COVER Book Cover

7208 20GB External 8mm Tape Drive
Model 341

Setup and Operator Guide

Document Number SA37-0319-00

Part Number 59H2733

NOTICES Notices

+--- **Note!** --+
¦ Before using this information and the product it supports, be sure ¦
¦ to read the general information under "Notices" in topic FRONT_1. ¦
¦   ¦
+---+

EDITION Edition Notice
First Edition (April 1997)

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Subtopics

FRONT_1.1 Safety Notices

When using this product, observe the danger, caution, and attention notices contained in this guide. Each danger and caution notice contains a reference number (72XXDxxx or 72XXCxxx). Use the reference number to check the translation in *External Devices Safety Information*, SA26-7003.

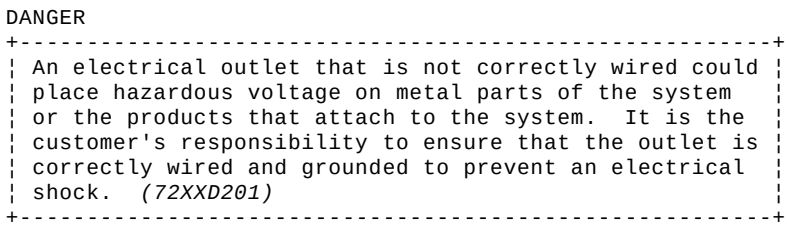
Examples of danger, caution, and attention notices follow.

Subtopics
FRONT_1.1.1 Danger Notice
FRONT_1.1.2 Caution Notice
FRONT_1.1.3 Attention Notice

FRONT_1.1.1 Danger Notice

A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people. The following is a sample danger notice:

PICTURE 1



FRONT_1.1.2 Caution Notice

A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition. The following is a sample caution notice:

PICTURE 2

CAUTION:
Do not attempt to use the handle on the module to lift the entire device (module and enclosure) as a unit. First remove the module; then, use two hands to lift the enclosure. *(72XXC356)*

FRONT_1.1.3 Attention Notice

An attention notice indicates the possibility of damage to a program, device, system, or data. The following is a sample attention notice:

Attention: Do not operate the 7208 Tape Drive in a poor air-quality environment. If your environment contains an excessive amount of particulates, contact your service representative for more information.

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This box is a purchased unit. Therefore, it is the sole responsibility of the purchaser to dispose of it in accordance with local laws and regulations at the time of disposal.

This unit contains recyclable materials. The materials should be recycled where facilities are available and according to local regulations. In some areas IBM may provide a product take-back program that ensures proper handling of the product. Contact your IBM representative for more information.

FRONT_1.3 Electronic Emission Notices

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7208 20GB External 8mm Tape Drive Model 341

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:

International Business Machines Corporation
Old Orchard Road
Armonk, NY 10504
Telephone: 1-919-543-2193

Industry Canada Compliance Statement

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Community Compliance Statement

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This equipment could cause interference to reception when used in proximity to radio and television receivers.

Please handle the equipment properly according to the instruction manual.

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FRONT_2 About This Guide

This guide describes how to install and use the 7208 Tape Drive Model 341. It contains the following topics:

Chapter 1, "General Information," describes the 7208 Tape Drive, gives the system requirement, tells how to enable the tape drive as an initial program load (IPL) device, and lists hardware specifications.

Chapter 2, "Setting Up the 7208 Tape Drive," tells how to install the 7208 Tape Drive.

Chapter 3, "Using the 7208 Tape Drive," describes the operator controls, indicator lights, and liquid crystal display (LCD) on the 7208 Tape Drive. It also tells how to load and unload a tape cartridge, and how to clean the tape drive.

Chapter 4, "Removing the 7208 Tape Drive," tells how to remove the 7208 Tape Drive after it has been installed.

Chapter 5, "Using the Media," describes the media to use in the 7208 Tape Drive.

Appendix A, "Power Cables," provides power cable information for different countries.

Appendix B, "Fault Symptom Codes and Error Recovery Procedure Numbers," lists codes needed to resolve error messages.

Appendix C, "Error Recovery Procedures," lists instructions for resolving error messages.

Store this guide with your system manuals.

Subtopics
FRONT_2.1 Related Publications

FRONT_2.1 Related Publications

- *7208 20GB External 8mm Tape Drive Model 341 Service Guide*, SA37-0320, provides service and maintenance information for the 7208 Tape Drive.

- *External Devices Safety Information*, SA26-7003, provides translations of danger and caution notices.

- *AIX System Management Guide: Operating System and Devices*, SC23-2525, provides information about how to manage the AIX operating system.

1.0 Chapter 1. General Information

The 7208 20GB External 8mm Tape Drive Model 341 is an external storage device that connects to the IBM RS/6000 and stores additional data.

The 7208 Tape Drive can:

- Save and restore system data files
- Archive important records
- Distribute upgrades to operating system software

The 7208 Tape Drive Model 341 uses a fast/wide differential interface and meets the Small Computer Systems Interface-2 (SCSI-2) standard X3.131-1994 of the American National Standards Institute (ANSI).

Figure 1 shows the front view of the 7208 Tape Drive.

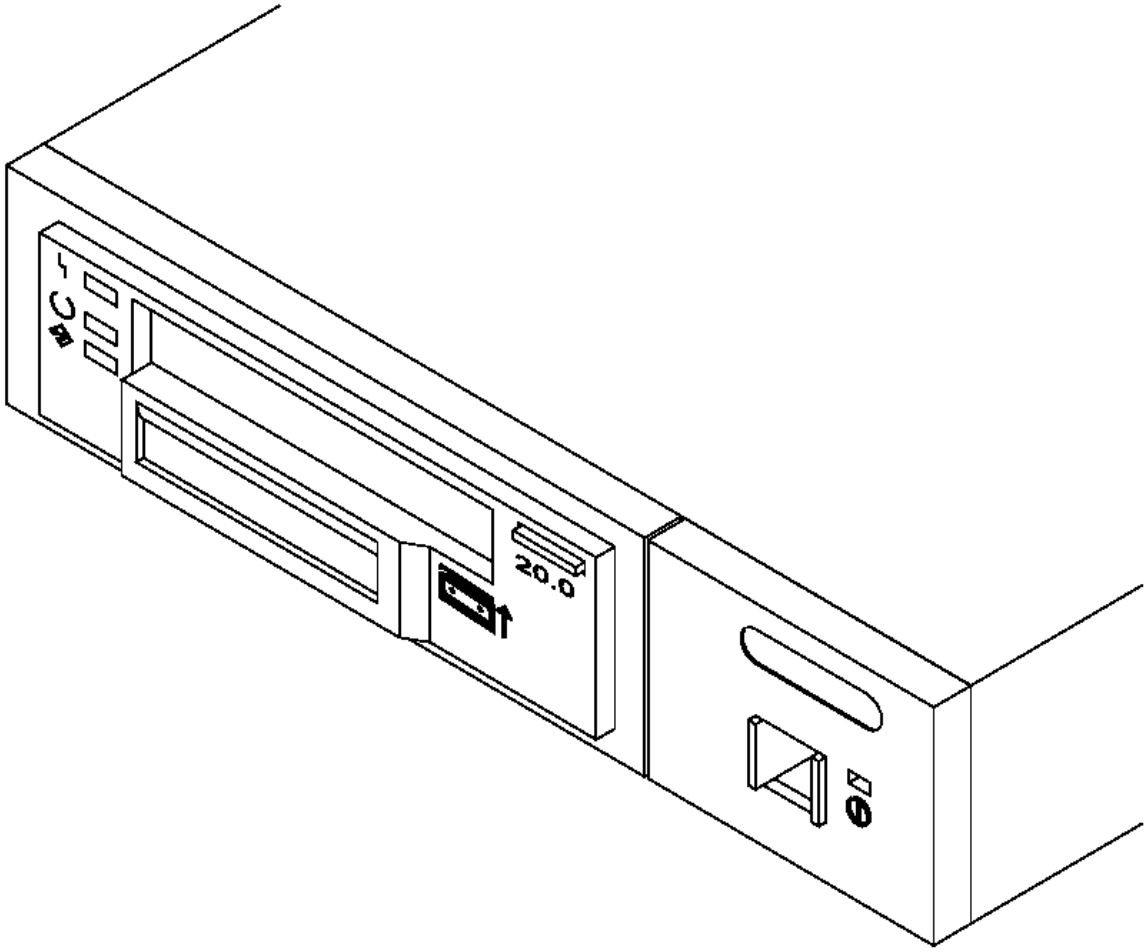

Figure 1. Front View of the 7208 Tape Drive Model 341

The 7208 Tape Drive Model 341 features the following:

- Tape cartridge capacity of up to 20GB per cartridge (where GB equals 1 000 000 000 bytes).
- Data transfer rate of 3MB per second (where MB equals 1 000 000 bytes).
- Data compression hardware that increases tape cartridge capacity up to 40GB and transfer rate up to 6MB per second. (This feature is controlled by the system software and does not require special handling by the 7208 Tape Drive operator.)

  Note: The actual capacity per cartridge varies, depending on the application and the type of data cartridge being used.

- A liquid crystal display (LCD) that provides operating and error messages.

