

# DEC 3000 Model 800/800S AXP

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## Upgrade Information

Order Number: EK-D38AX-UP. B01

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# 1

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## Kit Contents and Roadmap

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### Overview

#### Chapter Overview

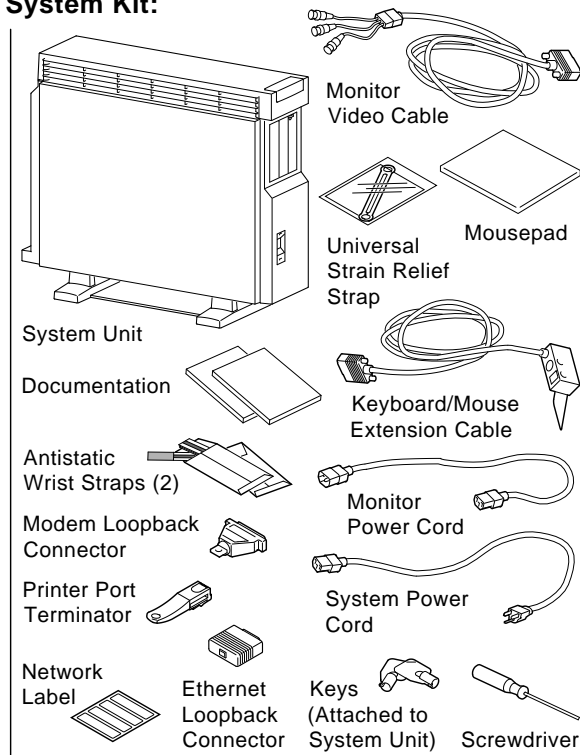
This chapter contains the following topics:

- Upgrade kit contents
- Using the Manual

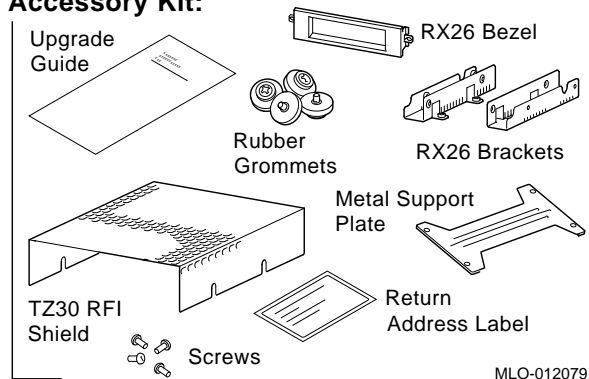
#### Purpose of Manual

The purpose of this guide is to tell customers and Digital Services which options can be removed from the current system and used, either internally or externally, in the DEC 3000 Model 800/800S. Step-by-step instructions are provided for removing the options.

**Figure 1-1 Upgrade Kit Contents System Kit:**



**Accessory Kit:**



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**Warning**

Attach an antistatic wrist strap before you begin this upgrade. As you remove options from your system, place them on an antistatic mat.

Static discharge can cause irreparable damage to options modules.

**Mounting Bracket**

If you are upgrading a disk drive from your existing system to a DEC 3000 system, you must attach a mounting bracket provided in the accessory kit to the drive before installing it into your new system.

---

**What to Read Next**
**Using This Manual**

Use the following table to determine which upgrade procedure to use.

<b>If you have this workstation...</b>	<b>Go to...</b>
DEC 3000-500/500S/500X AXP	Chapter 4
VAXstation 4000-90	Chapter 5
DECstation 5000-200/240/260	Chapter 7
Other systems	Chapter 12

## What to Read Next

<b>If you have this server...</b>	<b>Go to...</b>
MicroVAX 3100-30	Chapter 2
MicroVAX 3100-40/80/90, VAX 4000-100/100A	Chapter 3
DECsystem 5000-133/150	Chapter 6
DECsystem 5000-200/240/260	Chapter 7
DECsystem 3100	Chapter 8
DECsystem 5100	Chapter 9
DECsystem 5500	Chapter 10
DECsystem 5900	Chapter 11
Other systems	Chapter 12

# 2

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## Upgrading a MicroVAX 3100 Model 30

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

The options you can install in your DEC 3000 Model 800S are listed in the following tables:

Option	Description	Comment
Internal or External Disks		
RZ23L	121 MB	
RZ24	209 MB	
RZ24L	245 MB	
RZ25	426 MB	
RZ25L	500 MB	
RZ26	1.05 GB	

## Options You Can Upgrade

Option	Description	Comment
<b>Internal or External Removable Drives</b>		
RRD42	600 MB CD-ROM	
TZK10	525 MB QIC tape	
TZ30	95 MB tape	
TLZ06	4.0 GB DAT tape	

## External Options

The options that are supported externally on your DEC 3000 Model 800S are listed in the following tables:

Option	Description	Comment
<b>External Disks</b>		
RZ55	332 MB	
RZ56	665 MB	
RZ57	1.0 GB	Requires Firmware update 6000
RZ58	1.3 GB	
RZ74	3.6 GB	
<b>External Removable Drives</b>		
TLZ04	1.2 GB DAT tape	
TZ85	2.6 GB cartridge tape	
RX26	2.8 MB floppy	
TZ86	6.0 GB tape	
TSZ07	SCSI magnetic tape	
<b>Expansion Boxes</b>		
SZ12	Desktop	
BA350	Deskside	



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## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 AXP system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To determine the SCSI ID settings on your drives:

1. Shut down your software following the instructions in your software documentation.
2. Enter the `show config` command.

A screen similar to the following appears:

```
>>> show config

DEVNBR  DEVNAM      INFO
-----
1        NVR         OK
3        DZ         OK
4        CACHE     OK
5        MEM         OK
          16MB = SY=8MB, S0/1=8MB, S2/3=0MB, S4/5= 0MB
6        FPU         OK
7        IT         OK
8        SYS         OK
9        NI         OK
10       SCSI      OK
          3-RZ24      6-INITR
```

This information shows an RZ24 drive set to SCSI ID 3.

Write down your system drives and SCSI ID settings here. You will need them for future use.

### Step 2: Shut Down System

Turn off the system unit by pressing 0 on the On/Off switch on the back of the system unit.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

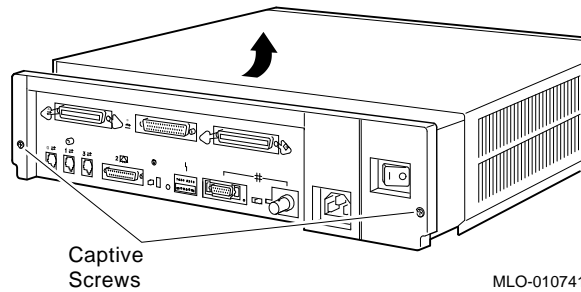
## Upgrade Procedure

### Step 3: Disconnect Cables

Disconnect all the cables from the back of the system unit. Disconnect the power cord from the wall outlet and then from the system unit.

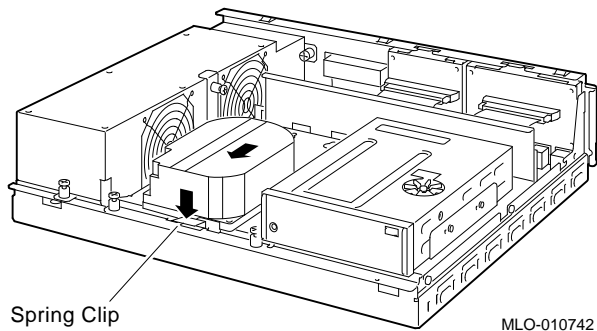
### Step 4: Remove System Cover

1. Loosen the two captive screws on the back of the system unit. These screws can be loosened but not removed.
2. Slide the cover forward and lift it up from the system unit. Set the cover aside.



**Step 5:  
Remove Fixed  
Disk Drives**

1. Press and hold the spring clip that locks the disk drive in position.
2. Refer to the figure, and push the disk drive towards the spring clip until the rubber grommets on the bottom of the disk drive release from the cutouts in the drive mounting shelf.



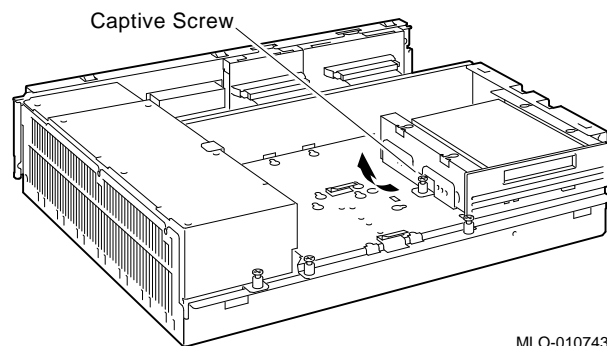
3. Lift the disk drive up from the drive mounting shelf and release the spring clip.
4. Disconnect the SCSI and power cables from the back of the drive.
5. Remove the drive mounting bracket by removing the screws that secure the mounting bracket to the drive.
6. Set the drive aside on an antistatic mat.

## Upgrade Procedure

### Step 6: Remove Removable-Media Drive

Follow these steps to remove a removable-media drive from the drive shelf:

1. Loosen the captive screw that secures the drive mounting bracket to the drive shelf.



MLO-010743

2. Lift the left side of the drive until the tabs on the right side clear the cutouts in the drive shelf.
3. Disconnect the SCSI and power cables from the back of the drive.
4. Remove the drive mounting bracket by removing the screws that secure the mounting bracket to the drive.
5. Set the drive aside on an antistatic mat.

### Step 7: Set the SCSI IDs on the Drives

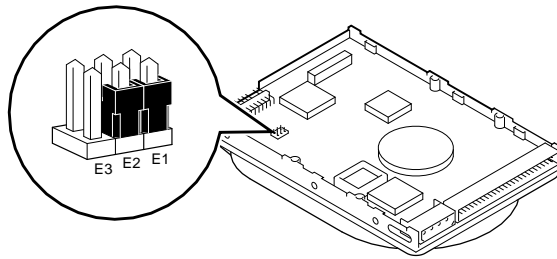
If your DEC 3000 AXP system has a factory-installed disk drive, it is set to SCSI ID 3. Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is also set to SCSI ID 3, change that setting.

Settings not shown here are described in the *DEC 3000 Model 800/800S AXP Options Guide* or in the option documentation.

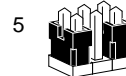
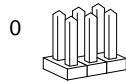
The following illustrate the SCSI ID settings for an RZ23L and an RZ24 drive.

## Upgrade Procedure

RZ23L Drive:



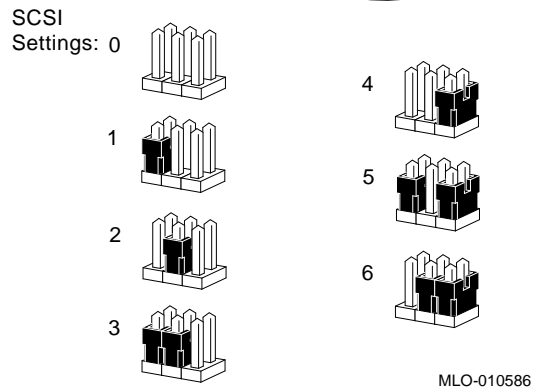
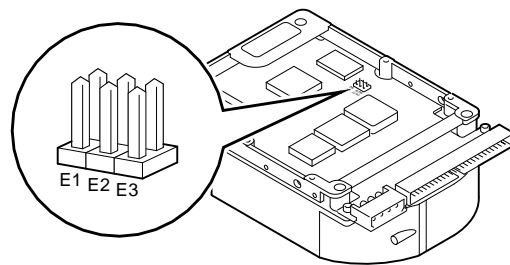
SCSI  
Settings: 0



MLO-010587

## Upgrade Procedure

### RZ24 Drive:



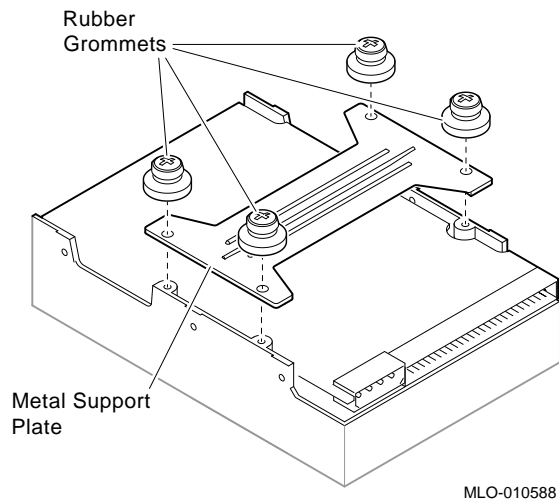
MLO-010586

### Step 8: Install New Mounting Bracket

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.

## Upgrade Procedure



### Step 9: Complete the Upgrade

1. Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.
2. Update the customer service contract to the DEC 3000 Model 800S AXP system.

### Step 10: Return Your MicroVAX System to Digital

Return your MicroVAX system and any devices that are not upgradeable to Digital.

1. Pack the MicroVAX system and devices securely in packing material.
2. Attach the return address label that was in your upgrade kit.





# 3

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## Upgrading a MicroVAX 3100 Model 40/80/90, VAX 4000 Model 100/100A

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

The following options can be removed from your MicroVAX 3100 Model 40/80/90 or VAX 4000 Model 100/100A and used with the DEC 3000 AXP system:

Option	Description	Comment
<b>Internal or External Disks</b>		
RZ23L	121 MB	MicroVAX 3100 only
RZ24	209 MB	MicroVAX 3100 only
RZ24L	245 MB	MicroVAX 3100 only
RZ25	426 MB	MicroVAX 3100 only

## Options You Can Upgrade

Option	Description	Comment
<b>Internal or External Disks</b>		
RZ25L	500 MB	MicroVAX 3100 only
RZ26	1.05 GB	MicroVAX 3100 only
<b>Internal or External Removable Drives</b>		
RRD42	600 MB CD-ROM	
TZK10	525 MB QIC tape	
TZ30	95 MB tape	
TLZ06	4.0 GB DAT tape	

## External Options

The external options that you can move to the DEC 3000 Model 800S are listed in the following tables:

<b>External Disks</b>		
RZ55	332 MB	MicroVAX 3100 only
RZ56	665 MB	MicroVAX 3100 only
RZ57	1.0 GB	MicroVAX 3100 only Requires Firmware update 6000
RZ58	1.3 GB	MicroVAX 3100 only
RZ74	3.6 GB	MicroVAX 3100 only
<b>External Removable Drives</b>		
TLZ04	1.2 GB DAT tape	MicroVAX 3100 only
TZ85	2.6 GB cartridge tape	
RX26	2.8 MB floppy	
TZ86	6.0 GB tape	MicroVAX 3100 only
TSZ07	SCSI magnetic tape	
RWZ01	Read/write optical drive	VAX 4000 only
TSZ05	1600 BPI magnetic tape drive	VAX 4000 only

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**Expansion Boxes**


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SZ12	Desktop	
BA350	Deskside	MicroVAX 3100 only

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 Model 800S AXP system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your system:

1. Shut down your software following the instructions in your software documentation.
2. Enter `SHOW CONFIG` at the console prompt (`>>>`). A screen similar to the following appears:

```
>>> SHOW CONFIG
DEVNBR  DEVNAM      INFO
-----
1       NVR          OK
3       DZ           OK
4       CACHE       OK
5       MEM         OK
        16MB = SY=8MB, S0/1=8MB, SE/3=0MB, S4/5= 0MB
6       FPU        OK
7       IT         OK
8       SYS        OK
9       NI         OK
10      SCSI       OK
        3-RZ24    6-INITR
```

This display shows an RZ24 drive set to SCSI ID 3.

