-190	973	Description: The Mode Select command failed.
973-200	973 media	Description: The Test Unit Ready command failed.
973-210	973 B88	Description: The device configuration failed.
973-220	973	Description: The Release command failed.
973-230	973	Description: The Request Sense command failed.
973-240	973	Description: The Openx command failed.
973-300	973 software	Description: The device configuration failed.
973-310	B88 973 software	Description: SCSI adapter configuration failed.
973-320	973 media	Description: Error log analysis indicates a failure.
973-411 to 973-423	973 B88 software	Description: A reservation conflict occurred.
973-511 to 973-523	973 B88	Description: The drive returned bad or non-extended sense data.
973-611 to 973-623	973 B88 software	Description: An adapter or bus I/O error occurred.

Service Request Number	Failing Function Codes	Description and Action
973-711 to 973-723	973 B88 software	Description: A device timeout error occurred.
986-102	986	Description: An unrecoverable media error.
986-104	986	Description: The motor failed to restart.
986-105	986	Description: The drive did not become ready.
986-106	986	Description: The electronics card test failed.
986-108	986	Description: The bus test failed.
986-110	986	Description: The media format is corrupted.
986-112	986	Description: The diagnostic test failed.
986-114	986	Description: An unrecoverable hardware error.
986-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
986-117	986	Description: A write protect error occurred.
986-118	986 B88	Description: A SCSI command time-out.
986-120	986	Description: A SCSI busy or command error.
986-122	986	Description: A SCSI reservation conflict error.
986-124	986	Description: A SCSI check condition error.
986-126	986 B88	Description: A software error was caused by a hardware failure.
986-128	986	Description: The error log analysis indicates a hardware failure.
986-129	190 986 B88 software	Description: Error log analysis indicates a SCSI bus problem.
986-130	986	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
986-132	986	Description: A disk drive hardware error occurred.
986-134	B88 software	Description: The adapter failed to configure.
986-136	986 C11	Description: The certify operation failed.
986-137	986 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
990-102	990	Description: An unrecoverable media error.
990-104	990	Description: The motor failed to restart.

Service Request Number	Failing Function Codes	Description and Action
990-105	990	Description: The drive did not become ready.
990-106	990	Description: The electronics card test failed.
990-108	990	Description: The bus test failed.
990-110	990	Description: The media format is corrupted.
990-112	990	Description: The diagnostic test failed.
990-114	990	Description: An unrecoverable hardware error.
990-116		Description: A protocol error. Action: Check the levels of the device, adapter, diagnostic software, and application software to be sure they are all compatible. If you do not find a problem, call your support person.
990-117	990	Description: A write protect error occurred.
990-118	990 B88	Description: A SCSI command time-out.
990-120	990	Description: A SCSI busy or command error.
990-122	990	Description: A SCSI reservation conflict error.
990-124	990	Description: A SCSI check condition error.
990-126	990 B88	Description: A software error was caused by a hardware failure.
990-128	990	Description: The error log analysis indicates a hardware failure.
990-129	190 990 B88 software	Description: Error log analysis indicates a SCSI bus problem.
990-130	990	Description: Error log analysis indicates a problem reported by the disk drive's self monitoring function.
990-132	990	Description: A disk drive hardware error occurred.
990-134	B88 software	Description: The adapter failed to configure.
990-136	990	Description: The certify operation failed.
990-137	990 B88 190	Description: Unit attention condition has occurred on the Send Diagnostic command.
991-101	991	Description: Timeout while attempting to communicate with SCSI device.
991-102	991	Description: The SCSI device indicates busy.
991-103	991	Description: The SCSI device is indicating a reservation conflict.
991-104	991	Description: The SCSI device indicates a check condition.
991-105	991	Description: Sense data from the SCSI device shows an error.

Service Request Number	Failing Function Codes	Description and Action
991-107	991	Description: The SCSI drive returned unexpected sense data.
991-110	991	Description: The Reserve command failed.
991-111	991	Description: Invalid condition from the drive after a reserve.
991-112	991	Description: The write protect sensor test failed.
991-113	991	Description: Invalid condition from the drive after a request sense.
991-114	991	Description: Timeout while attempting to communicate with the SCSI device.
991-120	991	Description: The Inquiry command failed.
991-130	991 media	Description: The Load command failed.
991-135	991 media	Description: The Unload command failed.
991-140	991	Description: The Mode Select command failed.
991-150	991 media	Description: The Test Unit Ready command failed.
991-160	991 media	Description: The Send Diagnostic command failed.
991-161	991 B88	Description: Invalid condition from the drive after a reserve.
991-163	991 B88	Description: Invalid condition from the drive after a request sense.
991-164	991 B88	Description: Timeout while attempting to communicate with the SCSI device.
991-165	991 B88 276	Description: Write, Read and Compare Test failed.
991-166	991 B88 software	Description: The device failed to configure.
991-167	991 B88	Description: An unexpected SCSI error occurred.
991-168	B88 software	Description: The adapter failed to configure.
991-169	991 media	Description: The Send Diagnostic command failed.
991-170	991 B88 media	Description: The Read, Write and Compare test failed.