Subtopics
1.1 System Requirement
1.2 Enabling the 7208 Tape Drive as an IPL Device
1.3 Specifications

1.1 System Requirement

The system requirement for the 7208 Tape Drive is any RS/6000 platform with an AIX operating system at level 4.1.5, 4.2, or higher.

1.2 Enabling the 7208 Tape Drive as an IPL Device

The 7208 Tape Drive has been enabled as an initial program load (IPL) device for certain models of the RS/6000. The applicable RS/6000 models and their required firmware are:

RS/6000 Machine Type	Required Level and Model Number of System Firmware
7043 Model 140	TIG97038 or later
7043 Model 240	DOR97038 or later
7025 Model F40	TR97038 or later
7026 Model H10	TR97038 or later

Note: To determine your current level of firmware and to obtain a firmware upgrade, refer to instructions that may be included with your 7208 Tape Drive or check your RS/6000 service documentation.

1.3 Specifications

Figure 2. Specifications for the 7208 Tape Drive Model 341

Physical Specifications	
Width	250 mm (9.8 in.)
Depth	275 mm (10.8 in.)
Height	55 mm (2.2 in.)
Weight	5 kg (11 lb)
Power Specifications	
kVA	0.041
V ac	100 to 125, or 200 to 240
Hertz	50 to 60
Btu Average (watts)	67 Btu/hr (20 watts)
Power Factor	0.58
Other Specifications	
Maximum Altitude	3048 m (10,000 ft)

Recommended Environment

Environmental Factor	**Operating**	**Storage**	**Shipping**
Temperature	16 to 32°C (60 to 90°F)	1 to 60°C (34 to 140°F)	-40 to 60°C (-40 to 140°F)
Relative Humidity (noncondensing)	20 to 80%	10 to 80%	10 to 90%
Maximum Wet Bulb	23°C (73°F)	29°C (84°F)	29°C (84°F)

Note: The operating limits include media. The storage and shipping limits do not include media. For media storage and shipping limits, see "Storage and Shipping Environments" in topic 5.2.

2.0 Chapter 2. Setting Up the 7208 Tape Drive

This topic provides step-by-step instructions on how to properly install the 7208 Tape Drive Model 341.

PICTURE 4

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. *(72XXD203)*

Before installing the 7208 Tape Drive, let it acclimate to the operating environment for as long as it has been away from the environment or for 24 hours, whichever is less.

Attention: The 7208 Tape Drive is a precision device that requires reasonable care in handling to prevent data loss or permanent damage. Avoid bumping or dropping the 7208 Tape Drive.

To unpack the 7208 Tape Drive, simply remove the packing material from the box it was shipped in.

Subtopics
2.1 Performing the Installation

2.1 Performing the Installation

To install the 7208 Tape Drive, complete the following steps.

Subtopics

2.1.1 Step 1. Using the Inventory Checklist

Make sure that you received the following items:

Power cable (for the appropriate cable see the appendix, "Power Cables," on topic A.0)
The *External Devices Warranty Information* (U.S., Canada, and Puerto Rico only)
The *7208 20GB External 8mm Tape Drive Model 341 Setup and Operator Guide* (this guide)
The *7208 20GB External 8mm Tape Drive Model 341 Service Guide*
The *External Devices Safety Information* manual
One of the following:
- A system-to-device SCSI bus cable and a terminator (if the 7208 Tape Drive is the only device connected to the RS/6000)
- A device-to-device SCSI bus cable (if the 7208 Tape Drive connects to another SCSI device)

Data cartridge
Test cartridge
Cleaning cartridge

2.1.2 Step 2. Checking the Electrical Outlets

Make sure that the electrical outlets you use are properly grounded.

2.1.3 Step 3. Assembling the Materials

Refer to your system management or system hardware manuals to locate the information that you need to connect the 7208 Tape Drive.

__ 1. **Get your system unit books now.** You may find the needed information under the topics:
- Installing an external SCSI tape drive
- SCSI controllers
- External SCSI devices

Do not continue until you have located the manual that describes how to:

__ 2. Determine where the SCSI controller is located (where you make the cable connection).

Record the controller location here PICTURE 5

__ 3. Determine an unused SCSI address for the 7208 Tape Drive.

Record the address here PICTURE 6

2.1.4 Step 4. Setting the SCSI Address

The SCSI address is a unique address that identifies the 7208 Tape Drive to your system unit. Use the SCSI address switch to set the SCSI address of the 7208 Tape Drive. The switch (1 in Figure 3) is located on the rear of the tape drive. Figure 3 also shows the SCSI bus cable connectors 2 , the cooling fan 3 , and the power cable connector 4 .

Note: Do not select a SCSI address that is already in use.

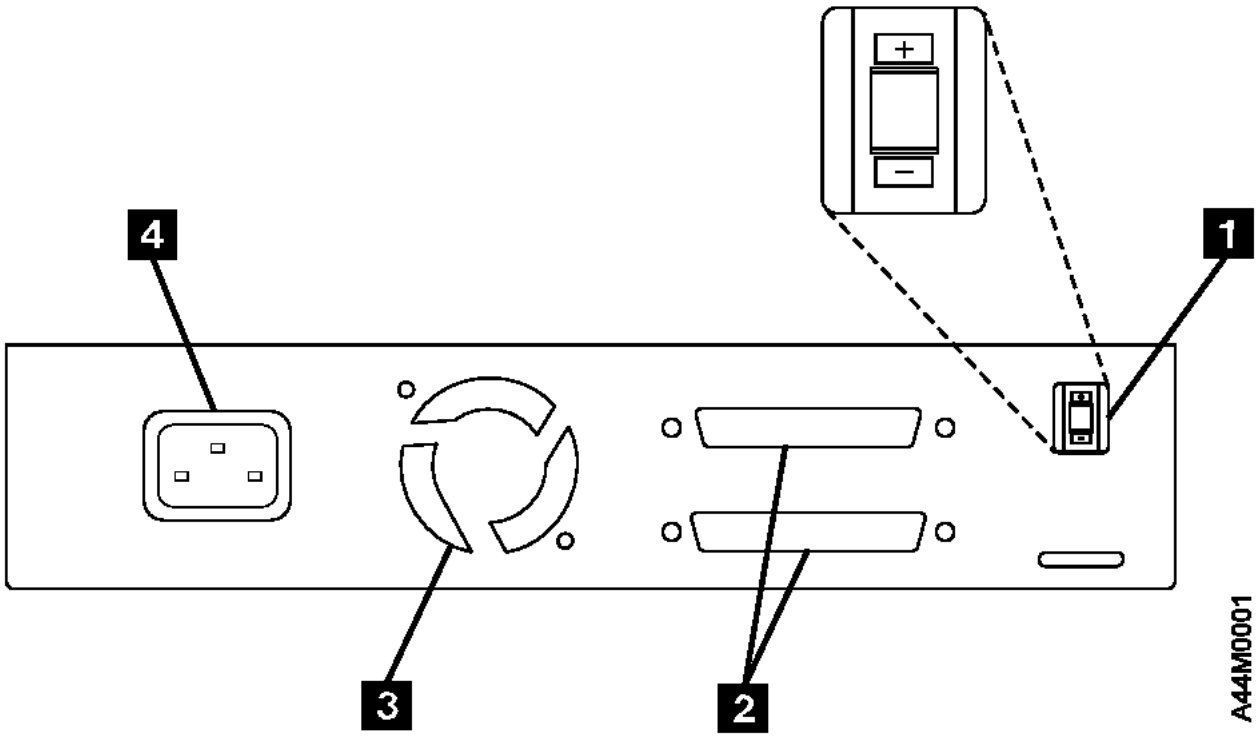

Figure 3. Rear View of the 7208 Tape Drive Model 341

To set the SCSI address, do the following:

Press the + or - pushbutton to set the SCSI address switch to the address that you have previously determined in "Step 3. Assembling the Materials" in topic 2.1.3.

2.1.5 Step 5. Placing the 7208 Tape Drive

The 7208 Tape Drive can be located anywhere that is convenient to your system unit. The only restrictions are the length of the power cord and the SCSI cable. Recommended locations are:

- Away from the floor
- In a horizontal position
- Where the tape cartridge can be easily inserted
- Where the liquid crystal display (LCD) can be easily viewed (for more information about the LCD, see "Liquid Crystal Display" in topic 3.3)
- Where the airflow around the unit is not obstructed

To place the 7208 Tape Drive, do the following in sequence:

__ 1. Set the tape drive in the location that you have previously determined.

__ 2. Connect the power cable to the 7208 Tape Drive. **(Do not plug it into the electrical outlet at this time.)**

The external devices that attach to the system unit can be stacked. When stacking external devices, do not place more than 30 pounds on top of the 7208 Tape Drive.

2.1.6 Step 6. Performing a System Shutdown

Attention: Do not attach the 7208 Tape Drive to a system unit that is powered on. This can damage the 7208 Tape Drive, the system unit, or both.

To perform a system shutdown, do the following:

Note: Before doing a controlled shutdown of the system unit, notify other users who may be using the system.

__ 1. If it is on, do a controlled fast shutdown of the system unit by typing **shutdown -F** from the system console. (You must have root authority to perform the shutdown; see your system administrator.) Depending on your system configuration, the shutdown may take several minutes.