Write down your system drives and SCSI ID settings here. You will need them for future use.

## Upgrade Procedure

### Step 2: Shut Down System

Turn off the system unit by pressing 0 on the On/Off switch on the rear of the system unit.

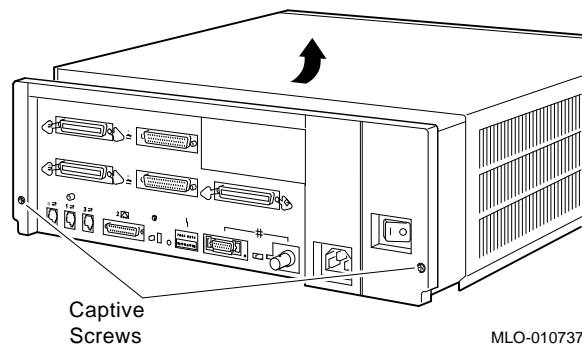
**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

### Step 3: Disconnect Cables

Disconnect all the cables from the back of the system unit. Disconnect the power cord from the wall outlet and then from the system unit.

### Step 4: Remove System Cover

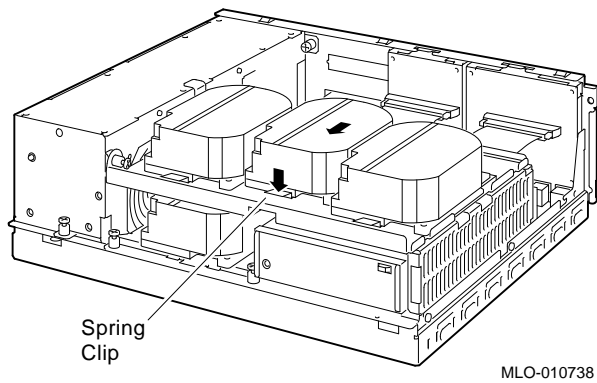
1. Loosen the two captive screws on the back of the system unit. These screws can be loosened but not removed.
2. Slide the cover forward and lift it up from the system unit. Set the cover aside.



### Step 5: Remove Fixed Disk Drives

1. Press and hold the spring clip that locks the disk drive in position.
2. Refer to the figure. Push the disk drive towards the spring clip until the rubber grommets on the bottom of the disk drive release from the cutouts in the drive mounting shelf.

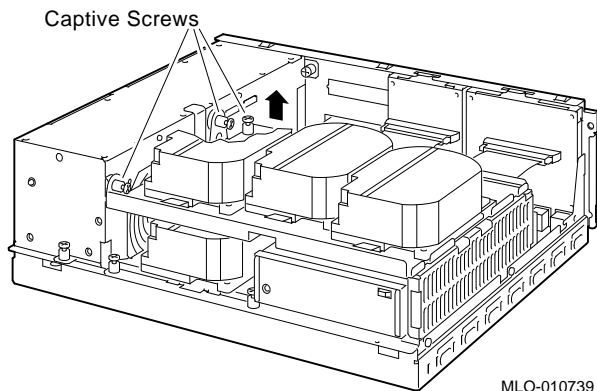
## Upgrade Procedure



3. Lift the disk drive up from the drive mounting shelf and release the spring clip.
4. Disconnect the SCSI and power cables from the back of the drive.
5. Remove the drive mounting bracket by removing the screws that secure the mounting bracket to the drive.
6. Set the drive aside on an antistatic mat.

### Step 6: Remove the Upper Drive Shelf

1. Disconnect the power cable from the power supply. Remove the power cable from the enclosure.
2. Refer to the figure. Loosen the three captive screws that hold the drive shelf in place.



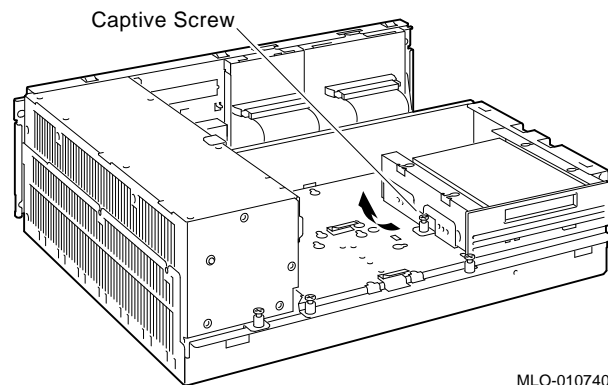
## Upgrade Procedure

3. Lift the left side of the shelf and pull the shelf to the left until the tabs on the right clear the cutouts in the lower drive shelf.
4. Set the drive shelf aside.

### Step 7: Remove Removable-Media Drive

Follow these steps to remove a removable-media drive from the lower drive shelf:

1. Loosen the captive screw that secures the drive mounting bracket to the drive shelf.



MLO-010740

2. Lift the left side of the drive until the tabs on the right side clear the cutouts in the drive shelf.
3. Disconnect the SCSI and power cables from the back of the drive.
4. Remove the drive mounting bracket by removing the screws that secure the mounting bracket to the drive.
5. Set the drive aside on an antistatic mat.

### Step 8: Set the SCSI IDs on the Drives

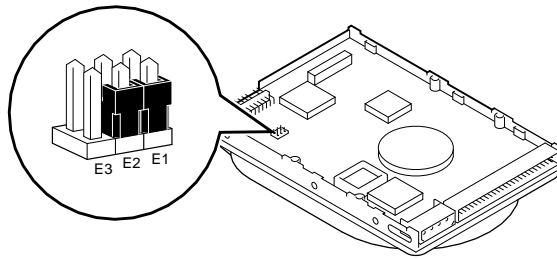
If your DEC 3000 AXP system has a factory-installed disk drive, it is set to SCSI ID 3. Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is also set to SCSI ID 3, change that setting.

Settings not shown here are described in the *DEC 3000 Model 800/800S Options Guide* or in the option documentation.

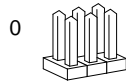
The following illustrate the SCSI ID settings for an RZ23L and an RZ24 drive.

## Upgrade Procedure

### RZ23L Drive:



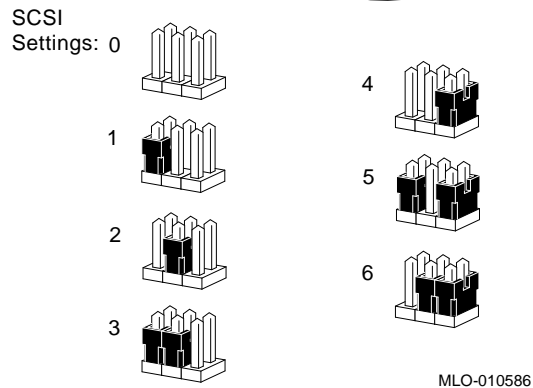
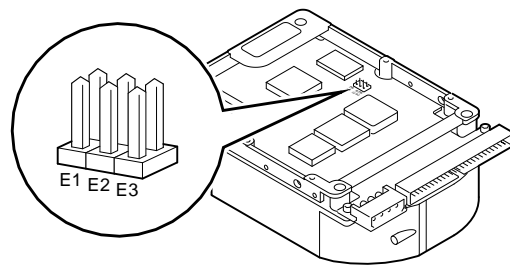
SCSI  
Settings: 0



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## Upgrade Procedure

### RZ24 Drive:



MLO-010586

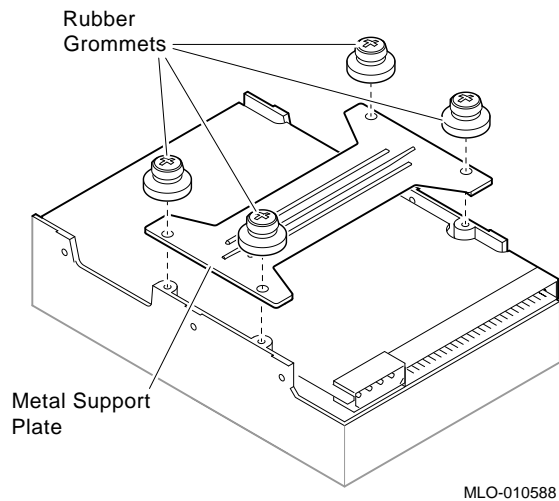
### Step 9: Install New Mounting Bracket

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.



## Upgrade Procedure



### Step 10: Complete the Upgrade

1. Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.
2. Update the customer service contract to the DEC 3000 Model 800S AXP system.

### Step 11: Return Your MicroVAX System to Digital

Return your MicroVAX system and any devices that are not upgradeable to Digital.

1. Pack the MicroVAX system and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.



# 4

---

## Upgrading a DEC 3000 Model 500/500S/500X AXP

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Removing modules
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal Options

The internal options you can install in your DEC 3000 Model 800/800S are listed in the following tables:

Fixed Disk Drives	Comment
RZ23L-EJ	121-MB drive
RZ24-EJ	209-MB drive
RZ24L-EJ	245-MB drive supported as working second disk only

## Options You Can Upgrade

<b>Fixed Disk Drives</b>	<b>Comment</b>
RZ25-EJ	426-MB drive (minimum system disk support)
RZ25L-EJ	535-MB drive (OpenVMS only)
RZ26-EJ	1.05-GB drive
RZ28-EJ	2.1-GB drive
<b>Removable-Media Drives</b>	<b>Comment</b>
TLZ06-MF	4-GB 4mm Dat tape drive
RX26-FT	2.8-MB diskette drive
TZK10-MF	QIC tape drive
TZK11-MF	QIC tape drive
RRD42-HM	600-MB CD-ROM
RX23	1.4-MB diskette drive (OSF/1 AXP only)
<b>Memory</b>	<b>Comment</b>
MS15-CA	32-MB ECC memory
MS15-DA	64-MB ECC memory
MS15-EA	128-MB ECC memory
MS15-FA	256-MB ECC memory

## Options You Can Upgrade

<b>TURBOchannel Graphics Options</b>	<b>Comment</b>
PMAGB-BE	HX 2D accelerator, 72-Hz (for multi-head)
PMAGB-DB	PXG+, 8-plane 3D accelerator, 72-Hz
PMAGB-EB	PXG+, 24-plane, Z buffer 3D accelerator, 72-Hz
PMAGB-FB	PXG Turbo, 24-plane, Z buffer 3D accelerator, 72-Hz
PMAG-GB	PXG+ 8- to 24-plane upgrade
PMAG-HA	PXG+ 24-bit Z buffer upgrade
PMAGB-JB	TX, 24-plane frame buffer, 72-Hz (OSF/1 AXP only)
PEXGA-AA	Denali P310 series graphics
PEXGA-BA	Denali P510 series graphics
PEXGA-CA	Denali P620 series graphics
AV300-AA	JV2 Multimedia
<b>Other TURBOchannel Options</b>	<b>Comment</b>
PMAZC-AA	Dual SCSI option card (10-MB/sec SCSI)
PMAZB-AA	Dual SCSI option card (5-MB/sec SCSI)
DEFTA-FA	DEC FDDI controller 700 (fiber-optic)
DJ-30APS-AA	Prestoserve option card (OSF/1 AXP only)

## Options You Can Upgrade

### External Options

External options that you can move to the DEC 3000 Model 800/800S are listed in the following tables:

Expansion Boxes	Comment
BA350-KA	StorageWorks deskside expansion unit, includes BA350-SA basic shelf, BA35X-HA universal ac power supply, pedestal mounting kit, 120-V power cord
BA353-AA	StorageWorks desktop expansion unit
BA353-AF	BA353 with RRD42 and two empty 3.5-inch half-height slots
BA353-AH	BA353 with TZ30 and two empty 3.5-inch half-height slots
SZ03	Single drive expansion box
SZ12	Desktop expansion box
SZ16	Desktop expansion box

SZ Expansion Box Supported Drives	Comment
RZ55	332-MB disk
RZ56	665-MB disk
RZ58	1.38-GB disk
RZ73	2.0-GB disk
TLZ04-MF	1.2-GB Dat tape drive

## Options You Can Upgrade

<b>BA350 and BA353 Supported Drives</b>	<b>Comment</b>
TLZ06-VA	3.5-inch 4-GB 4 mm DAT
TZK10-VA	5.25-inch 525-MB QIC tape (BA350 only)
RRD42-VB	5.25-inch 600-MB CD-ROM (BA350 only)
RRD42-VU	5.25-inch 600-MB CD-ROM (BA350 only)
RZ25-VA	3.5-inch 426-MB disk
RZ26-VA	3.5-inch 1.05-GB disk
RZ28-VA	3.5-inch 2.1-GB disk (BA350 only)
RZ25L-VA	3.5-inch 535-MB disk (OpenVMS only)
RZ73-VA	5.25-inch full-height 2.0-GB disk (BA350 only)
TZK11-VA	5.25-inch 2.0-GB QIC tape (BA350 only)
TZ86-VA	5.25-inch 6.0-GB cartridge tape
<b>External Table-top Drives</b>	<b>Comment</b>
RRD42-FA	600 MB CD-ROM
TLZ06-FA	4.0-GB tape drive
RWZ01-AA	Read/Write optical drive (OpenVMS only)
TZ85-TA	2.6-GB 5.25-inch cartridge tape drive
TZ86-TA	6.0-GB 5.25-inch tape drive
SZ100-AA	18-GB TZ85 loader (OpenVMS only)
SZ106-AA	42-GB TZ86 loader (OpenVMS only)
TKZ08-AA	2.2-GB 5.25-inch 8mm cartridge tape (OSF/1 AXP only)

## Options You Can Upgrade

Monitors	Comment
VRC16-HA/H4	16-inch color, 1024x768, 1280x1024, 72-Hz
VRM17-HA/H4	17-inch monochrome, 1280x1024, 72-Hz
VR319-DA/D4	19-inch monochrome, 1280x1024, 72-Hz
VR320-CA	19-inch color, 1280x1024, 66/72-Hz Appropriate 66-Hz graphics option required
VR320-DA	19-inch color, 1280x1024, 66/72-Hz
VRT16-HA/H4	16-inch color (Trinitron), 1280x1024, 66/72-Hz
VRT19-HA/H4	19-inch color (Trinitron), 1280x1024, 66/72-Hz

## Other Options

Other options that you can move to the DEC 3000 Model 800/800S are listed in the following tables:

Input Devices	Comment
VSXXX-AA/FA	Mouse
VSXXX-GA	Mouse
VSXXX-AB	Graphics tablet
VSXXX-JA	Audio headset
DECXM-AA	ThinWire Ethernet adapter
LK401-**	Keyboard
LK421-**	UNIX keyboard
VSX10-AA/A3	Combination lighted programmable function keyboard and programmable function dials package, 120/240V DEC Open3D required for software support
VSX20-AA/A3	Lighted programmable function keyboard package, 120/240V DEC Open3D required for software support



## Options You Can Upgrade

<b>Input Devices</b>	<b>Comment</b>
VSX30-AA/A3	Programmable function dials package, 120/240V DEC Open3D required for software support

---

## Preparing Your System

### Back Up Your Files

If files are stored on a system disk, back them up following the instructions in your software documentation.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

### Shut Down Software

The procedure for shutting down your software depends on whether your system is networked.