Service Request Number	Failing Function Codes	Description and Action
991-180	991 media	Description: The Load command failed.
991-185	991 media	Description: The Unload command failed.
991-190	991	Description: The Mode Select command failed.
991-200	991 media	Description: The Test Unit Ready command failed.
991-201	991 B88	Description: An error is diagnosed from the error log analysis.
991-210	991 B88	Description: The device configuration failed.
991-211	991 B88	Description: The device open test failed.
991-220	991	Description: The Release command failed.
991-230	991	Description: The Request Sense command failed.
991-240	991	Description: The Openx command failed.
991-260	991	Description: The device configuration failed.
991-261	991	Description: The device open test failed.
991-300	991 software	Description: The device configuration failed.
991-310	B88 991 software	Description: SCSI adapter configuration failed.
991-320	991 media	Description: Error log analysis indicates a failure.
991-411 to 991-423	991 B88 software	Description: A reservation conflict occurred.
991-511 to 991-523	991 B88	Description: The drive returned bad or non-extended sense data.
991-611 to 991-623	991 B88 software	Description: An adapter or bus I/O error occurred.
991-711 to 991-723	991 B88 software	Description: A device timeout error occurred.
994-110	994	Description: The Reserve command failed.
994-120	994	Description: The Inquiry command failed.
994-130	994 media	Description: The Load command failed.

Service Request Number	Failing Function Codes	Description and Action
994-135	994 media	Description: The Unload command failed.
994-140	994	Description: The Mode Select command failed.
994-150	994 media	Description: The Test Unit Ready command failed.
994-160	994 media	Description: The Send Diagnostic command failed.
994-169	994 media	Description: The Send Diagnostic command failed.
994-170	994 B88 media	Description: The Read, Write and Compare test failed.
994-180	994 media	Description: The Load command failed.
994-185	994 media	Description: The Unload command failed.
994-190	994	Description: The Mode Select command failed.
994-200	994 media	Description: The Test Unit Ready command failed.
994-210	994 B88	Description: The device configuration failed.
994-220	994	Description: The Release command failed.
994-230	994	Description: The Request Sense command failed.
994-240	994	Description: The Openx command failed.
994-300	994 software	Description: The device configuration failed.
994-310	B88 994 software	Description: SCSI adapter configuration failed.
994-320	994 media	Description: Error log analysis indicates a failure.
994-411 to 994-423	994 B88 software	Description: A reservation conflict occurred.
994-511 to 994-523	994 B88	Description: The drive returned bad or non-extended sense data.
994-611 to 994-623	994 B88 software	Description: An adapter or bus I/O error occurred.

Service Request Number	Failing Function Codes	Description and Action
994-711 to 994-723	994 B88 software	Description: A device timeout error occurred.
995-110	995	Description: The Reserve command failed.
995-120	995	Description: The Inquiry command failed.
995-130	995 media	Description: The Load command failed.
995-135	995 media	Description: The Unload command failed.
995-140	995	Description: The Mode Select command failed.
995-150	995 media	Description: The Test Unit Ready command failed.
995-160	995 media	Description: The Send Diagnostic command failed.
995-169	995 media	Description: The Send Diagnostic command failed.
995-170	995 B88 media	Description: The Read, Write and Compare test failed.
995-180	995 media	Description: The Load command failed.
995-185	995 media	Description: The Unload command failed.
995-190	995	Description: The Mode Select command failed.
995-200	995 media	Description: The Test Unit Ready command failed.
995-210	995 B88	Description: The device configuration failed.
995-220	995	Description: The Release command failed.
995-230	995	Description: The Request Sense command failed.
995-240	995	Description: The Openx command failed.
995-300	995 software	Description: The device configuration failed.
995-310	B88 995 software	Description: SCSI adapter configuration failed.
995-320	995 media	Description: Error log analysis indicates a failure.
995-411 to 995-423	995 B88 software	Description: A reservation conflict occurred.