__ 2. When the message **Halt Completed** displays on the system console, turn off the power to the system unit.

__ 3. Turn off the power to all external devices connected to the system unit.

__ 4. Unplug the power cables to all external devices from their electrical outlets.

__ 5. Unplug the system unit power cable from the electrical outlet.

2.1.7 Step 7. Connecting the SCSI Bus Cable

To connect the SCSI bus cable, do the following:

__ 1. On the rear of the 7208 Tape Drive, insert the device connector end of the SCSI bus cable into one of the connectors. See Figure 4.

__ 2. Push in until the cable is seated.

__ 3. Tighten the two thumbscrews (finger tight).

Figure 4. Connecting the SCSI Bus Cable to the 7208 Tape Drive

__ 4. Connect the other end of the SCSI bus cable as follows:

- If the 7208 Tape Drive is the only device attached to the system, connect the cable to the system unit (see Figure 5 in topic 2.1.8).
- If the 7208 Tape Drive is part of a multiple-device configuration, connect the SCSI cable to the next device (see Figure 6 in topic 2.1.8).

2.1.8 Step 8. Installing the SCSI Terminator

Make sure to install a terminator on the last device in the configuration.

To install the SCSI terminator, do the following:

Align the SCSI terminator with the appropriate connector, push in until the terminator is seated, and tighten the thumbscrews finger tight.

- If the 7208 Tape Drive is the only SCSI device attached to the system, install the terminator on one of the connectors of the 7208 Tape Drive (see Figure 5).

Figure 5. Example of Attaching One SCSI Device to the System Unit

- If more than one device attaches to the system, move the terminator to the last device as shown in Figure 6.

Figure 6. Example of Attaching Multiple SCSI Devices to the System Unit

Notes:

1. The terminator and the SCSI bus cable can be connected to either the top or bottom SCSI connector on the 7208 Tape Drive.
2. Only one external terminator is required to terminate the SCSI bus. You do not need to use the terminator shipped with the 7208 Tape Drive if a terminator has been previously installed.

2.1.9 Step 9. Connecting the Power Cables

To connect the power cables, do the following:

__ 1. Plug the 7208 Tape Drive power cable into an electrical outlet.

__ 2. Plug the power cables for all external devices into electrical outlets.

__ 3. Plug the system unit power cable into an electrical outlet.

__ 4. Turn on the power to all of the external devices.

__ 5. Review the information in "Indicator Lights" in topic 3.2 and "Liquid Crystal Display" in topic 3.3. Then turn on the power to the 7208 Tape Drive and watch for the following:

a. The power-on light comes on and stays on.
b. All three status lights come on, then turn off after approximately 35 seconds (indicating that the Power-On Self Test (POST) has completed successfully).

   Note: For machines with certain adapters, POST may not complete until the system is powered on.
c. A series of messages display on the LCD, ending with the message **READY-NOTAPE**. (If you change the display language while powering on, the **READY-NOTAPE** message and all subsequent messages appear in the chosen language. For more information, see "Changing the Display Language" in topic 3.3.1.)

__ 6. Turn on the power to the system unit.

Note: If the POST does not complete successfully, the 7208 Tape Drive has detected an internal fault and must be repaired. Contact your service representative. **Do not continue with the installation at this time**.

2.1.10 Step 10. Performing the 7208 Tape Drive Checkout Procedure

To perform the checkout procedure, do the following:

__ 1. Configure the 7208 Tape Drive to the RS/6000 software by doing the following:

a. Log into the RS/6000 (AIX operating system).

Note: You must have root authority to install or remove the 7208 Tape Drive from the system. To obtain root authority, see your system administrator.

b. At the system prompt, type **lsdev -Cs scsi** and press Enter. The command lists all of the SCSI devices that are connected to the RS/6000. Figure 7 shows an example of the screen that displays. The screen lists:

1 Device name
2 Device status
3 SCSI adapter slot number
4 Description of the SCSI device
5 SCSI address (begins with 7th digit)

Figure 7. Screen Display of SCSI Devices Attached to the RS/6000

c. From the list of SCSI devices, identify the 7208 Tape Drive (listed as the **Differential SCSI 8mm Tape Drive**):

- If the status of the 7208 Tape Drive is displayed as *Available*, the device has successfully been configured.
- If the status is not displayed as *Available*, refer to Topic 2, "Maintenance Analysis Procedures," in the *7208 20GB External 8mm Tape Drive Model 341 Service Guide*. For more information about configuring the 7208 Tape Drive to the system software, refer to your AIX or RS/6000 manuals.

d. This completes the 7208 Tape Drive installation.

Store the test cartridge and the cleaning cartridge for future use. Store all 7208 Tape Drive publications with your system manuals.

3.0 Chapter 3. Using the 7208 Tape Drive

This topic describes the operator controls and indicator lights on the 7208 Tape Drive. It also describes the liquid crystal display, gives instructions for loading and unloading a tape cartridge, and tells how to clean the tape drive.

Figure 8 shows the front view of the 7208 Tape Drive Model 341.

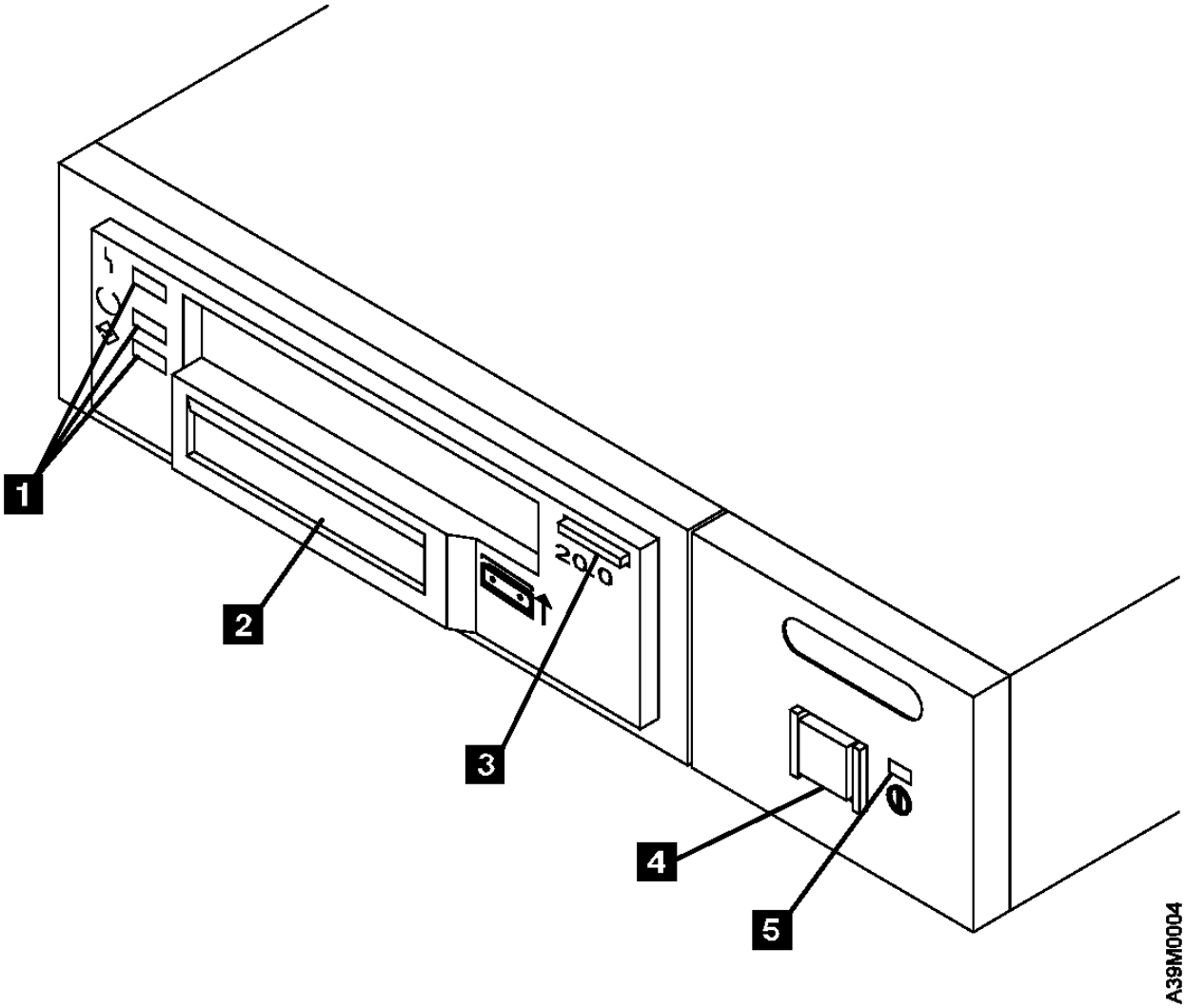

Figure 8. Front View of the 7208 Tape Drive Model 341

Subtopics
3.1 Operator Controls
3.2 Indicator Lights
3.3 Liquid Crystal Display
3.4 Loading and Unloading Tape Cartridges
3.5 Cleaning the Tape Drive

3.1 Operator Controls

The 7208 Tape Drive has the following operator controls.