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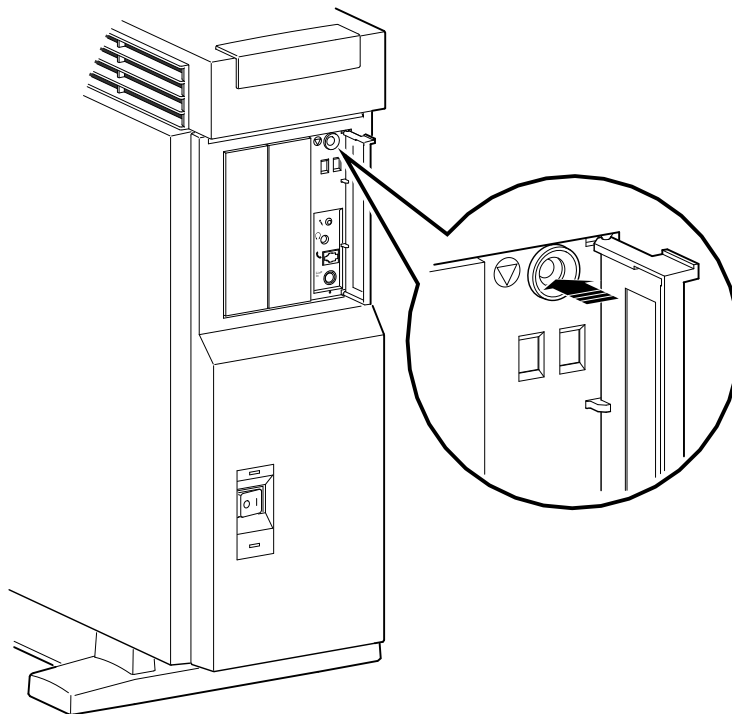
<b>If...</b>	<b>See your...</b>
Your system is networked, or part of a cluster	System manager
Your system is <i>Not</i> networked, not part of a cluster	Software documentation
You are not sure whether your system is networked	System manager

---

**Press the Halt Button**

If you are not already in console mode (at the >>> prompt) after shutting down the software, put the system into console mode by pressing the halt button. The halt button is behind the door, as shown in Figure 4-1. The console prompt (>>>) should appear on the screen.

**Figure 4-1 Halt Button**



MLO-007497

## Preparing Your System

### show device Display

Enter the show device command to display the SCSI address for each drive. You should get a display similar to what is shown in Figure 4-2.

**Figure 4-2 The show device Display**

```
>>> show device

BOOTDEV      ADDR      DEVTYPE    NUMBYTES   RM/FX  WP  DEVNAM  REV
-----      -
ESA0         08-00-2B-1D-1E-EF , THICK
DKA0         A/0/0     DISK       1.05MB     FX      RZ26   T368
DKA100      A/1/0     DISK       426.25MB   FX      RZ25   0700
DKA200      A/2/0     DISK       426.25MB   FX      RZ25   0700
DKA300      A/3/0     DISK       426.25MB   FX      RZ25   0700
DKA400      A/4/0     RODISK     .....     RM      WP  RRD42   4.3d
DKA500      A/5/0     DISK       .....     RM      RX26   0068
..HostID..  A/7       INITR
..HostID..  B/7       INITR

>>>
```

### How to Read the show device Display

You should see the SCSI address for each drive in the ADDR column, as shown in Figure 4-2. The drive model is shown in the DEVNAM column. In this example, A/3/0 indicates an address of 3 on the SCSI-A (internal device) bus for an RZ25 drive.

### What You Need to Do

Record the information in the ADDR and DEVNAM columns for later reference. After installing options in the Model 800/800S system, you can compare the new system configuration with the previous one to make sure that all drives are present and functioning correctly.

### Shut Down the Hardware

Turn off the equipment in the following order:

1. System unit
2. Expansion boxes
3. Printer and modem
4. Monitor (Note that turning off the system unit does *not* automatically turn off the monitor.)

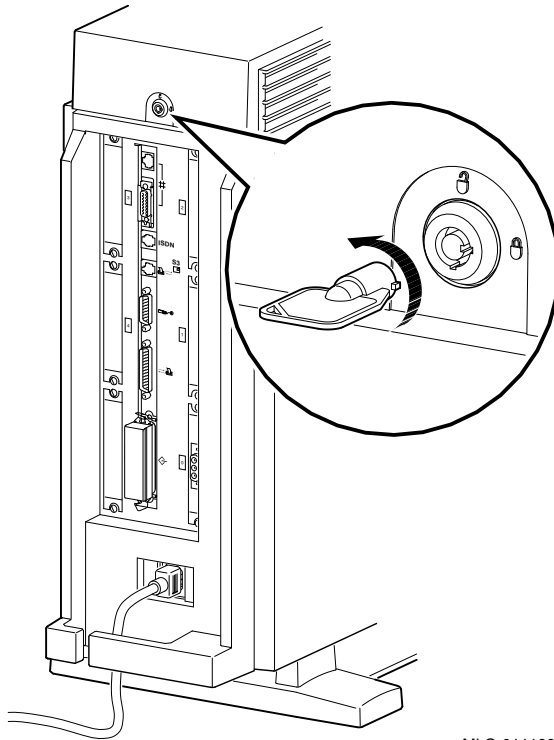
---

## Upgrade Procedure

### Step 1: Unlock Cover

Unlock the system cover, as shown in Figure 4-3.

**Figure 4-3 Unlocking the System Cover**



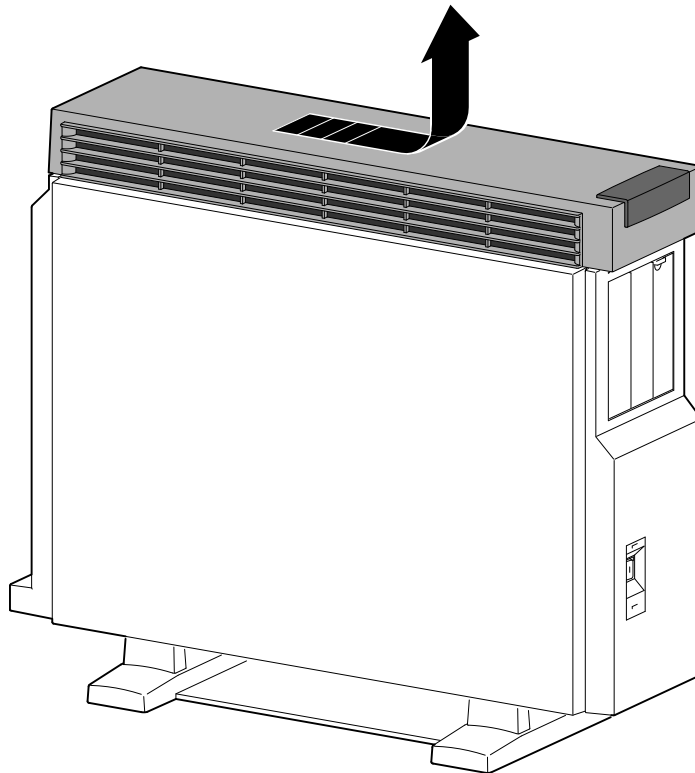
MLO-011186

Upgrade Procedure

**Step 2:  
Remove Cover**

Remove the system cover by sliding it forward and lifting it off, as shown in Figure 4-4. Note that the cover must be removed before you can remove the front panel or either side panel.

**Figure 4-4 Removing the System Cover**

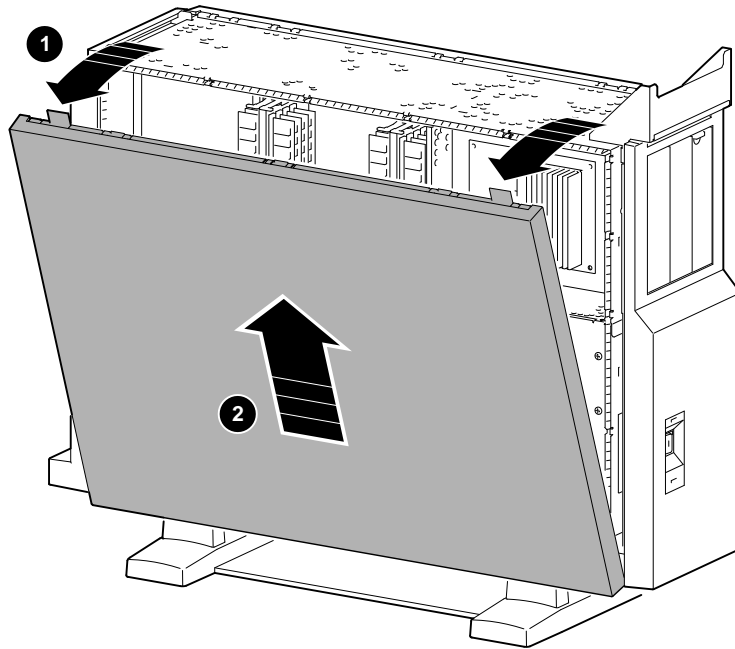


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**Step 3:  
Remove Left  
Panel**

Remove the left side panel by pulling the tabs on the top edge away ❶ and lifting the bottom edge out of the track ❷, as shown in Figure 4-5. Do *not* pull on the plastic part of the panel.

**Figure 4-5 Removing the Left Side Panel**



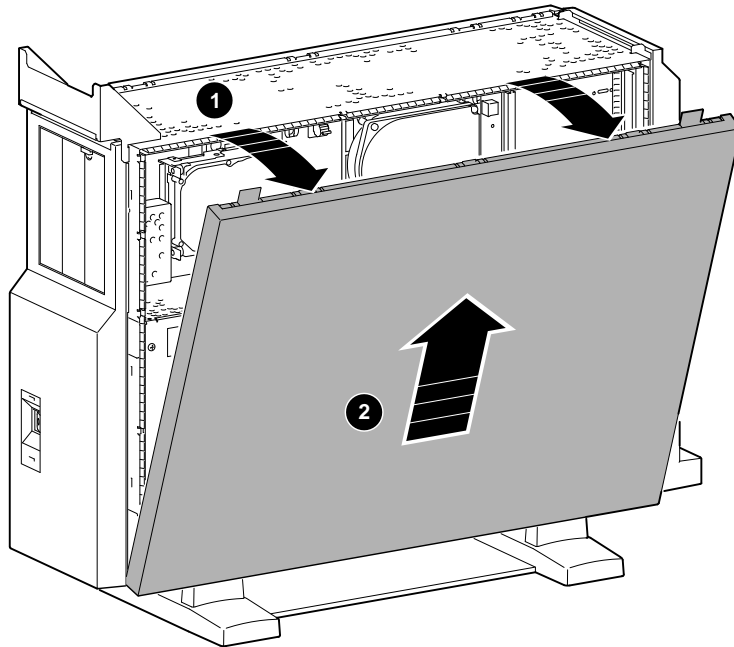
MLO-011187

## Upgrade Procedure

### Step 4: Remove Right Panel

Remove the right side panel by pulling the tabs on the top edge away ❶ and lifting the bottom edge out of the track ❷, as shown in Figure 4-6. Do *not* pull on the plastic part of the panel.

Figure 4-6 Removing the Right Side Panel



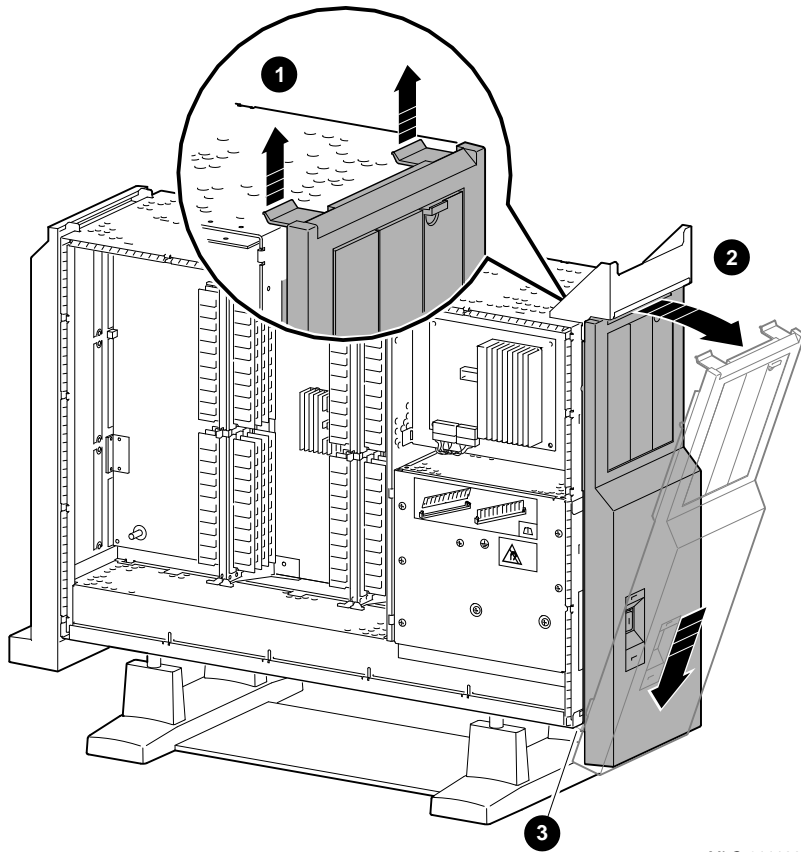
MLO-007505



**Step 5:  
Remove Front  
Panel**

Remove the front panel by releasing the catches at the top **1**. Pull the panel away **2** and unhook the panel bottom **3**, as shown in Figure 4-7.

**Figure 4-7 Removing the Front Panel**



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## Using an Antistatic Wrist Strap

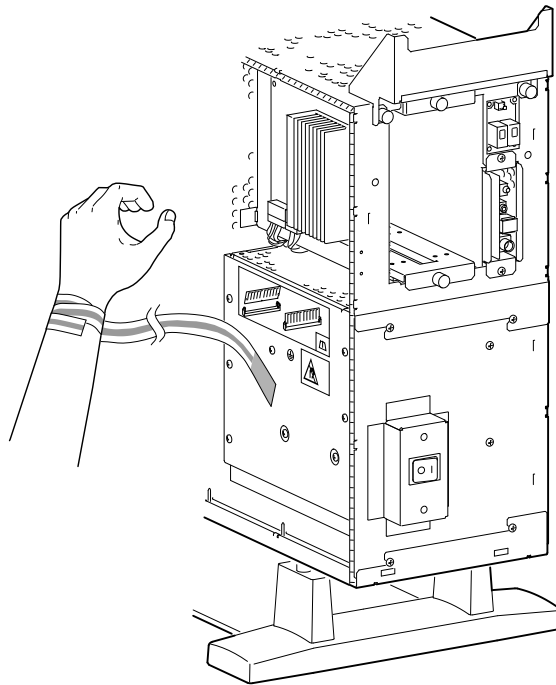
**CAUTION:**  
**Component**  
**Damage**

To avoid damage to internal components from static discharge, wear an antistatic wrist strap before handling any drive or module, and before touching anything inside the system.