Service Request Number	Failing Function Codes	Description and Action
995-511 to 995-523	995 B88	Description: The drive returned bad or non-extended sense data.
995-611 to 995-623	995 B88 software	Description: An adapter or bus I/O error occurred.
995-711 to 995-723	995 B88 software	Description: A device timeout error occurred.
998-110	998	Description: The Reserve command failed.
998-120	998	Description: The Inquiry command failed.
998-130	998 media	Description: The Load command failed.
998-135	998 media	Description: The Unload command failed.
998-140	998	Description: The Mode Select command failed.
998-150	998 media	Description: The Test Unit Ready command failed.
998-160	998 media	Description: The Send Diagnostic command failed.
998-169	998 media	Description: The Send Diagnostic command failed.
998-170	998 B88 media	Description: The Read, Write and Compare test failed.
998-180	998 media	Description: The Load command failed.
998-185	998 media	Description: The Unload command failed.
998-190	998	Description: The Mode Select command failed.
998-200	998 media	Description: The Test Unit Ready command failed.
998-210	998 B88	Description: The device configuration failed.
998-220	998	Description: The Release command failed.
998-230	998	Description: The Request Sense command failed.
998-240	995	Description: The Openx command failed.
998-300	995 software	Description: The device configuration failed.
998-310	B88 995 software	Description: SCSI adapter configuration failed.

Service Request Number	Failing Function Codes	Description and Action
998-320	995 media	Description: Error log analysis indicates a failure.
998-411 to 998-423	998 B88 software	Description: A reservation conflict occurred.
998-511 to 998-523	998 B88	Description: The drive returned bad or non-extended sense data.
998-611 to 998-623	998 B88 software	Description: An adapter or bus I/O error occurred.
998-711 to 998-723	998 B88 software	Description: A device timeout error occurred.

Chapter 8. Failing Function Codes (FFCs)

Failing function codes represent functions within the system unit.

Using the Failing Function Code List

The failing function codes are listed in numerical sequence.

A function may not be physically packaged on the same FRU in different system units. When this condition exists, the FRU part number for each type of system unit is listed.

The columns in the failing function code list are as follows:

Failing Function Code

The failing function code number from the SRN lists in Chapters 5, 6, and 7.

Description and Notes

The description of the FRU and any usage notes. The FRU description may be different in different system units. Use the one for the type of system unit you are servicing.

Failing Function Code List

Failing Function Code	Description and Notes
241	Ethernet network problem
2E6	PCI Differential Ultra SCSI Adapter (4-L) PCI Universal Differential Ultra SCSI Adapter (4-U)
2E7	Generic PCI SCSI Adapter
440	9.1 GB Ultra SCSI Disk Drive
441	18.2 GB Ultra SCSI Disk Drive
442	9.1 GB Ultra LVD SCSI Disk Drive
443	18.2 GB Ultra LVD SCSI Disk Drive
541	A DLT tape device problem has occurred. Refer to the DLT tape device documentation for FRU numbers.
601	9.1 GB LVD 68-pin SCSI Disk Drive
621	9.1 GB LVD 80-pin SCSI Disk Drive
623	18.2 GB LVD 68-pin SCSI Disk Drive
624	18.2 GB LVD 80-pin SCSI Disk Drive
637	Dual Channel PCI-2 Ultra2 SCSI Adapter
638	4.5 GB 16 bit Ultra SCSI SE Disk Drive
639	9.1 GB Ultra 68-pin SCSI Disk Drive
63A	9.1 GB LVD 68-pin SCSI Disk Drive