Subtopics
3.1.1 Power Switch
3.1.2 Unload Button

3.1.1 Power Switch

The power switch (4 in Figure 8 in topic 3.0) is a momentary pushbutton switch that enables the power to be turned on or off. When the 7208 Tape Drive is on, the power-on light 5 is on.

Note: The PICTURE 13 symbol located next to the power switch is an International Organization for Standardization (ISO) symbol for a pushbutton switch.

3.1.2 Unload Button

The unload button 3 enables a tape cartridge to be ejected. The unload button operates only when the 7208 Tape Drive power is on. To remove a tape cartridge, press and hold the unload button for about one second.

3.2 Indicator Lights

The 7208 Tape Drive has the following indicator lights.

Subtopics
3.2.1 Power-On Light
3.2.2 Status Lights

3.2.1 Power-On Light

When the 7208 Tape Drive is turned on, the power-on light 5 comes on and stays on.

3.2.2 Status Lights

Three status lights 1 and their ISO symbols appear on the 7208 Tape Drive as follows:

PICTURE 14 Fault (amber)

PICTURE 15 Ready (green)

PICTURE 16 Activity (green)

The combinations of the lights and their definitions are shown in Figure 9.

Figure 9. Definition of Status Light States

Status Lights	State	Status
PICTURE 17	On On On	The Power-On Self Test (POST) is running.
PICTURE 18	Off or On Off Off	One of the following conditions exists: □ The power is off (Fault light is off). □ The POST has completed successfully, but no tape cartridge has been inserted. If the Fault light is on, cleaning is required. See "Cleaning the Tape Drive" in topic 3.5.
PICTURE 19	Off or On On Flashing or Off	A tape cartridge has been inserted. □ The 7208 Tape Drive is ready to receive commands from the system (whether the Fault light is on or off). □ If the Fault light is on, cleaning is required. See "Cleaning the Tape Drive" in topic 3.5. □ If the Activity light flashes, a tape cartridge is in the drive and tape movement is occurring. If the light is off, no tape movement is occurring.
PICTURE 20	Flashing Off Off	The 7208 Tape Drive has detected an internal fault that requires corrective action. □ Reset the error by turning the power off to the 7208 Tape Drive, then turning it back on, or by holding down the unload button for about 15 seconds. □ If the Fault light still flashes after the reset, contact your service representative.
PICTURE 21	On Off or On Flashing or Off	The tape drive requires cleaning. See "Cleaning the Tape Drive" in topic 3.5. □ If the Ready light is on, a tape cartridge is in the drive. If the light is off, a cartridge is not in the drive. □ If the Activity light flashes, a tape cartridge is in the drive and tape movement is occurring. If the light is off, no tape movement is occurring.

3.3 Liquid Crystal Display

The 7208 Tape Drive features a liquid crystal display (LCD) (2 in Figure 8 in topic 3.0). The LCD provides operating and error messages.

Figure 10 shows a list of messages that display on the LCD.

Figure 10. LCD Messages

Reset Messages	
RESET	The first message to appear during the power-on sequence.
MODEL:	Variable information about the tape drive, in this case **IBM--20GB**
SUBMOD:	The submodel number of the tape drive.
SN:	The serial number of the tape drive.
CODE:	The level of the tape drive's firmware.
LAST CLN:	The number of hours since the last cleaning.
COMPRESSION:	Whether data compression is turned on (the default) or turned off.
SINGLE ENDED *or* **DIFFERENTIAL**	The type of SCSI input/output controller (whether single ended or differential).
WIDE	The type of SCSI configuration.
SCSI ID:	The SCSI address of the tape drive (0 through 15).
LANGUAGE:	The current language used on the LCD. To change the language, power the tape drive off. Press and hold the unload button immediately after turning the power back on. When the desired language displays, release the unload button.
Tape Drive Status Messages	
READY-NOTAPE	The tape drive is ready to accept a cartridge.
□¦□ **LOADING....**	The tape drive is loading the tape.
□¦□ **READY-TAPE**	The tape drive successfully loaded the tape and is ready for read or write operations.
□¦□ **ILLEGAL TAPE**	An unsuitable tape has been loaded and rejected.
<< EJECT======	The unload button was pressed. The tape drive will eject the cartridge as soon as it finishes the current operation.
□¦□ **EJECT PREVNT**	The system software has issued a command to prevent the eject function.
Tape Motion Messages	
□□□ **READ+¦¦¦¦¦=**	The tape drive is reading data. The + sign appears when the data is compressed. The boxes (¦) represent the amount of tape processed (out of a total of six boxes). The = sign represents the amount of unprocessed tape.
□□□ WRITE+¦¦¦¦=	The tape drive is writing data. The + sign appears when the data is compressed.
□/□ **PROTECTED**	The tape drive cannot write data because the data cartridge is write-protected.
□/□ **ILLEGAL WRT**	The tape drive cannot write to the type of data cartridge inserted. This message remains until a proper tape is inserted or a tape motion command is issued.

>> SEARCH **<< SEARCH**	A high-speed search is in progress.
<< REWIND	The rewind function is in progress.
ERASE	The tape drive is erasing data on the tape. As the data is erased, the equal signs (=) change to boxes (¦).
Cleaning Messages	
CLEAN SOON	The tape drive needs to be cleaned.
MUST CLEAN	The tape drive must be cleaned when advanced metal-evaporated (AME) media is inserted after using metal particle (MP) media.
CLEANING	Cleaning is in progress.
DEPLETED	The cleaning tape in the cartridge is used up and the tape drive will eject it. Insert a new cleaning cartridge.
Error Conditions	
LAST 3 ERRORS **ERR 1: xx yy zz** **ERR 2: xx yy zz** **ERR 3: xx yy zz**	A hardware error has occurred. The LCD displays the last three error codes, with **ERR 1: xx yy zz** as the most recent. **xx** = the fault symptom code (FSC). **yy** and **zz** = additional information for product support personnel (the information may or may not be present). To resolve the error, refer to Appendix B, "Fault Symptom Codes and Error Recovery Procedure Numbers" in topic B.0.

Subtopics
3.3.1 Changing the Display Language

3.3.1 Changing the Display Language

The text on the 7208 Tape Drive LCD is available in English, French, German, Italian, Portuguese, and Spanish. To change the language:

1. Power the tape drive off.

2. Press and hold the unload button immediately after turning on the power to the 7208 Tape Drive.

3. The LCD cycles through the available languages. When the desired language displays, release the unload button.

3.4 Loading and Unloading Tape Cartridges

To load and unload a tape cartridge, do the following. For information about the type of media to use, refer to Chapter 5, "Using the Media" in topic 5.0.

Note: To avoid problems with loading and unloading, use only one label on a cartridge.

Subtopics

3.4.1 Loading a Tape Cartridge

To load a tape cartridge:

1. Make sure that the 7208 Tape Drive power is on (the power-on light should be on).

2. Grasp the cartridge 1 by the outer edges, with the window side up and the write-protect switch 2 facing you.

   Note: See "Setting the Write-Protect Switch" in topic 5.4 to make sure that the write-protect switch is properly set.