**Putting On an**  
**Antistatic Wrist**  
**Strap**

To use the wrist strap, follow the instructions on the envelope. Note that the wrist strap may be attached to the metal surface of either side of the power supply, as shown in Figure 4-8.

**Figure 4-8 Using the Antistatic Wrist Strap**



MLO-011189

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## Removing Drives

### **Removing a Removable-Media Drive**

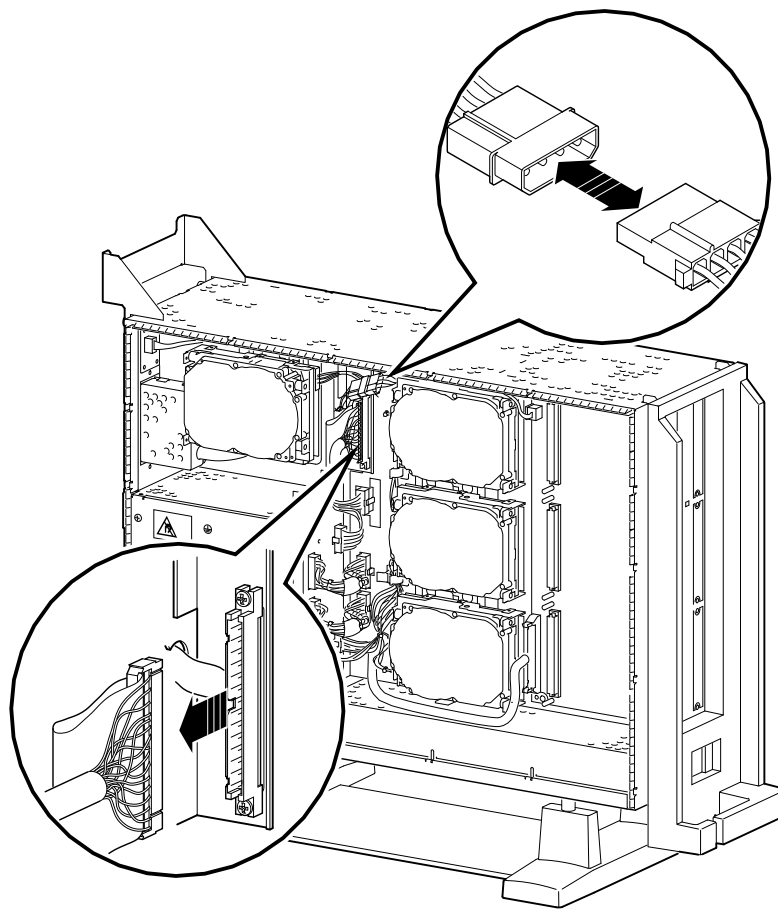
To remove a removable-media drive from the system, follow these steps.

#### **Step 1: Disconnect Cables**

Disconnect the SCSI and power cables from the system.

Removing Drives

Figure 4-9 Disconnecting the System SCSI and Power Cables



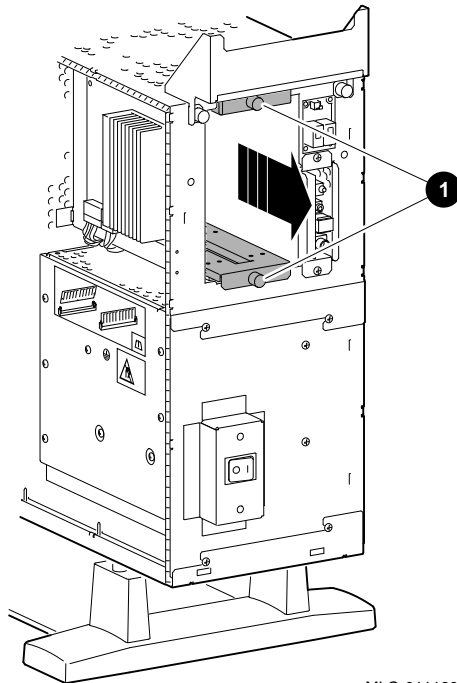
MLO-011263

## Removing Drives

### Step 2: Remove Drive Bracket

Release the two thumbscrews and remove the drive bracket from the system.

Figure 4-10 Removing the Drive Bracket



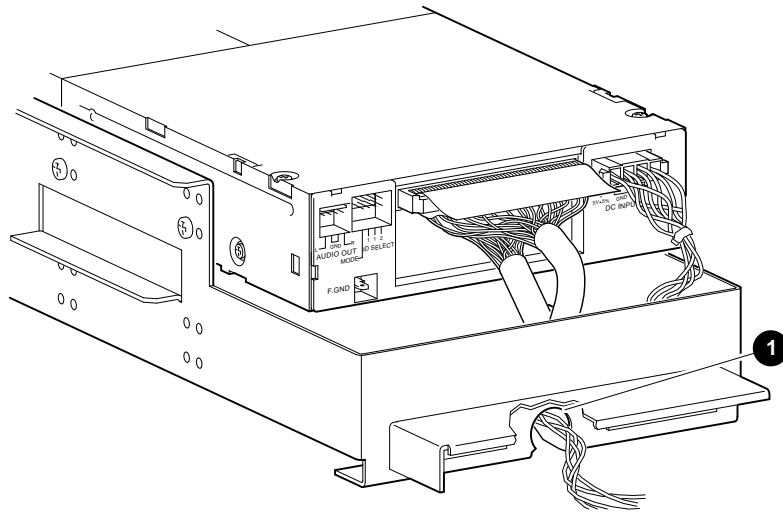
MLO-011190

## Removing Drives

### Step 3: Disconnect Drive Cables

Disconnect the SCSI and power cables from the drive.

Figure 4-11 Location of Drive SCSI and Power Cables



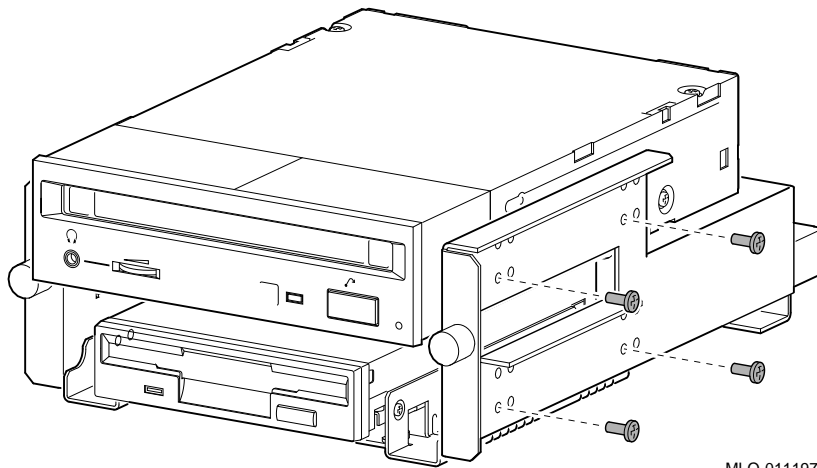
MLO-009392

## Removing Drives

### Step 4: Remove the Drive

Remove the two screws on each side of the drive bracket that secure the drive.

**Figure 4-12 Removing the Drive Bracket**



MLO-011197

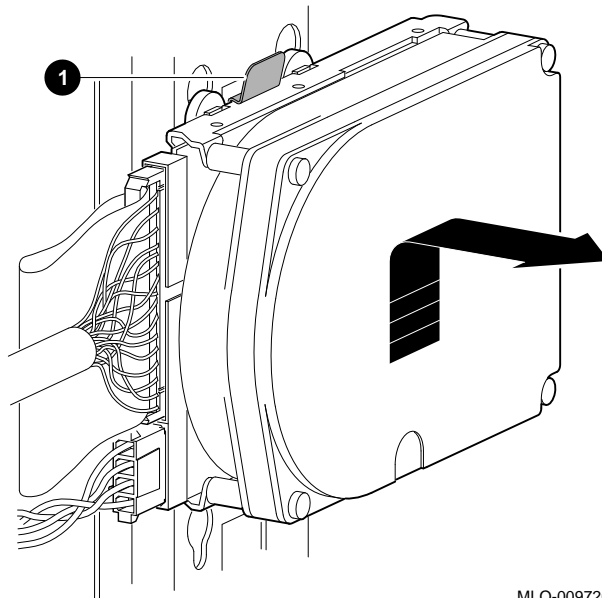
Lift the drive out of the bracket.

## Removing Drives

### Removing a Fixed Disk Drive

To remove a fixed disk drive, press the release latch **1** at the top of the drive, as shown in Figure 4-13, and slide the drive up and away from the system unit.

**Figure 4-13** Removing a Fixed Disk Drive



MLO-009720

Remove the power and SCSI cables from the drive.



---

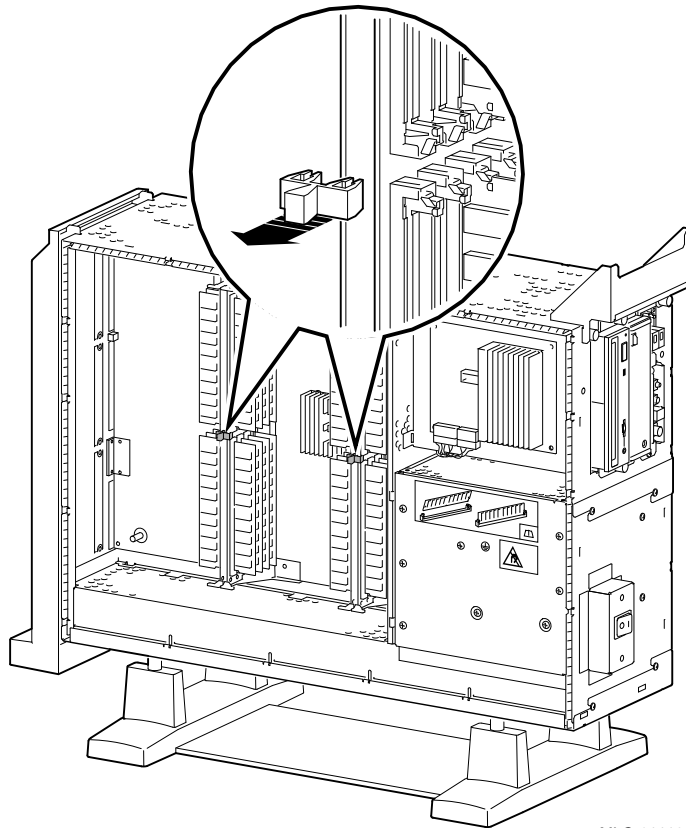
## Removing Memory Modules

To remove the memory modules, follow these steps.

### Step 1: Remove the MMB Clips

Remove the two clips from the Memory Module Boards, as shown in Figure 4-14.

**Figure 4-14** Removing MMB Clips



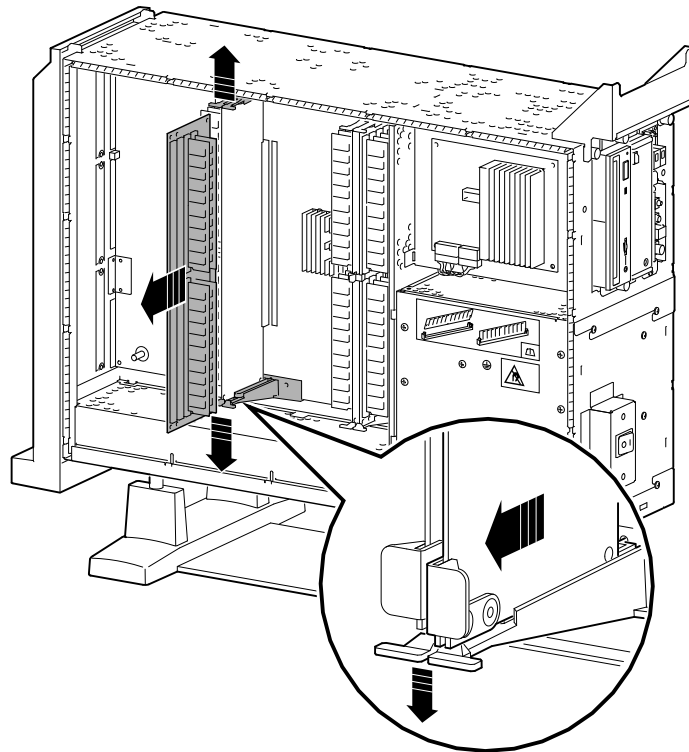
MLO-011193

## Removing Memory Modules

### Step 2: Remove MMBs

Remove all four MMBs from their channels by releasing the catches and sliding the boards out, as shown in Figure 4-15.

Figure 4-15 Removing an MMB



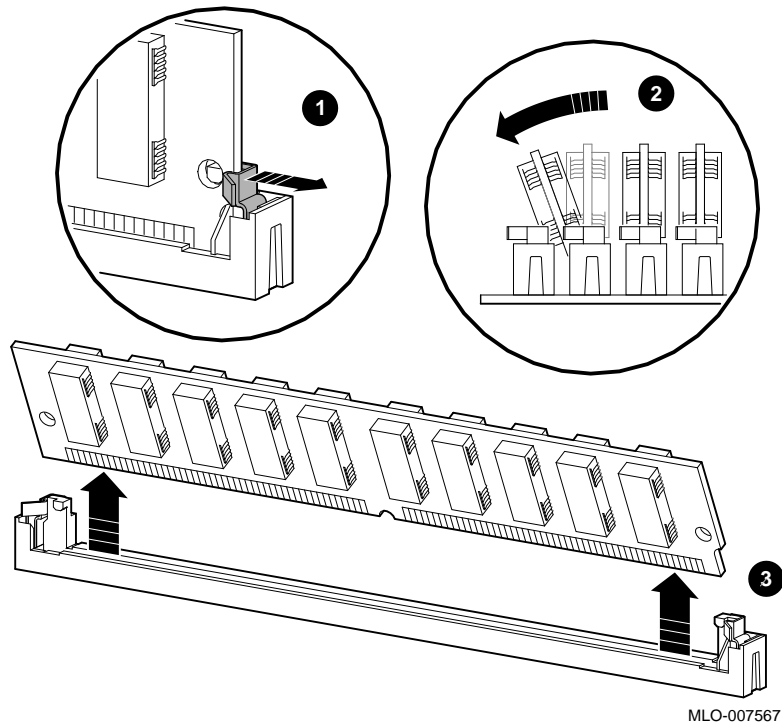
MLO-011194

## Removing Memory Modules

### Step 3: Remove Memory Modules

Remove the memory modules from the MMBs by releasing the metal clips at each end of the module **1**, tilting the module **2**, and lifting it out **3**, as shown in Figure 4-16.