Failing Function Code	Description and Notes
63B	9.1 GB LVD 80-pin SCSI Disk Drive
63C	18.2 GB LVD 68-pin SCSI Disk Drive
63D	18.2 GB LVD 80-pin SCSI Disk Drive
63E	36.4 GB LVD 68-pin SCSI Disk Drive
63F	36.4 GB LVD 80-pin SCSI Disk Drive
640	9.1 GB Ultra 80-pin SCSI Disk Drive
643	18.2 GB Ultra LVD SCSI Disk Drive
644	36.2 GB Ultra LVD SCSI Disk Drive
646	High-Speed Token-Ring PCI Adapter
64A	9.1 GB LVD 68-pin SCSI Disk Drive and Carrier
64B	9.1 GB LVD 80-pin SCSI Disk Drive and Carrier
64C	18.2 GB LVD 68-pin SCSI Disk Drive and Carrier
64D	18.2 GB LVD 80-pin SCSI Disk Drive and Carrier
64E	36.4 GB LVD 68-pin SCSI Disk Drive and Carrier
64F	36.4 GB LVD 80-pin SCSI Disk Drive and Carrier
650	Unknown disk drive.
653	18.2 GB Ultra-SCSI 16-bit disk drive
664	SCSI-2 CD-ROM Drive
669	PCI Gigabit Ethernet Adapter
678	12 GB 4 mm SCSI Tape Drive
679	4.5 GB SCSI Disk Drive
681	9.1 GB Ultra-SCSI 16-bit drive
682	20X (MAX) SCSI-2 CD-ROM Drive
689	4.5 GB 16 bit Ultra SCSI SE Disk Drive
690	9.1 GB 16 bit Ultra SCSI SE Disk Drive
700	1.1 GB 8-bit SE Disk Drive
701	1.1 GB 16-bit SE Disk Drive
702	1.1 GB 16-bit DE Disk Drive
703	2.2 GB 8-bit SE Disk Drive
704	2.2 GB 16-bit SE Disk Drive
705	2.2 GB 16-bit DE Disk Drive
706	4.5 GB 16-bit SE Disk Drive
707	4.5 GB 16-bit DE Disk Drive
711	Unrecognized adapter
721	Unrecognized SCSI device
722	Unrecognized disk drive
723	Unrecognized CD-ROM drive

Failing Function Code	Description and Notes
724	Unrecognized tape drive
726	Unrecognized input device
727	Unrecognized async device
728	Unrecognized parallel device
730	Unrecognized diskette drive
733	140 GB 8 mm Tape Library
736	Quiet Touch Keyboard and Speaker cable (The part number is printed on the underside of the keyboard.)
741	1.08 GB SCSI-2 Disk Drive (one-inch high)
745	16 GB DDS-2 Tape Cartridge Auto Loader 48 GB DDS-3 Tape Cartridge Auto Loader Note: See the service documentation for this device.
746	SCSI-2 Fast/Wide PCI Adapter
747	SCSI-2 Differential Fast/Wide PCI Adapter
749	7331 Model 205 8 mm Tape Library Note: See the service documentation for this device.
757	SCSI 13 GB 1/4-Inch Tape Drive
772	4.5 GB 16 bit SCSI F/W Disk Drive
773	9.1 GB 16 bit SCSI F/W Disk Drive
774	9.1 GB External SCSI DE Disk Drive
777	10/100 Base-TX Ethernet PCI Adapter
783	24/48 GB DDS-2 4 mm Tape Autoloader
784	2.1 GB 16-bit SCSI-2 Disk Drive
791	2.2 GB 16-bit SE Disk Drive
792	4.5 GB 16-bit SE Disk Drive
793	9.1 GB 16-bit SE Disk Drive
804	8X Speed SCSI-2 CD-ROM Drive
812	Common Standard Adapter Logic problem
815	Floating Point Processor problem
821	Keyboard Adapter problem
823	Mouse Adapter problem
826	Serial Port Adapter problem
827	Built-in Parallel Port Adapter problem
828	Standard Diskette Adapter problem
831	Serial Port 2 Adapter problem
840	PCI Single-Ended Ultra SCSI Adapter
891	Vendor SCSI Adapter
892	Vendor Display Adapter

Failing Function Code	Description and Notes
893	Vendor LAN Adapter
894	Vendor Async Communications Adapter
901	Vendor SCSI device
902	Vendor Display
903	Vendor Async device
904	Vendor Parallel device
905	Other Vendor device
912	2.0 GB SCSI-2 DE Disk Drive
913	1 GB DE Disk Drive, half-height
914	5 GB 8 mm SCSI DE Tape Drive
915	4/8 GB 4 mm Tape Drive
917	2.0 GB DE F/W Disk Drive
918	2.0 GB 16-bit SCSI SE F/W Disk Drive
921	101-Key Keyboard problem
922	102-Key Keyboard problem
923	106-key International Keyboard problem
925	3-Button Mouse
946	Serial Port Adapter problem
950	Unknown SCSI device is missing.
960	1.37 GB SCSI Disk Drive Assembly
964	20 GB 8 mm SE SCSI Tape Drive
968	1 GB SCSI SE Disk Drive
972	2.3 GB 8 mm Tape Drive
973	Other SCSI Tape Drive
984	1 GB 8-bit Disk Drive
986	2.4 GB SCSI Disk Drive
987	600 MB CD-ROM-2 Disk Drive
989	200 MB SCSI Disk Drive
990	2.0 GB SCSI-2 SE Disk Drive
991	525 MB 1/4-Inch SCSI Tape Drive
994	5/10 GB 8 mm Internal Tape Drive
995	1.2 GB 1/4-inch Cartridge Tape Drive
998	2.0 GB 4 mm SCSI Tape Drive
B31	Unrecognized keyboard type
B88	Generic SCSI I/O Controller

Appendix A. General Attributes Required When Using a TTY Terminal

The following general attributes are the default settings for the diagnostic programs. Be sure your terminal is set to these attributes.