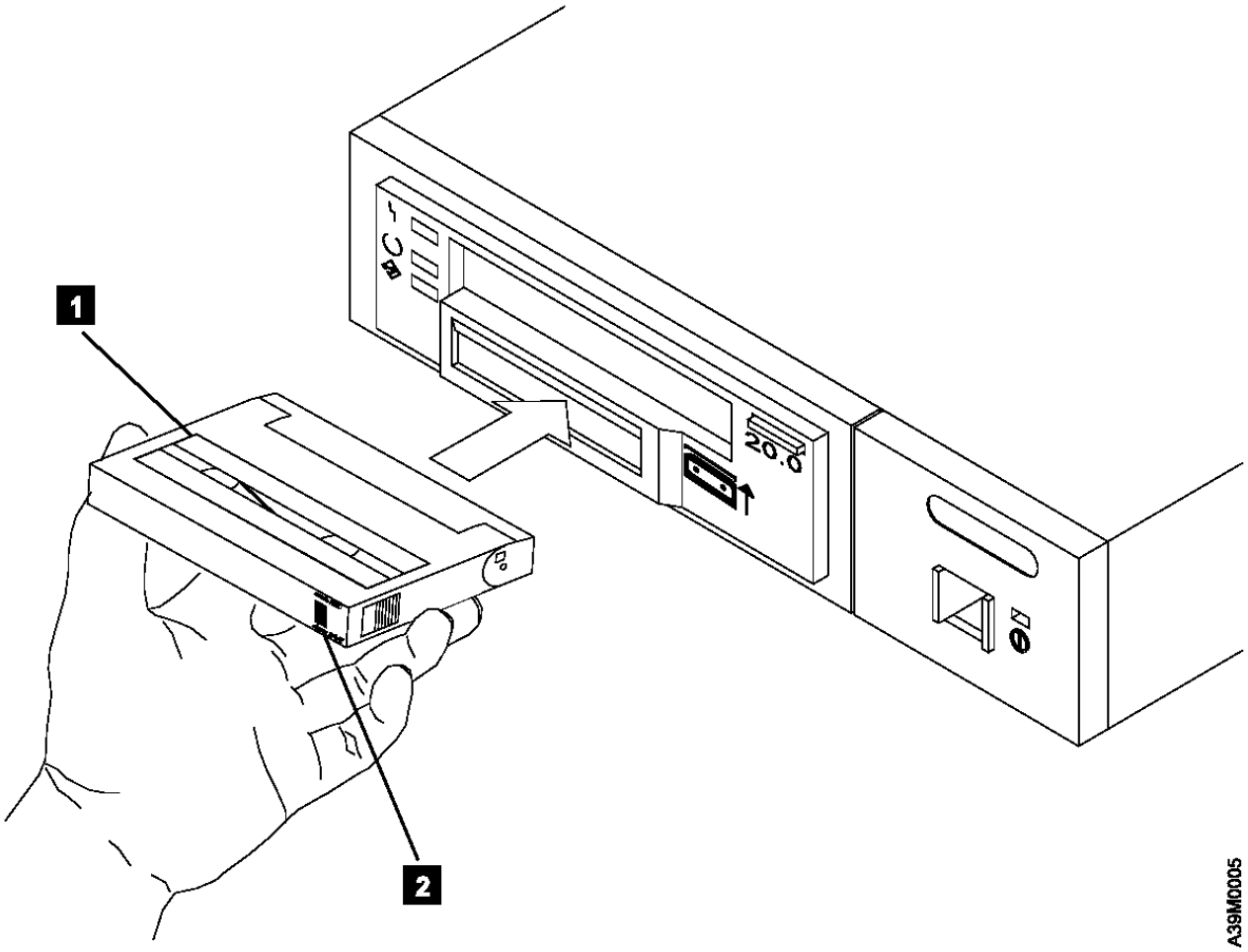

Figure 11. Loading a Tape Cartridge into the 7208 Tape Drive

3. Slide the cartridge into the opening on the front of the 7208 Tape Drive until the loading mechanism pulls the cartridge into the drive and the drive door closes (see Figure 11). The message **LOADING** displays.

To indicate that the load operation was successful, the message **READY-TAPE** displays and the Ready status light comes on.

3.4.2 Unloading a Tape Cartridge

To unload a tape cartridge:

1. Make sure that the 7208 Tape Drive power is on (the power-on light should be on).

2. Press the unload button.

The 7208 Tape Drive rewinds, unloads, and ejects the tape. The process may take from 15 seconds to several minutes, depending on the position of the tape and the amount of data written. On the LCD, the message **EJECT** displays, followed by the message **READY-NOTAPE**. The status lights respond as follows:

- The Ready light turns off.
- The Activity light flashes during the unload operation.
- The Activity light turns off when the cartridge is ejected from the tape drive.

Subtopics
3.4.2.1 Resolving Unload Error Messages

3.4.2.1 Resolving Unload Error Messages

If the tape cartridge fails to eject and the LCD displays the last three error messages (**ERR 1** being the most recent), an error condition has occurred. To resolve the error condition:

1. Write down the error message shown on the LCD. This may be helpful if additional analysis is needed.

2. Press the 7208 Tape Drive power switch to turn off the power.

3. Manually reset the drive by pressing the 7208 Tape Drive power switch (to turn on the power).

   a. Wait approximately 35 seconds for the POST to complete.
   b. Wait for the **READY-TAPE** message to display.

4. Press the unload button.

5. When the cartridge ejects, refer to Appendix B, "Fault Symptom Codes and Error Recovery Procedure Numbers" in topic B.0 to resolve the error message that you wrote down in Step 1.

If the cartridge does not eject, refer to the section on manually removing a tape cartridge in the *7208 20GB External 8mm Tape Drive Model 341 Service Guide*.

3.5 Cleaning the Tape Drive

Clean the 7208 Tape Drive tape drive:

- After you use a metal particle (MP) tape (such as a 112-meter tape, a 160-meter tape, or all tapes that were compatible with previous 8mm drives)
- After a maximum of 72 hours of tape motion

You must clean the tape drive after using MP media. If you use MP media after using advanced metal-evaporated (AME) media, the LCD prompts you to clean the tape drive by displaying the message **MUST CLEAN.**

The 7208 Tape Drive counts the number of hours of tape motion and indicates when it is time to clean the tape drive by displaying the message **CLEAN SOON** and turning on the Fault status light.

To clean the tape drive, use only the IBM 8mm Cleaning Cartridge (part number 59H2898). For uninterrupted operation, have one or more spare cleaning cartridges available.

Attention: Do not operate the 7208 Tape Drive Model 341 in a poor air-quality environment. If your environment contains an excessive amount of particulates, they may permanently damage the media, the drive, or both. Contact your service representative for more information.

To load the cleaning cartridge:

1. Make sure that the 7208 Tape Drive power is on and the Power-On Self Test has completed.
2. Grasp the cleaning cartridge by the outer edges, with the window side up and the write-protect switch facing you (refer to Figure 11 in topic 3.4.1).
3. Slide the cartridge into the opening on the front of the 7208 Tape Drive until the loading mechanism pulls the cartridge into the drive and the drive door closes.

After the cleaning cartridge has been fully inserted into the 7208 Tape Drive, the remainder of the cleaning process is automatic. The 7208 Tape Drive:

1. Loads the cleaning tape into the tape drive
2. Turns on the Fault status light (if the light is off)
3. Cleans the drive by moving the cleaning tape forward for approximately two minutes (the Fault status light comes on and the message **CLEANING** displays)
4. Unloads and ejects the cleaning tape when the cleaning operation is complete
5. Indicates a successful cleaning operation by turning off the Fault status light

The cleaning cartridge can be used for a minimum of 18 cleaning operations. If you attempt to use the depleted cartridge, the 7208 Tape Drive automatically detects the error, ejects the cartridge, and displays the message **DEPLETED**. The Fault status light remains on to indicate that cleaning is still required. Replace the depleted cartridge with a new cleaning cartridge.

4.0 Chapter 4. Removing the 7208 Tape Drive

PICTURE 23

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. *(72XXD203)*

Attention: Damage as a result of improper handling may void your equipment warranty.

Subtopics
4.1 Removal Checklist

4.1 Removal Checklist

When moving the 7208 Tape Drive, perform the following steps:

Attention: Failure to perform the following steps in sequence before you add or delete a device may result in data loss or a system fault.

__ 1. If loaded, remove the tape cartridge from the drive by pressing the unload button while the 7208 Tape Drive power is **on**.

__ 2. Remove the 7208 Tape Drive from the system configuration (for instructions, refer to your system manuals).

Attention: Failure to inform the operating system before you add or delete a device may result in data loss or a system fault.

__ 3. If it is on, do a controlled shutdown of the system unit. Refer to "Step 6. Performing a System Shutdown" in topic 2.1.6.

__ 4. Turn off the power to the 7208 Tape Drive.

__ 5. Turn off the power to all external devices attached to the system.

__ 6. Turn off the power to the system unit.

__ 7. Unplug the power cable for the 7208 Tape Drive from the electrical outlet.

__ 8. Unplug the system unit power cable from the electrical outlet.

Attention: When SCSI bus cables are connected to a system unit, they must also be connected to a device. Do not leave the SCSI bus cable connected to the system if the device for that cable has been removed.

__ 9. Disconnect the SCSI bus cable from the system unit.

__ 10. Disconnect the SCSI bus cable from the 7208 Tape Drive.

__ 11. Ensure that the terminator is on the last device on the SCSI bus (see "Step 8. Installing the SCSI Terminator" in topic 2.1.8).

__ 12. Remove the 7208 Tape Drive and place it in the new location.

__ 13. Reinstall the 7208 Tape Drive (refer to Chapter 2, "Setting Up the 7208 Tape Drive" in topic 2.0).

5.0 Chapter 5. Using the Media

Observe the following guidelines for using media with the 7208 Tape Drive Model 341:

- **Attention:** Do not use video-grade cartridges, as they are hazardous to the 7208 Tape Drive and will void your warranty.

- Before using a cartridge, let it acclimate to the operating environment for as long as it has been away from the environment or for 24 hours, whichever is less.

- Use only IBM 8mm cartridges with the 7208 Tape Drive Model 341. The 7208 Tape Drive:

  - Reads from and writes to advanced metal-evaporated (AME) cartridges
  - Reads from metal particle (MP) cartridges

  To order tape cartridges, see "Ordering Tape Cartridges" in topic 5.5.

- **Attention:** Clean the 7208 Tape Drive tape drive:

  - After you use an MP tape cartridge prior to using an AME cartridge
  - Whenever you replace a worn tape
  - Whenever you replace a defective tape
  - Whenever the **CLEANING** message displays

  For more information, see "Cleaning the Tape Drive" in topic 3.5.

- Do not write to previously written software distribution tapes. Often these tapes will not support being rewritten without modifications to the cartridge. If the cartridge is modified, it is possible to cause tape jams or tape misalignment.

- Back up and then discard any tape that repeatedly produces error messages. (The error information is in the System Error Log.)

- Do not open the door that covers the tape in the data cartridge. This door protects the magnetic tape from dirt, dust, and damage.

- Do not touch the tape material. Any substance transferred to the tape by touching could cause loss of data.

- Do not operate the 7208 Tape Drive in a dusty environment.

- Do not store tape cartridges or the 7208 Tape Drive in a dusty environment.