Figure 4-16 Removing a Memory Module



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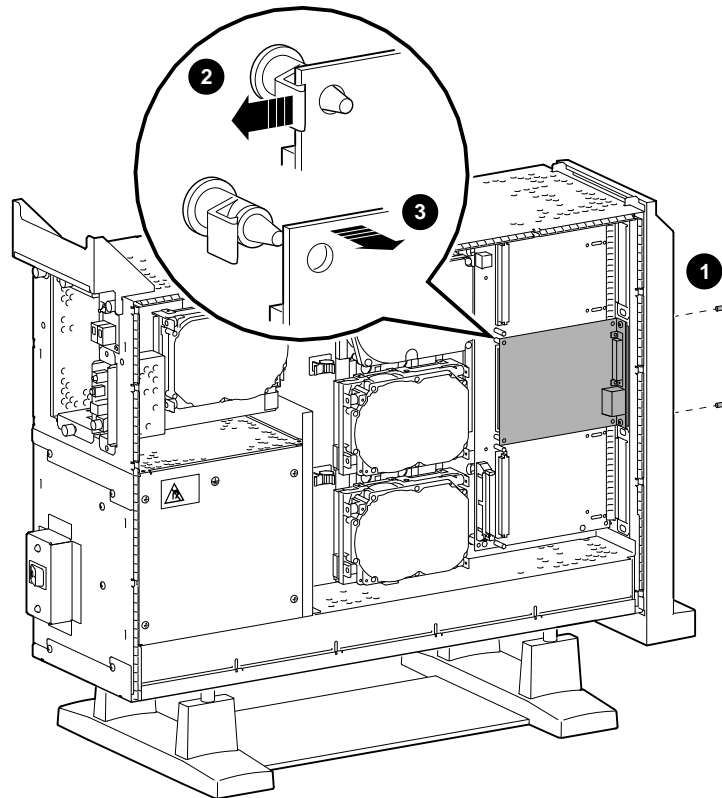
## Removing a TURBOchannel Module

To remove a TURBOchannel module, follow these steps:

### Step 1: Cables and Screws

1. Remove any cables that are attached to the module.
2. Remove the slot screws that hold the module in place. See ❶ in Figure 4-17.

Figure 4-17 Removing a TURBOchannel Module



MLO-008581

### Step 2: Releasing the Module

Release the latches ❷ that hold the edge of the module in place, and carefully pull ❸ the module connector away from the connector on the system module or I/O module, as shown in

## Removing a TURBOchannel Module

Figure 4-17. If you are removing a 3-slot module, you may need assistance to release the six latches simultaneously and pull the module away from the system module or I/O module.

Remove the module from the system box.

---

## Completing the Upgrade

### Step 1: Set SCSI IDs on Drives

If your DEC 3000 system has a factory-installed disk drive, it is set to SCSI ID 3.

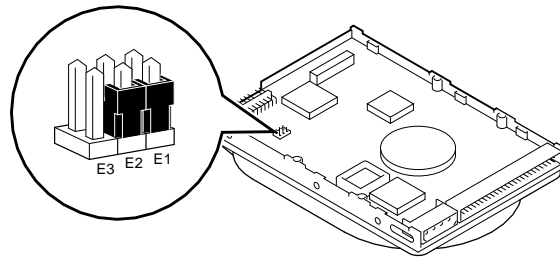
Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is set to SCSI ID 3, then change that setting.

Settings not shown here are described in the *DEC 3000 Model 800/800S AXP Options Guide* or in the option documentation.

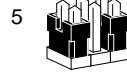
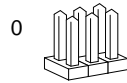
The following illustrate the SCSI ID settings for an RZ23L and an RZ24 drive.

## Completing the Upgrade

### RZ23L Drive:



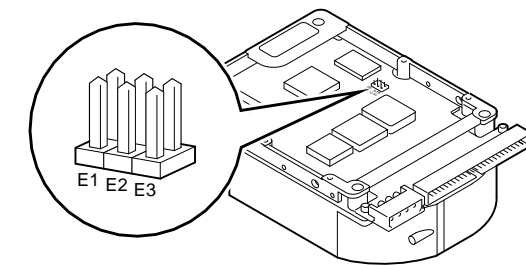
SCSI  
Settings: 0



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## Completing the Upgrade

RZ24 Drive:



SCSI  
Settings: 0



1



2



3



4



5



6



MLO-010586

### Step 2: Install the Model 800/800S AXP System

1. Follow the instructions in the *DEC 3000 Model 800/800S AXP Owner's Guide* to set up and install that system.
2. Follow the instructions in the *DEC 3000 Model 800/800S AXP Options Guide* to install the options in your new system.

### Step 3: Return Your System to Digital

Return your Model 500/500S/500X system as follows:

1. Pack the system unit securely in the packing material that the Model 800/800S came in.
2. Attach the return-address label that came in the upgrade accessory kit.

### Step 4: Service Contract

Contact your Digital service representative to upgrade your hardware service contract.





# 5

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## Upgrading a VAXstation 4000 Model 90

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800 are listed in the following tables:

Fixed Disk Drives	Comment
RZ23L	
RZ24L	
RZ24	
RZ25	
RZ26	
RZ26B	OpenVMS support only

## Options You Can Upgrade

<b>Removable-Media Drives</b>	<b>Comment</b>
RRD42	Including tabletop device
TLZ06	Including tabletop device
TZK10	
RX26	
<b>TURBOchannel Options</b>	<b>Comment</b>
DEFTA-FA	

**External  
Options**

Options that are supported externally on the DEC 3000 Model 800 are listed in the following tables:

<b>Expansion Boxes</b>	<b>Comment</b>
BA350	
BA353	
SZ03	
SZ12	
SZ16	
<b>Disk and Tape Drives</b>	<b>Comment</b>
TZ30	
TZ85	
RZ55/RZ56	
RZ58	
TSZ07	
TLZ04	
RWZ01	OpenVMS support only
<b>Monitors</b>	<b>Comment</b>
VR319-C%	Appropriate 66 Hz graphics option required
VR319-D%	
VR320-C%	Appropriate 66 Hz graphics option required
VR320-D%	
VRC16-H%	
VRM17-H%	
VRT16-H%	
VRT19-H%	

## Options You Can Upgrade

<b>Input Devices</b>	<b>Comment</b>
VSXXX-AB	
VSXXX-FA	
VSXXX-AA	
VSXXX-JA	
VSXXX-GA	
LK401/201	
VSX10-AA/A3	DEC Open3D required for software support
VSX20-AA/A3	DEC Open3D required for software support
VSX30-AA/A3	DEC Open3D required for software support

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To determine the SCSI ID settings on your drives:

1. Shut down your software following the instructions in your software documentation.
2. Put the VAXstation into console mode by pressing the halt button located behind the door on the front of the system unit.
3. Enter the `SHOW CONFIG` command.

A screen similar to the following appears:

```
>>> show config
KN4n-A Vn.n
08-00-2B-0A-7D-CB
32 MB

DEVNBR DEVNAM  INFO
-----
1 NVR  OK
2 LCSPX OK
.
.
10 SCSI 0-RZ24 3-RZ25
```

This information shows an RZ24 drive set to SCSI ID 0 and an RZ25 drive set to SCSI ID 3.

Write down your system drives and SCSI ID settings here. You will need them for future use.

## Upgrade Procedure

### Step 2: Shut Down System

Turn off the system unit by pressing 0 on the On/Off switch on the front of the system unit.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

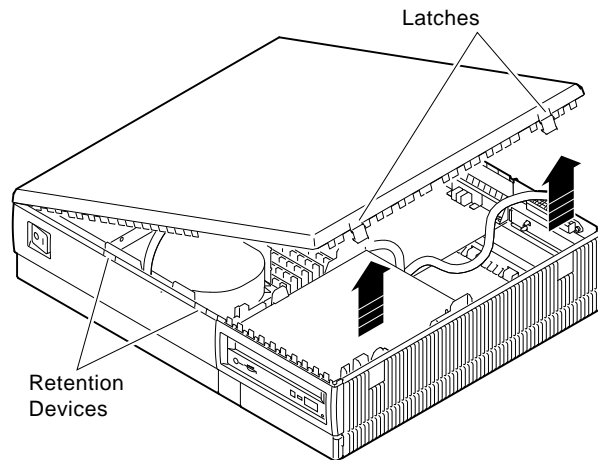
### Step 3: Disconnect Cables

Disconnect all cables from the rear of the system unit.

Disconnect the power cord from the wall outlet and then from the system unit.

### Step 4: Remove System Cover

Release the latches on the right side. Then pull the cover up and away. You need to pull forcefully to release the retention devices.

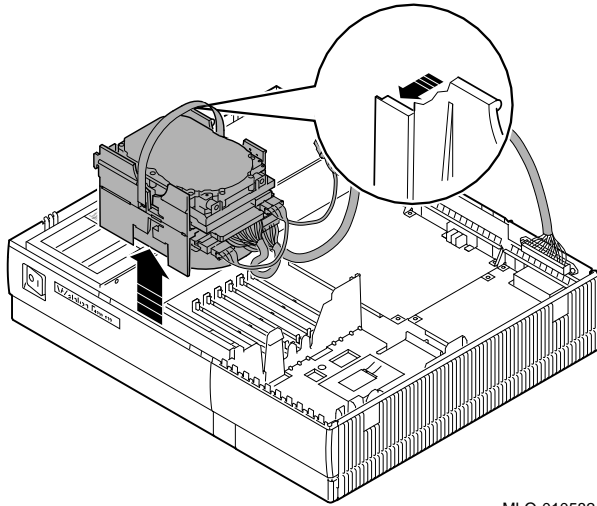


MLO-010581

**Step 5:  
Remove  
H-Bracket**

To remove the H-bracket from the VAXstation system unit:

1. Push in on the cantilever catch on the bracket (as shown) and lift the bracket straight up with the strap handle.



MLO-010582

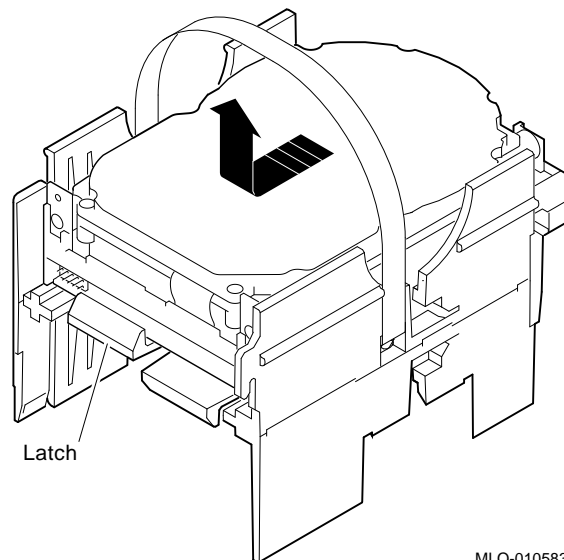
2. Disconnect the SCSI and power cables from the drives in the bracket.

## Upgrade Procedure

### Step 6: Remove Drives from the H-Bracket

To remove a drive from the H-bracket:

1. Press down on the latch on the front of the bracket.
2. Slide the drive forward until you can pull it up and out of the bracket.



MLO-010583

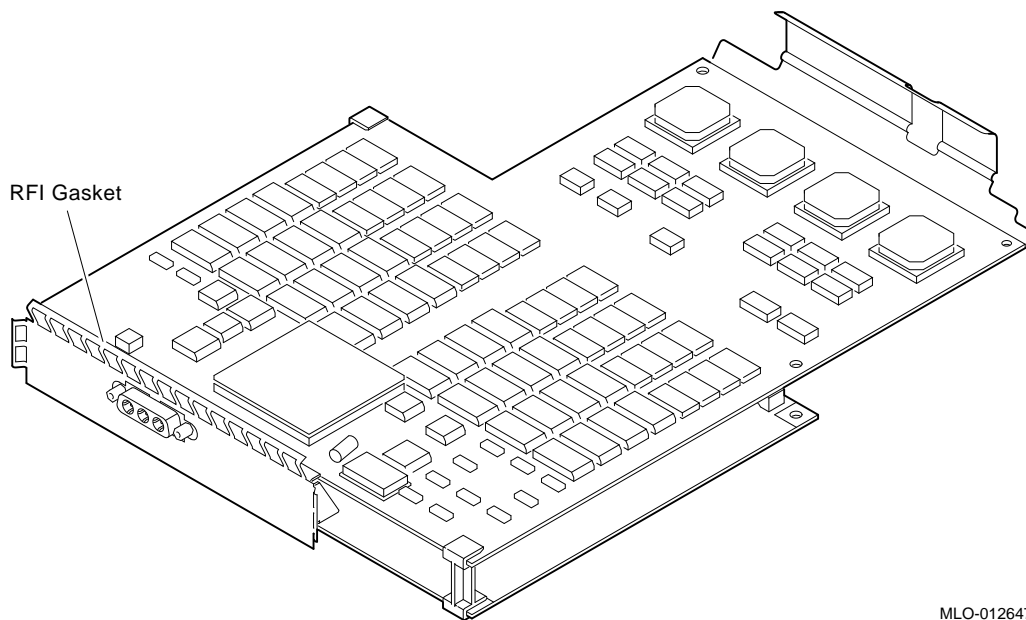
3. Set the drive aside on an antistatic mat.



**Step 7:  
Remove SPXgt  
Graphics  
Module**

If your system has an SPXgt graphics module, you must remove it before you can remove the removable-media device from the system unit. If you do not have an SPXgt graphics module, go to step 8.