Note: Set these attributes before the diagnostic programs are loaded.

Refer to the following table.

General Setup Attributes	3151 /11/31 /41 Settings	3151 /51/61 Settings	3161 /3164 Settings	Description
Machine mode	IBM 3151	IBM 3151 PC	IBM 3161 or IBM 3164	The diagnostic programs are set to emulate use of the 3161 ASCII Display Terminal. If your terminal can emulate a 5085, 3161 or 3164 terminal, use the attribute settings contained in these listings. Otherwise, refer to your operator's manual, compare the follow attribute descriptions with those of your terminal, and set your attributes accordingly.
Generated Code Set		ASCII		
Screen	Normal	Normal		Uses the EIA-232 interface protocol.
Row and Column	24 x 80	24 x 80		Uses the EIA-232 interface protocol.
Scroll	Jump	Jump	Jump	When the last character on the bottom line is entered, the screen moves down one line.
Auto LF	Off	Off	Off	For the "On" setting, pressing the Return key moves the cursor to the first character position of the next line. For the "Off" setting, pressing the Return key moves the cursor to the first character position of the current line. The CR and LF characters are generated by the New line setting.
CRT saver	Off	Off	10	The "10" setting causes the display screen to go blank if there is no activity for 10 minutes. When the system unit sends data or a key is pressed, the screen contents are displayed again.

General Setup Attributes	3151 /11/31 /41 Settings	3151 /51/61 Settings	3161 /3164 Settings	Description
Line wrap	On	On	On	The cursor moves to the first character position of the next line in the page after it reaches the last character position of the current line in the page.
Forcing insert	Off	Off		
Tab	Field	Field	Field	The column tab stops are ignored, and the tab operation depends on the field attribute character positions.
Trace			All	Both inbound data (data to the system unit) and outbound data (data from the system unit) to and from the main port can be transferred to the auxiliary port without disturbing communications with the system unit when the Trace key is pressed.

Additional Communication Attributes

The following communication attributes are for the 3151, 3161, and 3164 terminals.

Communication Setup Attributes	3151/11 /31/41) Settings	3151 /51/61, Settings	3161 /3164 Settings	Description
Operating mode	Echo	Echo	Echo	Data entered from the keyboard on the terminal is sent to the system unit for translation and then sent back to the display screen. Sometimes called <i>conversational mode</i> .
Line speed	9600 bps	9600 bps	9600 bps	Uses the 9600 bps (bits per second) line speed to communicate with the system unit.
Word length (bits)	8	8	8	Selects eight bits as a data word length (byte).
Parity	No	No	No	Does not add a parity bit, and is used together with the word length attribute to form the 8-bit data word (byte).
Stop bit	1	1	1	Places a bit after a data word (byte).

Communication Setup Attributes	3151/11 /31/41) Settings	3151 /51/61, Settings	3161 /3164 Settings	Description
Turnaround character	CR	CR	CR	Selects the carriage return (CR) character as the line turnaround character.
Interface	EIA-232	EIA-232	EIA-232	Uses the EIA-232 interface protocol.
Line control	IPRTS	IPRTS	IPRTS	Uses the 'permanent request to send' (IPRTS) signal to communicate with system unit.
Break signal (ms)	500	500	500	The terminal sends a 'break signal' to the system unit within 500 ms after the Break key is pressed.
Send null suppress	On	On		Trailing null characters are not sent to the system unit.
Send null			On	Trailing null characters are sent to the system unit.
Response delay (ms)	100	100	100	The terminal waits for 100 ms for the system unit to respond.

Additional Keyboard Attributes

The following keyboard attributes are for the keyboard attached to the 3151, 3161, and 3164 terminals.