- Store tape cartridges vertically.

Subtopics

5.1 Types of Tape Cartridges

The 7208 Tape Drive Model 341 is shipped with an AME data cartridge, an AME test cartridge, and a cleaning cartridge.

Data Cartridge

Use the AME data cartridge for saving or restoring your programs or data.

To avoid problems with loading and unloading a tape, use only one label on the tape cartridge. Place the label in location 1 or 2 as shown in Figure 12.

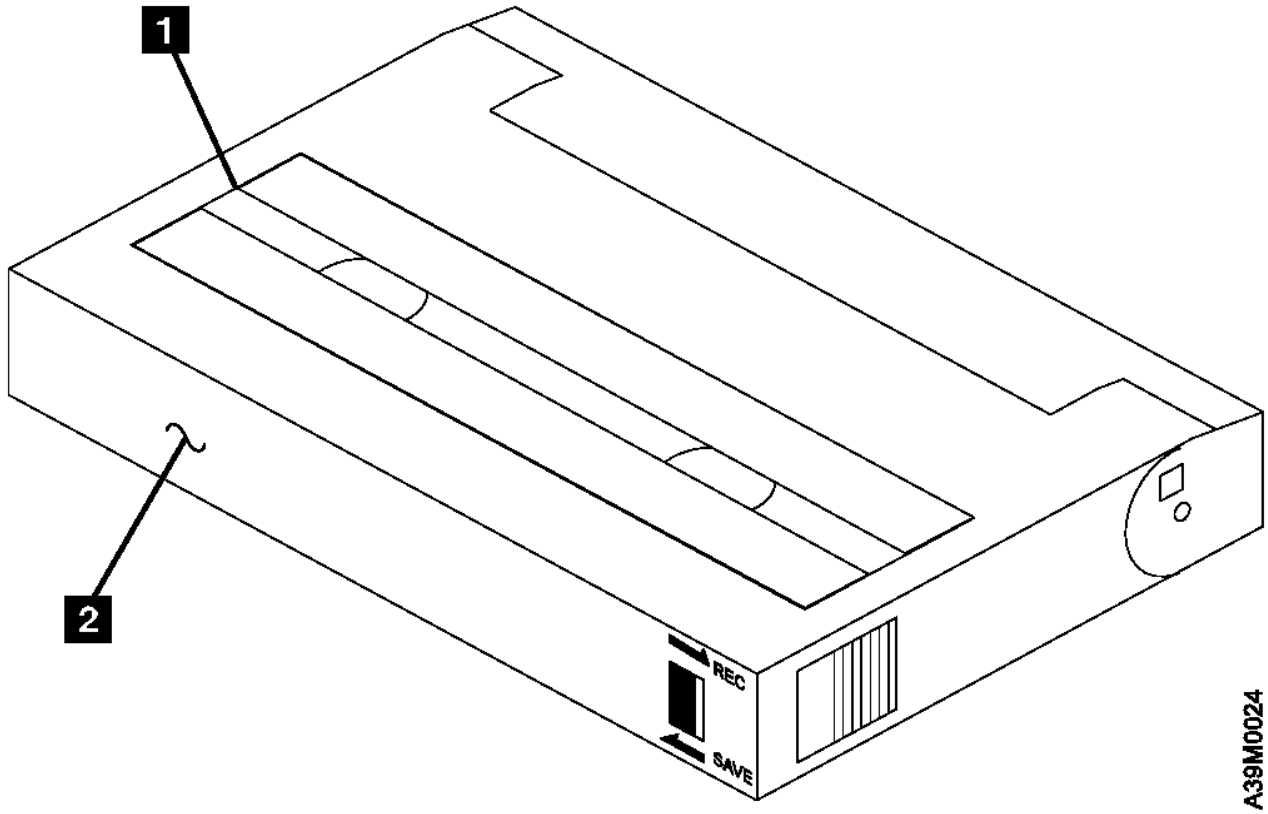

Figure 12. Placement of Label on an 8mm Data Cartridge

Test Cartridge

Reserve the specially labeled test tape cartridge to perform diagnostics on the drive. Do not use it to save or restore programs or data.

Cleaning Cartridge

Use the specially labeled cleaning cartridge to clean the 7208 Tape Drive tape drive (see "Cleaning the Tape Drive" in topic 3.5).

To order additional cartridges, refer to "Ordering Tape Cartridges" in topic 5.5.

5.2 Storage and Shipping Environments

Before using the cartridges, let them acclimate to the operating environment by placing the cartridge in the operating environment for as long as it has been away from the environment or for 24 hours, whichever is less.

Acclimation is necessary on any data cartridge exposed to a different humidity environment or to temperature changes of 11°C (20°F) or more.

The 8mm data cartridge can be stored and shipped in a variety of environments. Figure 13 provides a description of these environments.

Figure 13. Recommended Environment for 8mm Data Cartridges

Environmental Factor	**Storage**	**Shipping**
Temperature	5°C to 32°C (41° to 90°F)	-40 to 45°C (-40 to 113°F)
Relative Humidity (noncondensing)	20 to 60%	5 to 80%
Maximum Wet Bulb	26°C (79°F)	26°C (79°F)

5.3 Operating in Harsh Environments

The 7208 Tape Drive is ideally suited to streaming operations, as opposed to multiple stop-and-start, random-search tape operations. When the tape is used for frequent stop-and-start operations, it is beneficial to still have as much streaming movement as possible. This can be accomplished by assuring that any save or restore operation is the only active operation being performed by a device connected to the SCSI I/O controller.

Do not use as an archival tape any tape that has been used outside of the ranges specified in Figure 13 in topic 5.2 for an extended period of time. The magnetic and physical strength of the tape will have deteriorated as a result of its exposure to the environment. Do not store important data on such a tape; transfer the data to a newer tape for reliable archiving.

5.4 Setting the Write-Protect Switch

The position of the write-protect switch on the 8mm tape cartridge determines when you can write to the tape.

- When the switch is set to **SAVE** 1 , data cannot be written to the tape.
- When the switch is set to **REC** (Record) 2 , data can be written to and read from the tape.

Figure 14 shows the write-protect switch in the **REC** and **SAVE** positions.

An attempt to write to a data cartridge with the switch in the **SAVE** position will cause an error.

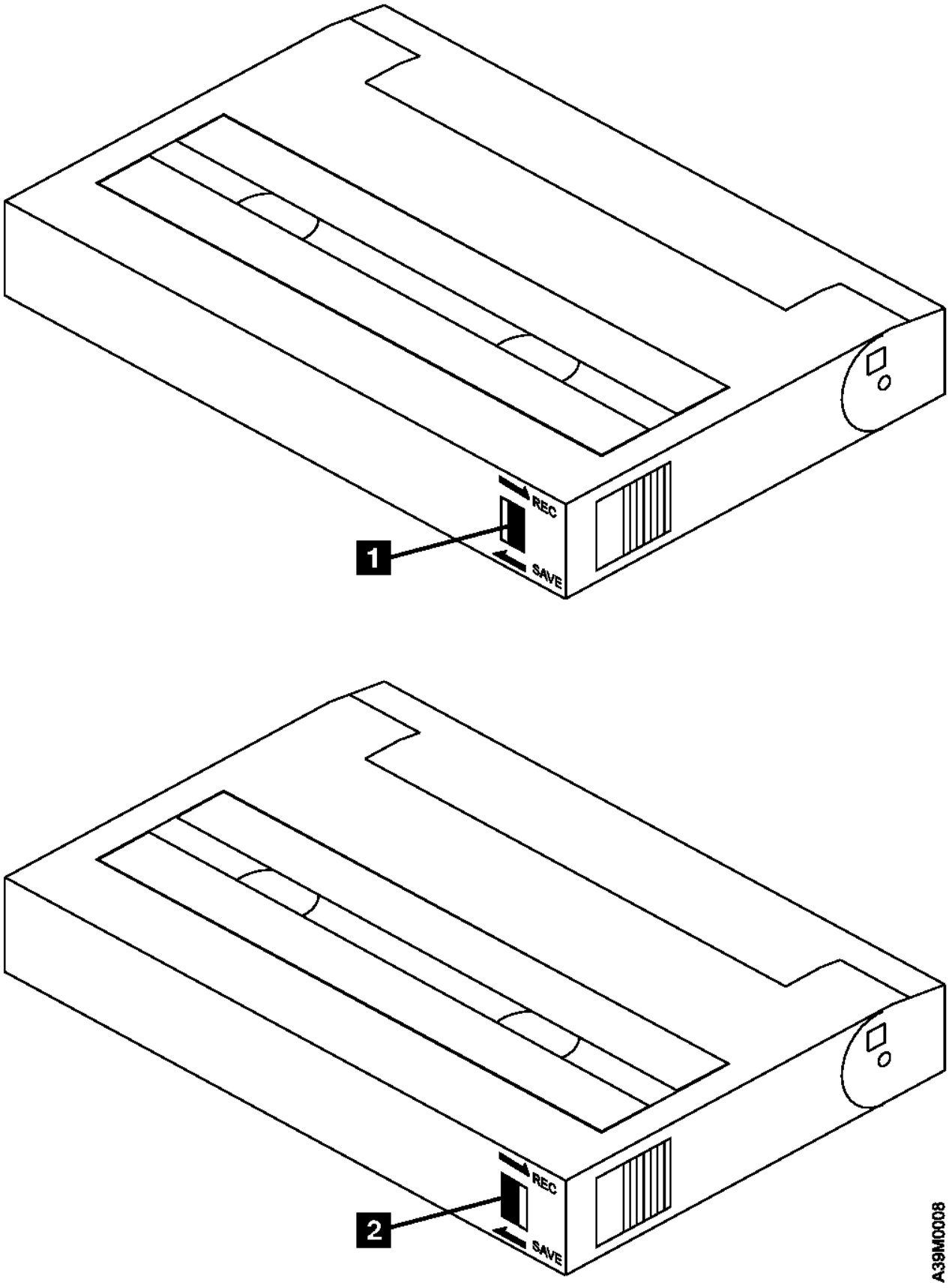

Figure 14. Setting the Write-Protect Switch

5.5 Ordering Tape Cartridges

Figure 15 lists the tape cartridges that you can order for the 7208 Tape Drive Model 341. To order cartridges in the United States and Canada, call 1-888-IBM-MEDIA. To order cartridges in other locations, contact your local provider of IBM storage products.