**Figure 5–1 SPXgt 24-Plane Graphics Module**



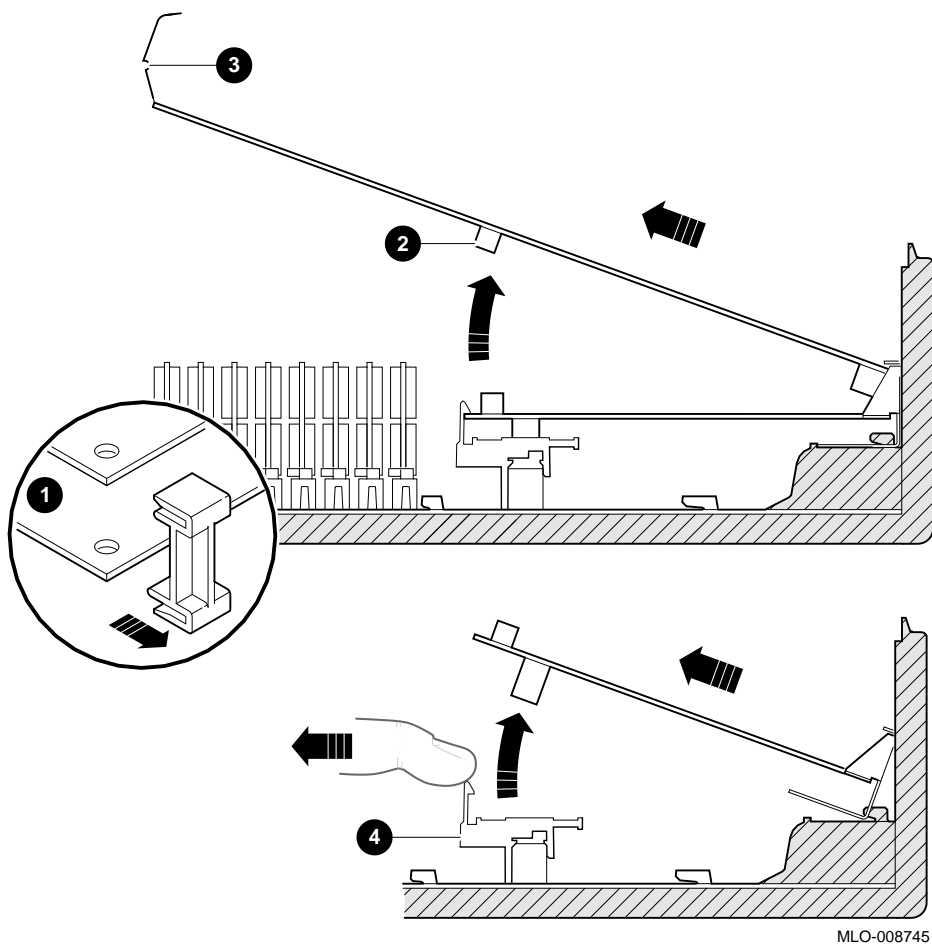
MLO-012647

To remove the graphics module:

1. Remove the plastic E-clip ❶ that holds the graphics module to the frame buffer. (See Figure 5–2.)
2. Lift the frame buffer from the center connector ❷, then free it from the ridge ❸ on the disk drive H-bracket. Gently work the frame buffer free by pulling up from the center of the module.
3. Pull the frame buffer out of the RFI gasket (shown in Figure 5–1). The gasket will remain in place, held by the video connector bracket on the graphics module.

Upgrade Procedure

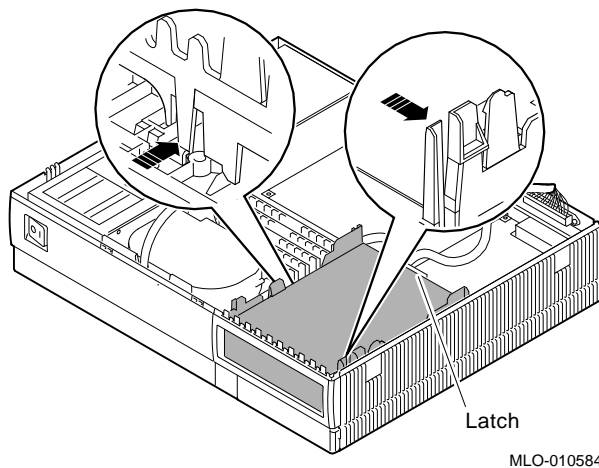
Figure 5-2 Removing the SPXgt 24-Plane Graphics Module



**Step 8:  
Remove  
Removable-Media  
Bracket**

To remove the bracket:

1. Disconnect the SCSI and power cables from the removable-media drive.
2. Push down the latch on the rear of the drive bracket and push the drive back until the front bezel clears the bezel opening in the system unit.



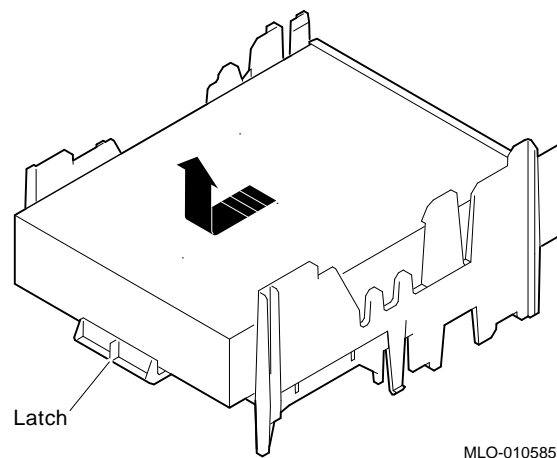
3. Release the two cantilever catches (shown) on the removable-media bracket and lift the bracket out of the system unit.

## Upgrade Procedure

### Step 9: Remove Drive from Bracket

Follow these steps:

1. Hold down the locking latch and push the drive back to loosen it.
2. Spread apart the cantilever latches on the bracket and lift the drive out.



MLO-010585

3. Set the drive aside on an antistatic mat.

**Step 10: Set SCSI IDs on Drives**

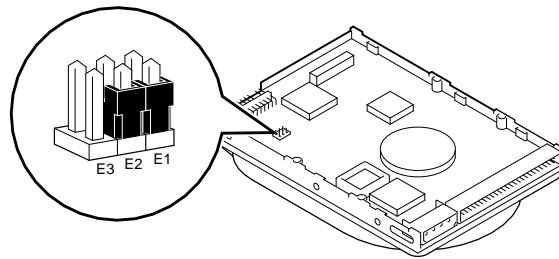
If your DEC 3000 system has a factory-installed disk drive, it is set to SCSI ID 3.

Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is set to SCSI ID 3, then change that setting.

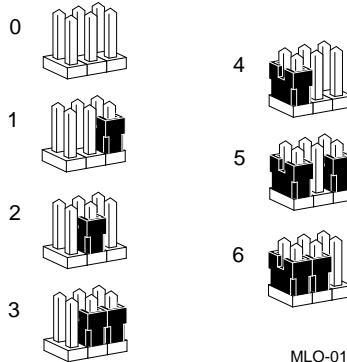
Settings not shown here are described in the *DEC 3000 Model 800/800S AXP Options Guide* or in the option documentation.

The following illustrate the SCSI ID settings for an RZ23L, an RZ24, and an RZ26B drive.

RZ23L Drive:



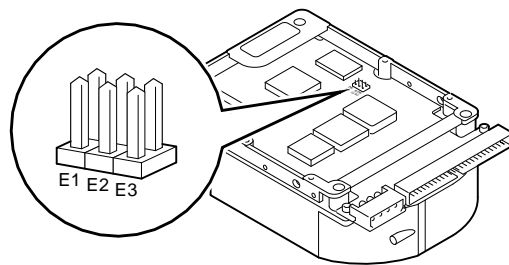
SCSI Settings: 0



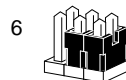
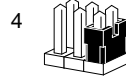
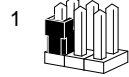
MLO-010587

## Upgrade Procedure

### RZ24 Drive:



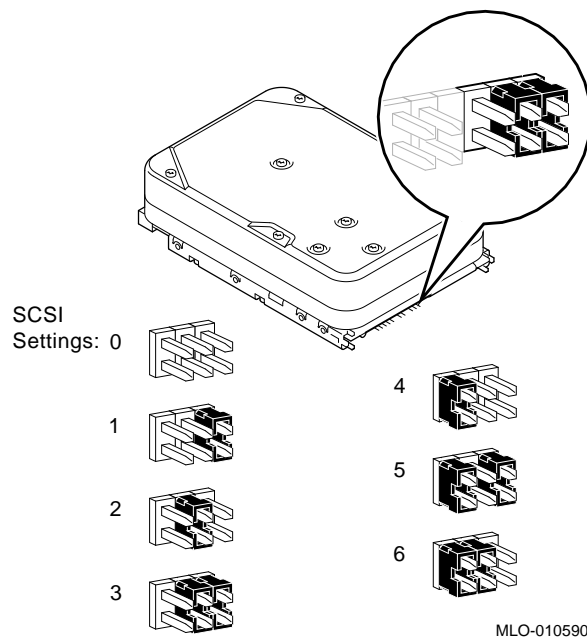
SCSI  
Settings: 0



MLO-010586

## Upgrade Procedure

RZ26B Drive:

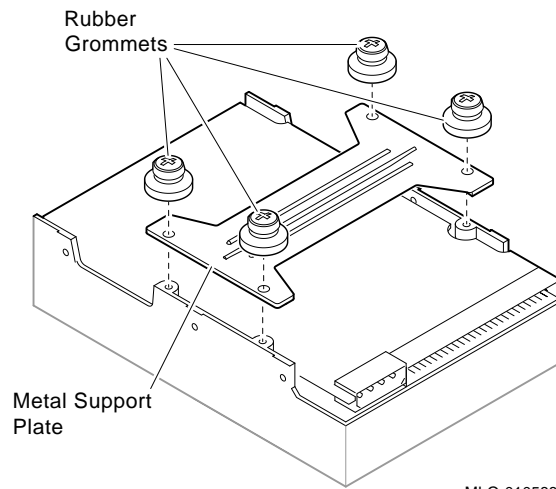


## Upgrade Procedure

### Step 11: Install New Mounting Brackets

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.

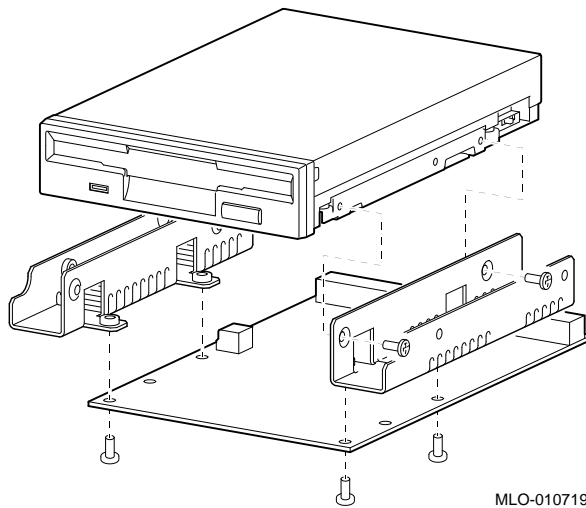


MLO-010588



**Note: Other  
Accessory Kit  
Brackets**

Install the RX26 bracket extensions as shown.



**Step 12:  
Complete the  
Upgrade**

1. Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.
2. Update the customer service contract to the DEC 3000 Model 800 AXP system.

**Step 13:  
Return Your  
VAXstation to  
Digital**

Return your VAXstation and any devices that are not upgradeable to Digital.

1. Pack the VAXstation and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.



# 6

---

## Upgrading a DECsystem 5000 Model 133/150

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Removing modules
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800S are listed in the following tables:

---

Fixed Disk Drives	Comment
-------------------	---------

---

RZ23L

RZ24L

RZ24

RZ25

RZ26

## Options You Can Upgrade

<b>Removable-Media Drives</b>	<b>Comment</b>
RRD42	Including tabletop devices.
TLZ06	Including tabletop devices.
TZK10	

## External Options

Options that are supported externally on the DEC 3000 Model 800S are listed in the following tables:

<b>Expansion Boxes</b>	<b>Comment</b>
SZ16	
SZ03	
SZ12	
PMTcE	Minimum revision required is D03
BA350	
BA353	

<b>Disk/Tape Drives</b>	<b>Comment</b>
RZ55	
RZ56	
RZ58	
RX23	OSF/1 AXP support only
TKZ08	OSF/1 AXP support only
TKZ09	
TLZ04	
TZ30	
TZ85	
TSZ07	
TZ857	Requires DEC NSR for support in OSF/1 AXP

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your system:

1. Enter the following command to shut down the software and put the system in console mode: `shutdown -h now`
2. Enter `cnfg 3` at the console prompt (`>>>`). A screen similar to the following appears:

```
>>> cnfg 3
3: KNO2  DEC  Vn.n  TCF0 (8 MB)
      (enet:  08-00-2b-30-14-df)
      (SCSI = 7)

-----
      DEV  PID      VID  REV  SCSI ID
-----
rz2   RZ24 (C) DEC DEC 0700  DIR
rz5   Rrd42 (C) DEC DEC 0700  CD-ROM
```

This display shows an RZ24 drive set to SCSI ID 2 and an RRD42 drive set to SCSI ID 5.

Write down your system drives and SCSI ID settings here. You will need them for future use.

### Step 2: Shut Down System

Turn off the system unit by pressing 0 on the On/Off switch on the back of the system unit.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

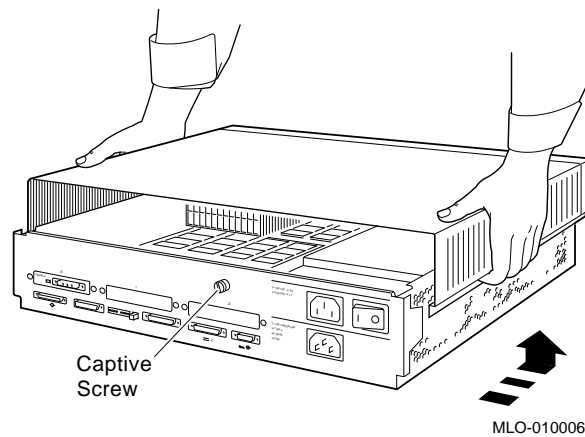
### Step 3: Disconnect Cables

Disconnect all the cables from the back of the system unit. Disconnect the power cord from the wall outlet and then from the system unit.

## Upgrade Procedure

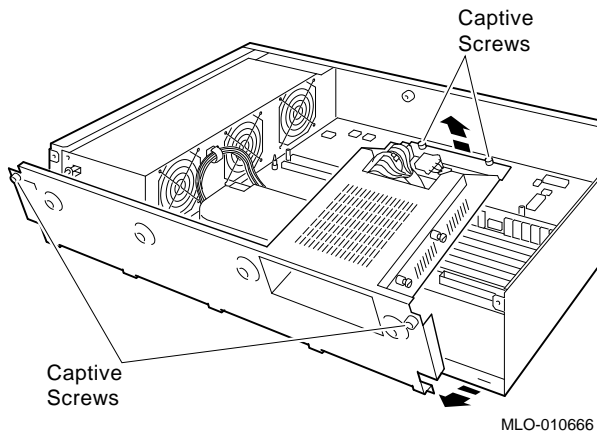
### Step 4: Remove System Cover

1. Loosen the captive screw on the back of the system unit. This captive screw can be loosened but not removed.
2. Grasp each side of the cover with your hands, and pull the cover straight toward the front about 5.5 cm (2 inches). Pull the cover up and set it aside.



**Step 5:  
Remove Front  
Drive Panel**

1. Loosen the two captive screws that hold the front drive panel in place.
2. Loosen the two captive screws on the back of the drive bracket.
3. If there is a drive inside the bracket, disconnect the SCSI and power cables from the drive.



4. Pull up carefully from the back of the drive bracket. As you raise the end of the bracket, you can pull the disconnected ends of the cables through the cutout in the bracket.
5. Release the cables from the cable clamps on the inside of the front panel.
6. Set the front panel aside. Handle it carefully if it contains a drive.