Keyboard Setup Attributes	3151/11 /31/41 Settings	3151 /51/61 Settings	3161 /3164 Settings	Description
Enter	Return	Return	Return	The Enter key functions as the Return key.
Return	New line	New line	New line	The cursor moves to the next line when the Return key is pressed.
New line	CR	CR	CR	The Return key generates the carriage return (CR) and the line feed (LF) characters. The line turnaround occurs after the CR and LF characters are generated.
Send	Page	Page	Page	The contents of the current page are sent to the system unit when the Send key is pressed.
Insert character	Space	Space	Space	A blank character is inserted when the Insert key is pressed.

Additional Printer Attributes

The following printer attributes are for a printer attached to the 3151, 3161, and 3164 terminals.

Printer Setup Attributes	3151/11 /31/41 Settings	3151 /51/61 Settings	3161 /3164 Settings	Description
Line speed	9600	9600	9600	Uses 19200 or 9600 bps (bits per second) line speed to communicate with the system unit.
Word length (bits)	8	8	8	Selects eight bits as a data word length (byte).
Parity	Even	Even	No	
Stop bit	1	1	1	Places a bit after a data word (byte).
Characters	ALL	ALL		
Line end			CR-LF	
Print			View- port	
Print EOL			Off	
Print null			Off	

Appendix B. Notices

This information was developed for products and services offered in the U.S.A.

The manufacturer may not offer the products, services, or features discussed in this document in other countries. Consult the manufacturer's representative for information on the products and services currently available in your area. Any reference to the manufacturer's product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any intellectual property right of the manufacturer may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any product, program, or service.

The manufacturer may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the manufacturer.

The following paragraph does not apply to the United Kingdom or any country where such provisions are inconsistent with local law: THIS MANUAL IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions; therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. The manufacturer may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Information concerning products made by other than the manufacturer was obtained from the suppliers of those products, their published announcements, or other publicly available sources. The manufacturer has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to products made by other than the manufacturer. Questions on the capabilities of products made by other than the manufacturer should be addressed to the suppliers of those products.

Index

A

about this book v
 audience v
 how this book is organized v
 trademarks v
attributes required for TTY terminal 131

C

CE login 1
common system information 1

D

diagnostic controller 2
 advanced diagnostics function 3
 automatic error log analysis 4
 command line options 12
 controller description 2
 diagnostic summary 11
 online diagnostics modes of operation 8
 online diagnostics service mode 9
 operating considerations 7
 periodic diagnostics 4
 system checkout option 4
 task and service aid functions 3
 tasks and resources 12
 TTY terminal attributes 131

F

Failing Function Codes (FFCs) 127

G

General Attributes Required When Using a TTY
 Terminal 131
general diagnostic information 1

L

log repair action service aid 22

O

Operating system message file 1

R

repair log service aid 22
run exercisers 23

S

service aids 15
 add resource 16
 AIX shell prompt 16
 backup/restore media 16
 certify media 16
 change hardware VPD 17
 delete resource 17

service aids 15 (*continued*)
 disk-based diagnostic 26
 disk to disk copy 17
 display/alter sector 18
 display configuration and resource list 18
 display hardware VPD 18
 display or change diagnostic run-time options 19
 display previous diagnostic results 19
 display resource attributes 20
 display software product data 20
 format media 20
 generic microcode download 22
 introduction 15
 log repair action 22
 periodic diagnostics 23
 run diagnostics 23
 run error log analysis 23
 run exercisers 23
 SCSD tape drive 25
SRN codes 29, 63, 99
SRN list 27
 2E6-212 through 692-723 29
 700-102 through 840-802 63
 901-xxx through 998-723 99
 description of SRN list 27
 how to use the SRN list 27

T

TTY terminal attributes required for diagnostics
 general 131

U

Using online diagnostics 7

Readers' Comments — We'd Like to Hear from You

Diagnostic Information for Itanium-based Systems

Publication No. SA23-1237-00

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to find	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Well organized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applicable to your tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please tell us how we can improve this book:

Thank you for your responses. May we contact you? Yes No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

Name

Address

Company or Organization

Phone No.

Readers' Comments — We'd Like to Hear from You
SA23-1237-00

Cut or Fold
Along Line

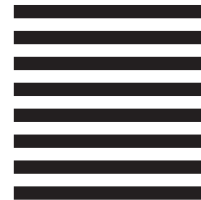
Fold and Tape

Please do not staple

Fold and Tape



NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

Information Development
Department H6DS-9561
11400 Burnet Road
Austin, TX 78758-3493



Fold and Tape

Please do not staple

Fold and Tape

SA23-1237-00

Cut or Fold
Along Line



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

SA23-1237-00