Figure 15. Tape Cartridges for the 7208 Tape Drive Model 341

IBM Part Number	**Type of Cartridge**	**Length**
59H2671	8mm 2.5GB AME Cartridge (short length)	22.5 m (74 ft)
59H2678	8mm 20GB AME Data Cartridge	170 m (558 ft)
59H2898	8mm Cleaning Cartridge (To be used only with 20GB drives)	--

A.0 Appendix A. Power Cables

PICTURE 26

To avoid electrical shock, a power cable with a grounded attachment plug is provided. Use only properly grounded outlets.

Power cables used in the United States and Canada are listed by Underwriter's Laboratories and certified by the Canadian Standards Association. The power cables consist of:

- Electrical cables, type SVT or SJT.
- Attachment plugs complying with National Electrical Manufacturers Association (NEMA) 5-15P, that is:

  "For 115 V operation use a UL Listed Cable Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cable a maximum of 15 feet in length and a parallel blade, grounding type attachment plug rated at 15 A, 125 V."

  "For 230 V operation in the United States use a UL Listed Cable Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cable a maximum of 15 feet in length, and a tandem blade, grounding type attachment plug rated at 15 A, 250 V."

- Appliance couplers complying with International Electrotechnical Commission (IEC) Standard 320, Sheet C13.

Power cables used in other countries consist of:

- Electrical cables, type HD21.
- Attachment plugs approved by the appropriate testing organization for the specific countries where they are used.

  "For units set at 230 V (outside of U. S.): Use a Cable Set consisting of a minimum 18 AWG cable and grounding type attachment plug rated 15 A, 250 V. The Cable Set should have the appropriate safety approvals for the country in which the equipment will be installed and marked 'HAR'."

Figure 16 lists the power cable part number, the country where the power cable can be used, and an index number to be matched with the receptacles shown in Figure 17. If your power cable does not match this information, contact your local dealer.

Figure 16. Power Cable Information

Part Number	**Country**	**Index**
1838574 Japan	Bahamas, Barbados, Bolivia, Brazil, Canada, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Netherlands Antilles, Panama, Peru, Philippines, Taiwan, Thailand, Tobago, Trinidad, U.S.A. (except Chicago), Venezuela	1
6952300 US/Canada	Bahamas, Barbados, Bermuda, Bolivia, Brazil, Canada, Cayman Islands, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Korea (South), Mexico, Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Puerto Rico, Saudi Arabia, Suriname, Taiwan, Trinidad, U.S.A. (except Chicago), Venezuela	2
6952301 6 ft Chicago	Chicago, U.S.A.	2

13F9940 Australia	Argentina, Australia, New Zealand	3
13F9979 France	Abu Dhabi, Austria, Belgium, Bosnia, Botswana, Bulgaria, Croatia, Egypt, Finland, France, Germany, Greece, Iceland, Indonesia, Korea (South), Lebanon, Luxembourg, Macau, Macedonia, Netherlands, Norway, Portugal, Saudi Arabia, Serbia, Slovenia, Spain, Sudan, Sweden, Turkey	4
13F9997 Denmark	Denmark	5
14F0015 South Africa	Bangladesh, Burma, Pakistan, South Africa, Sri Lanka	6
14F0033 United Kingdom	Bahrain, Bermuda, Brunei, Channel Islands, Cyprus, Ghana, Hong Kong, India, Iraq, Ireland, Jordan, Kenya, Kuwait, Malawi, Malaysia, Nigeria, Oman, People's Republic of China, Qatar, Sierra Leone, Singapore, Tanzania, Uganda, United Arab Emirates (Dubai), United Kingdom, Zambia	7
14F0051 Switzerland	Liechtenstein, Switzerland	8
14F0069 Italy	Chile, Ethiopia, Italy	9
14F0087 Israel	Israel	10

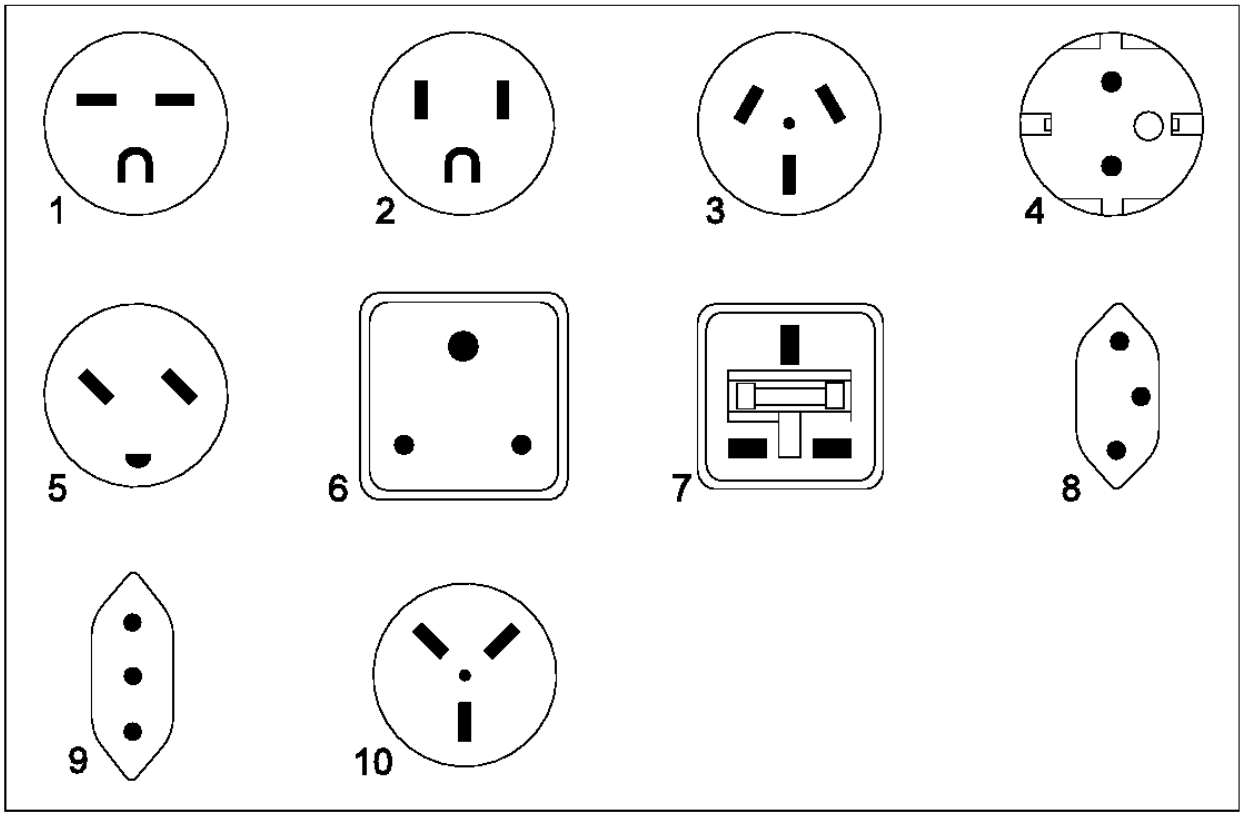

Figure 17. Types of Receptacles

B.0 Appendix B. Fault Symptom Codes and Error Recovery Procedure Numbers

Use Figure 18 to resolve error messages that appear on the LCD of the 7208 Tape Drive Model 341:

1. Determine the fault symptom code (FSC) in the error message (the first two digits in the message). For example, in error message **ERR 1: AD 58 C0**, the FSC is **AD**.