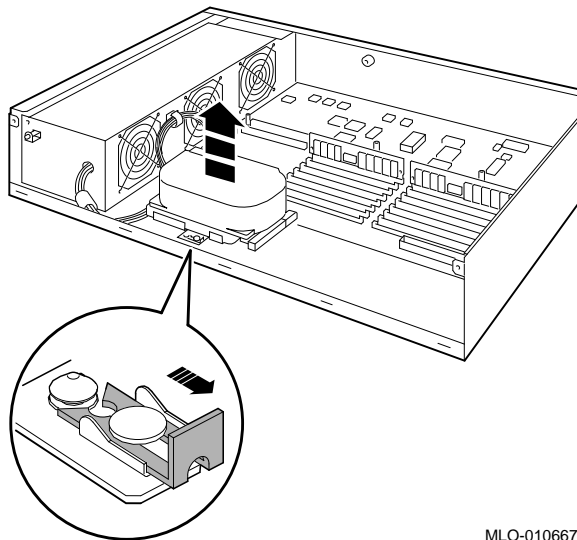
## Upgrade Procedure

### Step 6: Remove Removable Media Drives

1. Loosen the captive screws on both sides of the drive bracket.
2. Slide the drive out of the bracket and through the opening in the front panel.
3. Set the drive aside on an antistatic mat.

### Step 7: Remove Fixed Disk Drives

1. Press down on the disk drive and unlock the sliding latch.
2. Lift the drive off the mounting post and out of the chassis cutouts.



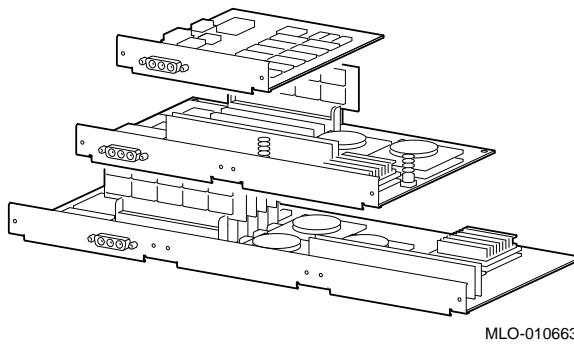
MLO-010667

3. Unplug the power cable and SCSI cable from the drive. Pull on the SCSI cable connector flap to remove the connector.
4. Remove the drive mounting bracket by removing the four screws that secure the drive to the mounting bracket.
5. Set the drive aside on an antistatic mat.
6. Put all the disconnected ends of the cables back into the system unit.

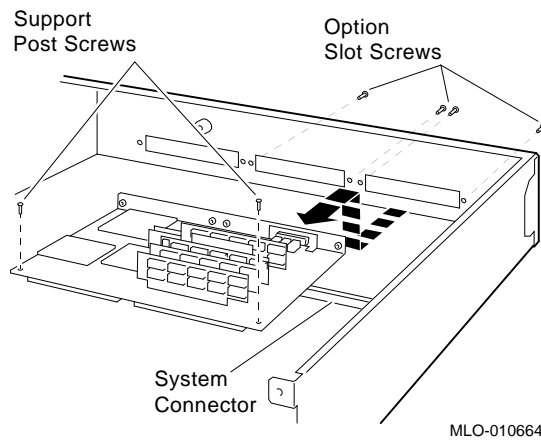


**Step 8:  
Remove  
Modules**

The system unit holds up to three TURBOchannel option modules. Modules can occupy one, two, or three slots.



1. Remove the option slot screws and the support post screws.
2. Release the module from the system connector and lift the module out of the option slot opening.



## Upgrade Procedure

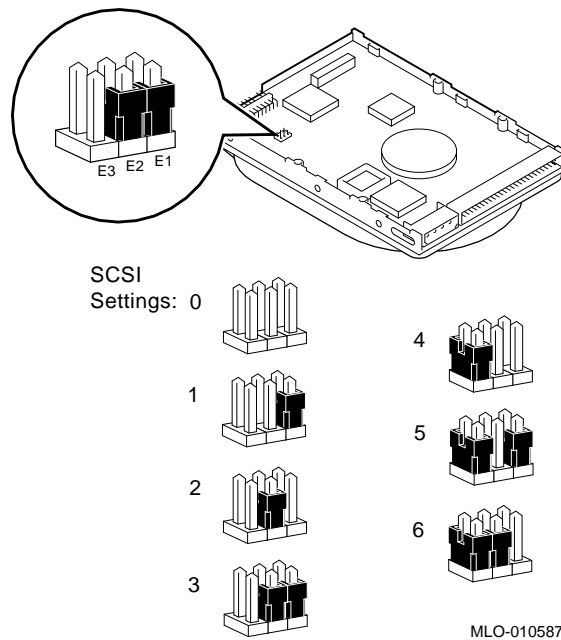
### Step 9: Set the SCSI IDs on the Drives

If your DEC 3000 system has a factory-installed disk drive, it is set to SCSI ID 3. Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is also set to SCSI ID 3, change that setting.

Settings for drives not shown here can be found in the *DEC 3000 Model 800/800S AXP Options Guide* or in the option documentation.

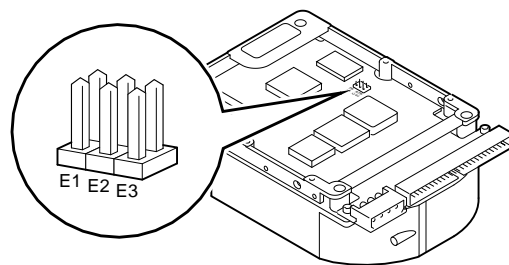
The following illustrate the SCSI ID settings for an RZ23L and an RZ24 drive.

RZ23L Drive:



## Upgrade Procedure

RZ24 drive.



SCSI  
Settings: 0



1



2



3



4



5



6



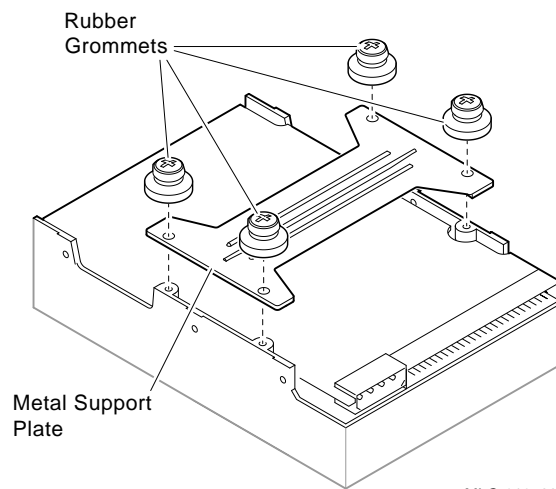
MLO-010586

## Upgrade Procedure

### Step 10: Install New Mounting Bracket

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.



### Step 11: Complete the Upgrade

1. Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.
2. Update the customer service contract to the DEC 3000 Model 800S AXP system.

### Step 12: Return Your DECsystem to Digital

Return your DECsystem and any devices that are not upgradeable to Digital.

1. Pack the DECsystem and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

# 7

---

## Upgrading a DECstation/DECsystem 5000 Model 200/240/260

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing modules
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800/800S are listed in the following tables:

---

Fixed Disk Drives	Comment
-------------------	---------

---

RZ23L

RZ24L

RZ24

RZ25

RZ26

## Options You Can Upgrade

<b>Removable-Media Drives</b>	<b>Comment</b>
RRD42	Including tabletop devices
TLZ06	Including tabletop devices
TZK10	

<b>Graphics Modules</b>	<b>Comment</b>
AV10U-AA/DA	
PMAGB-BA/BB	
PMAGB-BC/BD	
PMAGB-BE/BF	
PMAGB-JA/JB	OSF/1 AXP support only
PMAGB-DA/DB	DEC Open3D required for software support
PMAGB-DC/DD	DEC Open3D required for software support
PMAGB-EA/EB	DEC Open3D required for software support
PMAGB-EC/ED	DEC Open3D required for software support
PMAGB-FA/FB	DEC Open3D required for software support

## Options You Can Upgrade

### External Options

Options that are supported externally on the DEC 3000 Model 800/800S are listed in the following tables:

Expansion Boxes	Comment
SZ16	
SZ03	
SZ12	
PMTcE	Minimum revision required is D03
BA350	
BA353	

Tape/Disk Drives	Comment
RZ55	
RZ56	
RZ58	
RX23	OSF/1 AXP support only
TKZ08	OSF/1 AXP support only
TKZ09	
TLZ04	
TZ30	
TZ85	
TZ857	Requires DEC NSR for OSF/1 AXP support
TSZ07	

## Options You Can Upgrade

### Options for Workstations

Monitors and input devices that are supported on the DEC 3000 Model 800 are listed in the following tables:

<b>Monitors</b>	<b>Comment</b>
VR319-C% VR319-D%	Appropriate 66 Hz graphics option required
VR320-C% VR320-D%	Appropriate 66 Hz graphics option required
VRC16-H%	
VRM17-H%	
VRT16-H%	
VRT19-H%	

<b>Input Devices</b>	<b>Comment</b>
VSXXX-AB	
VSXXX-FA	
VSXXX-AA	
VSXXX-JA	
VSXXX-GA	
LK201/LK401	
VSX10-AA/A3	DEC Open3D required for software support
VSX20-AA/A3	DEC Open3D required for software support
VSX30-AA/A3	DEC Open3D required for software support



---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 AXP system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your expansion box:

1. Enter the command to shut down the software and put the system in console mode: `shutdown -h now`
2. Enter `cnfg 3` at the console prompt (`>>>`). A screen similar to the following appears:

```
>>> cnfg 3
3:      KNO2   DEC   Vn.n   TCF0                (12 MB)
                               (enet:  08-00-2b-30-14-df)
                               (SCSI = 7)

-----
      DEV    PID      VID    REV    SCSI ID
-----
      rz2    RZ24  (C) DEC   0700   DIR
      rz5    RX26  (C) DEC   0700   SEQ
```

This sample display shows an RZ24 drive set to SCSI ID 2 and an RX26 drive set to SCSI ID 5.

Write down the names of your system drives and SCSI ID settings here. You will need them for future use.

### Step 2: Shut Down System

Turn off the system unit by pressing 0 on the On/Off switch on the back of the system unit.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

## Upgrade Procedure

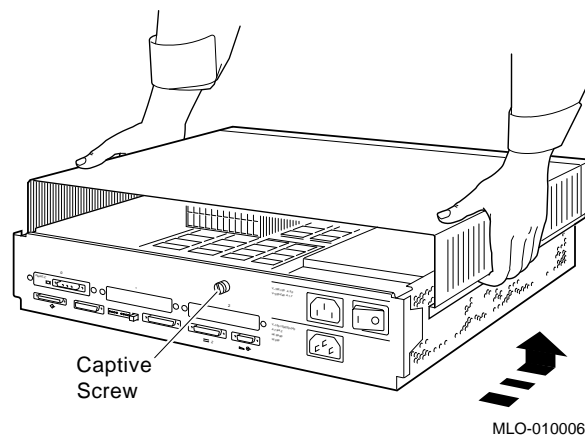
### Step 3: Disconnect Cables

Disconnect all the cables from the back of the system unit.

Disconnect the power cord from the wall outlet and then from the system unit.

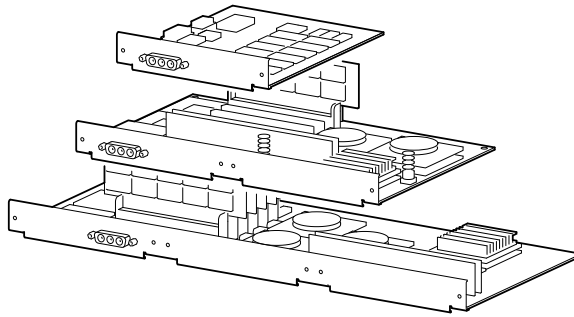
### Step 4: Remove System Cover

1. Loosen the captive screw on the back of the system unit. This screw can be loosened but not removed.
2. Grasp each side of the cover with your hands, and pull the cover straight toward the front about 5.5 cm (2 inches). Pull the cover up and set it aside.



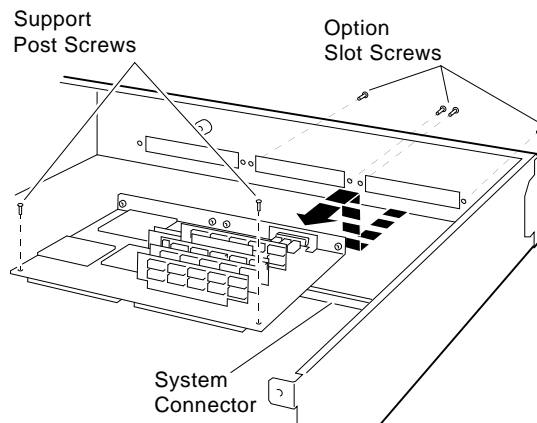
**Step 5:  
Remove Option  
Modules**

The system unit holds up to three graphics or TURBOchannel modules. Modules can occupy one, two, or three slots.



MLO-010663

1. Use a Phillips screwdriver to remove the option slot screws, then the support post screws.
2. Lift the front of the module to disconnect the slot connectors, then lift the module out of the option slot opening.



MLO-010664

## Upgrade Procedure

### **Step 6: Set the SCSI IDs on the Drives**

If your DEC 3000 AXP system has a factory-installed disk drive, it is set to SCSI ID 3. Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is also set to SCSI ID 3, change that setting.

Settings for drives can be found in the expansion box documentation.

### **Step 7: Complete the Upgrade**

1. Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.
2. Update the customer service contract to the DEC 3000 Model 800/800S AXP system.

### **Step 8: Return Your DECstation to Digital**

Return your DECstation and any devices that are not upgradeable to Digital.

1. Pack the DECstation and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

# 8

---

## Upgrading a DECsystem 3100

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800S are listed in the following tables:

---

Fixed Disk Drives	Comment
-------------------	---------

---

RZ24

## Options You Can Upgrade

### External Options

Options that are supported externally on the DEC 3000 Model 800S are listed in the following tables.

---

Expansion Box	Comment
---------------	---------

---

SZ12/RZ5X

---

Drives	Comment
RX23	OSF/1 AXP support only
RZ55	
RZ56	
TKZ08	OSF/1 AXP support only
TZ30	

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your DECsystem:

1. Enter the following command to shut down the software and put the system in console mode: `shutdown -h now`
2. Enter `test -c` at the console prompt (`>>>`). A screen similar to the following appears:

## Upgrade Procedure

```
>>> test -c
.
.
Unit(2) Device type  0 DISK
        RME           0x0
        Version       1
        Response data format 1 CCS
        Additional length 31
        Vendor        DEC
        Product identification RZ24 (C) DEC
        Firmware revision level 0700
Unit(1)
Unit(0) Device type  0 DISK
        RME           0x0
        Version       1
        Response data format 1 CCS
        Additional length 31
        Vendor        DEC
        Product identification RZ24 (C) DEC
        Firmware revision level 0700

>>
```

This display shows an RZ24 set to SCSI ID 0 and an RZ24 set to SCSI ID 2.

Write down your system drives and SCSI ID settings here. You will need them for future use.