2. Locate the FSC in Figure 18 and identify the error recovery procedure (ERP) number for that FSC.

3. Locate the ERP number in Figure 19 in topic C.0, and identify the recommended error recovery procedure.

Figure 18. Fault Symptom Codes (FSC) and Error Recovery Procedure (ERP) Numbers

FSC	Description	ERP Number	Cause
02	Invalid position for WRITE	2	-
03	Tape is write protected for WRITE	5	-
04	LEOT encountered on current WRITE	10	-
05	Operation has aborted (as requested)	11	-
06	LEOT encountered on the last WRITE	10	-
08	Compression data integrity check failed	12	100%
09	Detected LEOT during READ	10	-
0A	Length mismatch on READ	15	-
0B	Uncorrectable block on READ	8,6	T = 90% D = 10%
0C	EOD encountered on READ	13	-
0D	Filemark encountered during a READ	10	-
0E	Illegal condition for READ	2	-
0F	READ issued at blank tape	4	-
10	READ operation has aborted (as requested)	11	-
11	Too many permanent READ errors, cannot sync	8,6	T = 90% D = 10%
14	PEOT or PEOP encountered on a READ or VERIFY	2,8,6	-
15	Bad filemark encountered during a READ	8,6	T = 100%
16	Medium error detected during a READ	8,6	T = 90% D = 10%
17	Hardware error during a READ	12	D = 100%
18	READ decompression failed - HW error	12	D = 100%
19	READ decompression CRC failed	12	D = 100%
1C	Unknown or incompatible format	14	T = 100%
1D	Hit setmark on READ	10	-
26	Not at legal place to WFM	2	-
27	Tape is write protected for WFM	5	-
28	LEOT encountered during WFM	10	-
31	Setmark detected on SPACE/LOCATE	10	-
32	Filemark detected during	10	-

	SPACE/LOCATE		
33	EOD encountered on SPACE/LOCATE	10	-
34	PEOT encountered on SPACE/LOCATE	8,6	-
35	PBOT encountered on SPACE/LOCATE	2	-
36	Format error during SPACE/LOCATE	8,6	T = 80% D = 20%
37	Uncorrectable block during a SPACE/LOCATE	8,6	T = 90% D = 10%
38	Medium error during SPACE/LOCATE	8,6	T = 80% D = 20%
3A	Bad filemark during SPACE (2.3GB mode only)	3	T = 100%
3B	SPACE/LOCATE has aborted (as requested)	11	-
3D	Lost in space	8,6	T = 80% D = 20%
47	Incompatible medium rejected after loading	14	-
4B	Illegal position for ERASE	2	-
4C	Tape is write protected for ERASE	5	-
4E	ERASE has aborted (as requested)	11	-
58	Hardware error during SEND DIAGNOSTIC	12	D = 100%
61	Header in wrong format when loading ucode	8,6	T = 100%
63	Control load image not valid	8,6	T = 100%
65	EEPROM load image not valid	8,6	T = 100%
66	Boot code old	8,6	T = 100%
67	Cannot program one of the memories	12	D = 100%
69	CRC in load image was not correct	8,6	T = 100%
6D	Read buffer command failed	12	D = 100%
71	Illegal position to format partition	2	-
72	Partitions are too big for tape	2	-
74	Partition format of tape failed	8,6	-
75	Partition format aborted	8,6	-
79	Failed position to a new partition	8,6	-
7A	Partition switch aborted	11	-
8C	Software hang, we are very confused	12	D = 100%
8D	Software detects a hardware problem	12	D = 100%
93	Detect PEOP	10	-
94	Write Setmark failure	6	-
95	WRITE failure after retry limit exceeded	8,6	T = 70% D = 30%
96	WFM failure after retry limit exceeded	8,6	T = 70% D = 30%
97	Write EOD failure after retry limit exceeded	8,6	T = 70% D = 30%

98	Fill error, invalid BRT	12	D = 100%
99	Fill error, buffer empty	12	D = 100%
9A	Deformatter interrupt timeout on search	12	D = 100%
9B	Overwrite (bad readback check block type)	8,6	D = 50% T = 50%
9C	Formatter interrupt timeout on WRITE	12	D = 100%
9D	Permanent write error, write recovery fail	8,6	T = 70% D = 30%
9E	Permanent write error rewrite threshold	8,6	T = 70% D = 30%
9F	Servo zone readback check failure	8,6	T = 70% D = 30%
A1	Head sync error during WRITE	8,6	D = 90% T = 10%
A2	Underrun error during WRITE	12	D = 100%
A3	IPORT write buffer parity error	12	D = 100%
A4	DPORT WRITE parity error	12	D = 100%
A5	PPORT WRITE parity error	12	D = 100%
A6	IPORT READ parity error	12	D = 100%
A7	DPORT READ parity error	12	D = 100%
A8	PPORT READ parity error	12	D = 100%
AC	Servo software error	12	D = 100%
AD	Servo hardware error	8,6	T = 90% D = 10%
AE	Not tracking	8,6	T = 60% D = 40%
AF	EOT encountered during a motion command	2	D = 100%
B0	Not tracking - loss of PLL	8,6	T = 60% D = 40%
B3	LBOT WRITE failure	8,6	T = 70% D = 30%
B4	LBOT ATM write failure	8,6	T = 70% D = 30%
B5	Read manager could not read LBOT	8,6	T = 70% D = 30%
B6	EOT encountered during buffer flush	2	-
C0	Power-on reset occurred	3	-
C1	Tape may have been changed	3	-
C2	Mode Select parameters have changed	3	-
C3	New ucode was loaded	3	-
C4	Operator requested media removal	11	-
C5	Incompatible media was rejected	14	-
C6	Not ready, cause not known	7.3	-
C7	Not ready, in process of becoming ready	3	-

C8	A backup positioning command is required	2	-
C9	Command requires a tape and none is loaded	7.3	-
CA	Log Threshold met	3	-
CB	Log Parameter changed	3	-
CC	Parameter List Length error in CDB	2	-
CD	Illegal Operation Code	2	-
CE	Invalid field or reserved bits set in CDB	2	-
CF	This LUN is not supported	2	-
D0	Invalid field in Parameter List (Mode Data)	2	-
D1	Illegal bit set in identify message	2	-
D2	Media removal is prevented	2	-
D3	Command has mode mismatch (variable/fixed)	2	-
D4	Illegal Transfer Length in CDB	2	-
D6	Tried to change Mode Parms and not at LBOT	2	-
D7	Can't read medium incompatible format	14	-
D8	Overlapped commands attempted bad ITL nexus	2	-
DA	Illegal bits set in ID message	2	-
DB	Cannot write to tape not AME	14	T = 100%
DC	Rounding has occurred	10	-
DD	Not ready - head synch tape	7	-
DE	Density not supported	2	-
E0	Aborted in CDB phase, parity or other error	12	-
E1	Aborted prior to Data phase, bad message	12	-
E2	Aborted in Data phase, init detected error	12	-
E3	Aborted in Data phase, bad message	12	-
E4	Aborted after Data phase, bad message	12	-
E5	Aborted after Data phase, other error	12	-
E6	ABORT caused by SCSI Bus Parity Error	12	-
E7	ABORT sent by initiator has been completed	12	-
E8	Drive needs cleaning	1	-
EA	Invalid mode (2.3GB) for data compression	2	-
EB	Download in progress	3	-
EC	Log parameter overflow (recovered error)	10	-

EE	Service required	12	D = 100%
FA	Serial number invalid or blank	12	D = 100%
FC	Head sync value in EEPROM out of range	12	D = 100%
FD	EEPROM contains meaningless information	12	D = 100%

Note: In the Cause column, T = Tape and D = Drive

C.0 Appendix C. Error Recovery Procedures

Use Figure 19 to resolve the error messages that appear on the LCD of the 7208 Tape Drive Model 341:

1. Determine the fault symptom code (FSC) in the error message. For example, in error message **ERR 1: AD 58 C0**, the FSC is **AD**.

2. Locate the FSC in Figure 18 in topic B.0 and identify the error recovery procedure (ERP) number for that FSC.

3. Locate the ERP number in Figure 19, and identify the recommended error recovery procedure. If two or more ERP codes are listed for the fault symptom code in Figure 18 in topic B.0, perform the action for the first code, then perform the action for the second code, and so on.

Figure 19. Error Recovery Procedures

ERP Numbe	**Recommended Error Recovery Procedure**
1	Warning Message, clean drive.
2	Application program error or user error using application. Retry operation. If this problem continues, notify application provider.
3	Reissue the failed command or command sequence.
4	Application attempted to read a blank tape. Either write to the tape or replace the tape with a tape containing data.
5	Tape is write protected and a write or erase was attempted. Either write-enable the tape or insert a write-enabled tape.
6	Perform the following until the operation can be completed: 1. Clean the drive 2. Retry the operation 3. Clean the drive 4. Replace the tape cartridge 5. If the error persists and there is an error in the system error log, call your service representative.
7	Insert a data cartridge into the tape drive.
8	Perform one of the following actions: □ Reset the tape drive by holding down the unload button until the **RESET** message appears; then release the button. □ Send a SCSI bus reset (a hard reset).
9	Clean the tape drive and repeat the operation.
10	No action is necessary.
11	User has pushed the unload button. No action is required; the tape drive performed the requested operation.
12	The tape drive requires maintenance.
13	The tape drive has encountered the end of the media on a read or write operation. Mount the next tape and continue the tape operation.
14	The media type is not supported. Clean the drive and retry the operation with supported media.
15	The block size requested on the read operation does not match the block size that the tape was written at. Change the application's block size.

BACK_1 Communicating Your Comments to IBM
7208 20GB External 8mm Tape Drive Model 341 Setup and Operator Guide

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