### Step 2: Shut Down System

Turn off the system unit by pressing the 0 on the On/Off switch.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

### Step 3: Disconnect Cables

Disconnect the power cord from the wall outlet and then from the system unit. Disconnect all the cables from the back of the system unit.

## Upgrade Procedure

### **Step 4: Remove System Cover**

1. Loosen, but do not remove, the two screws at the back of the unit.
2. Facing the front of the system unit, grip both sides of the cover and slide it toward you to disengage it from the guides.
3. Lift the cover away from the unit and set it aside.

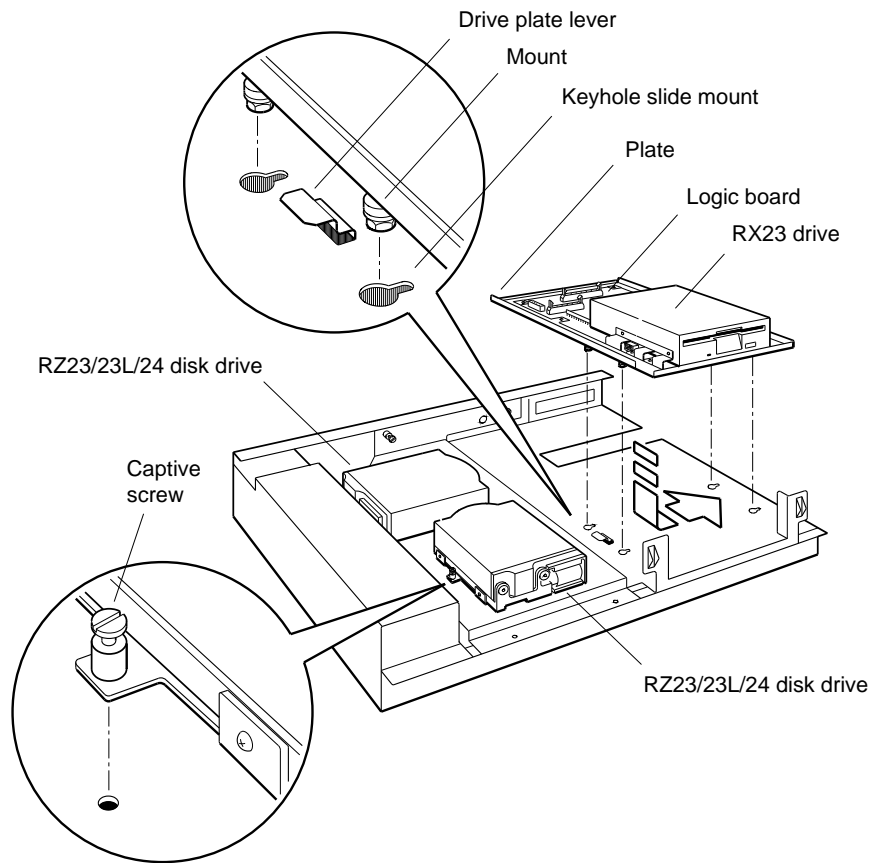
### **Step 5: Remove RZ24**

To remove the disk drive from the mounting panel:

1. Disconnect the SCSI cable from the drive by gently pulling the connector straight out.
2. Disconnect the drive power cable from the drive.
3. Remove the drive and bracket from the drive mounting panel by using a 5/16-inch socket wrench to unscrew the nuts from the four studs or loosen the captive screw, shown in Figure 8-1.
4. Lift the drive and bracket off the studs. If there is a captive screw, lift the drive bracket from the cutouts in the mounting panel.
5. Remove the drive mounting bracket by removing the four screws that secure the drive to the mounting bracket.
6. Set the drive aside on an antistatic mat.



Figure 8-1 Remove Diskette Drive from Mounting Plate



WSE1M005

**Step 6:  
Remove RX23**

To remove the drive:

1. Press down and hold the drive plate lever.
2. Slide the drive toward and over the drive plate lever and into the large openings of the keyhole slide mounts.
3. Lift the drive up and away from the mounting panel.

## Upgrade Procedure

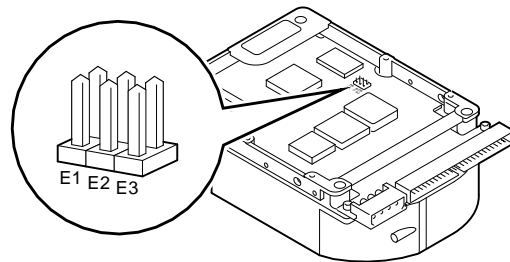
4. Disconnect the SCSI cable from the drive logic module by pushing the connector latches in opposite directions. Then gently pull the connector straight up.
5. Disconnect the drive power cables from the drive and the logic module.
6. Remove the four screws that secure the drive to the drive plate. Remove the drive.
7. Set the drive aside on an antistatic mat.

### Step 7: Set SCSI IDs on Drives

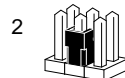
If your DEC 3000 system has a factory-installed disk drive, it is set to SCSI ID 3.

Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is set to SCSI ID 3, then change that setting. SCSI settings not found here can be found in the *DEC 3000 Model 800/800S Options Guide* or in the option documentation.

The following illustrates the SCSI ID settings for an RZ24 drive.



SCSI Settings: 0



4



5

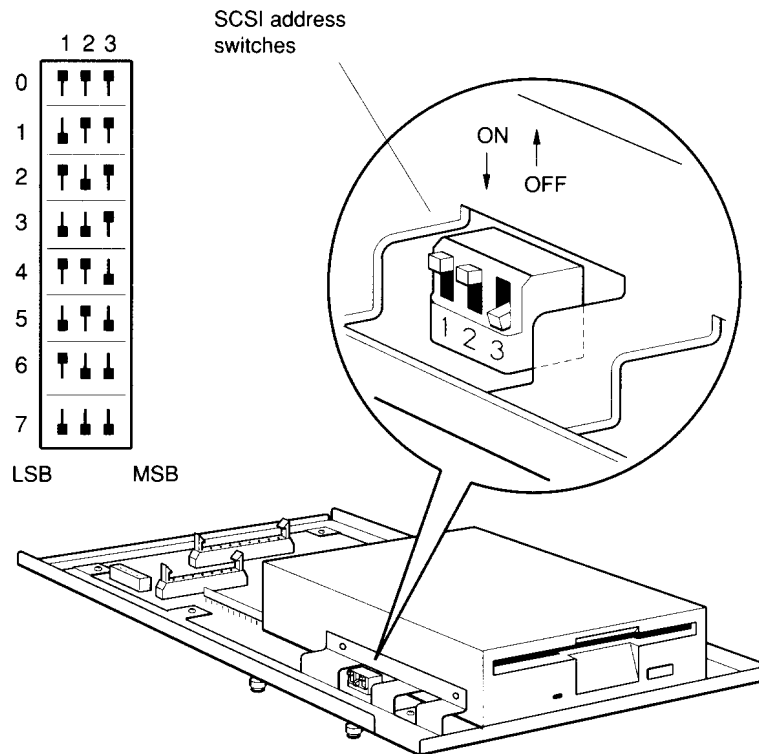


6



MLO-010586

The following illustrates the SCSI ID settings for an RX23 drive.



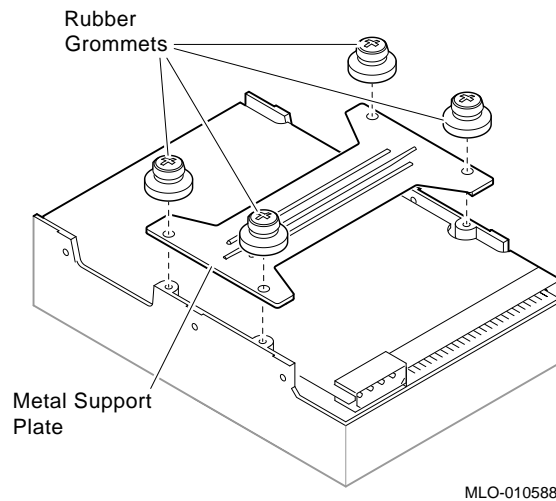
WSE1M003

### Step 8: Install New Mounting Bracket

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.

## Upgrade Procedure



### **Step 9: Complete the Upgrade**

Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.

### **Step 10: Return Your DECsystem to Digital**

Return your DECsystem and any devices that are not upgradeable to Digital.

1. Pack the DECsystem and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

### **Step 11: Update Service Contract**

Update the customer service contract to the DEC 3000 Model 800S AXP system.

# 9

---

## Upgrading a DECsystem 5100

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800S are listed in the following tables:

Drives	Comment
RZ23L	
RZ24	
RZ25	
RRD42	
TZK10	

## Options You Can Upgrade

### External Options

Options that are supported externally on the DEC 3000 Model 800S are listed in the following tables:

---

Expansion Box	Comment
---------------	---------

---

SZ12

---

Drives	Comment
TZ30	
TLZ04	
TKZ08	OSF/1 AXP support only
RX23	OSF/1 AXP support only
TSZ07	

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your DECsystem:

1. Enter the following command to shut down the software and put the system in console mode: `shutdown -h now`
2. Enter `conf -s` at the console prompt (`>>>`). A screen similar to the following appears:

```
>>> conf -s
.
.
scsi peripherals
  unit  type      product          removable/fixed  capacity
  0    disk      RZ56 (C) DEC    fixed            634 MBs
  3    disk      RZ24            fixed            209 MBs
  5    tape      TZ30            removable
  7    host adapter
```

This display shows an RZ56 set to SCSI ID 0, an RZ24 set to SCSI ID 3, and a TZ30 set to SCSI ID 5.

## Upgrade Procedure

Write down your system drives and SCSI ID settings here. You will need them for future use.

### **Step 2: Shut Down System**

Set the On/Off switch on the back of the system unit to the off (0) position.

**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.

### **Step 3: Disconnect the Cables**

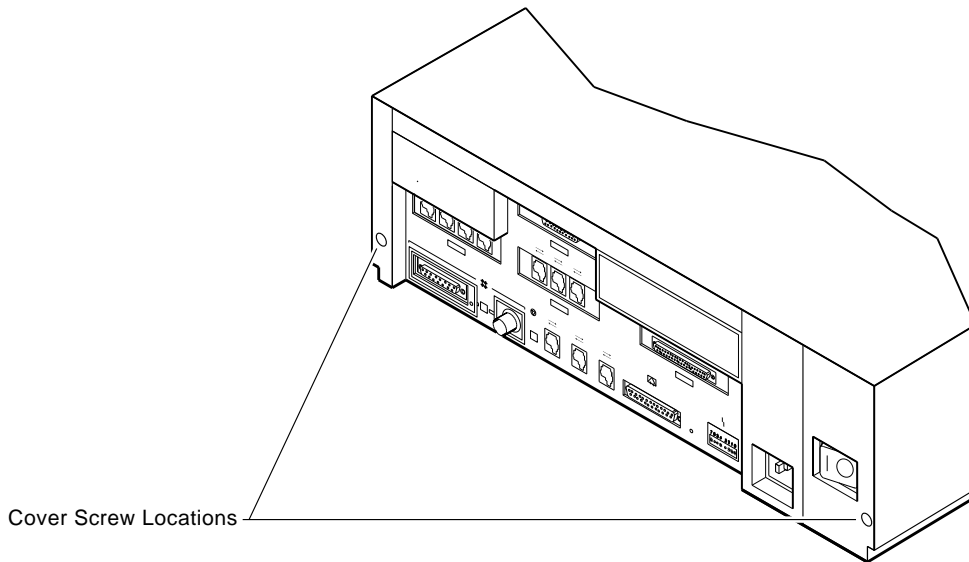
Disconnect all the cables connected to the system unit.

Disconnect the power cord from the wall outlet and then from the system unit.

## Upgrade Procedure

### Step 4: Remove System Cover

1. Loosen the two cover screws on the back of the system unit.
2. Slide the cover forward, and up, off the system unit.



RE\_EN05175A\_90

### Step 5: Remove Upper Drive Mounting Panel

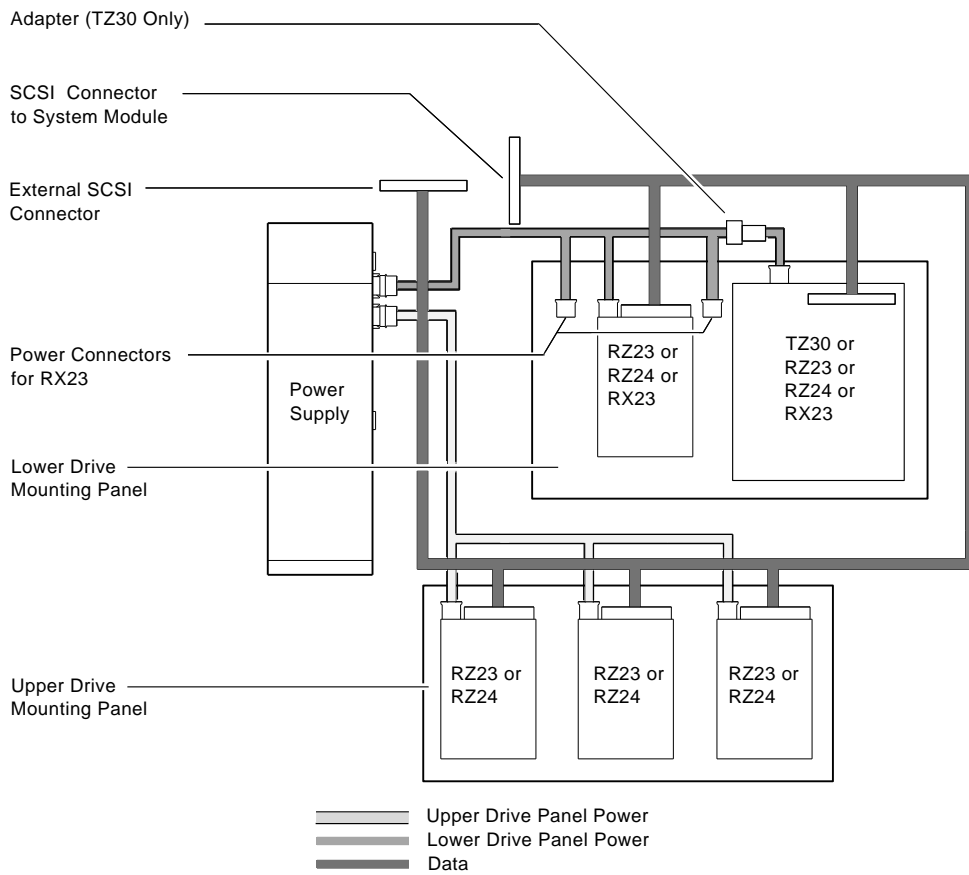
Depending on your system configuration, the upper drive mounting panel can contain one, two, or three hard disk drives. These drives can be either RZ23 or RZ24 disk drives.

To remove the upper drive mounting panel:

1. Disconnect the power cable and the SCSI cable from the drives on the upper mounting panel.
2. Loosen the four captive screws located on the upper drive mounting panel.

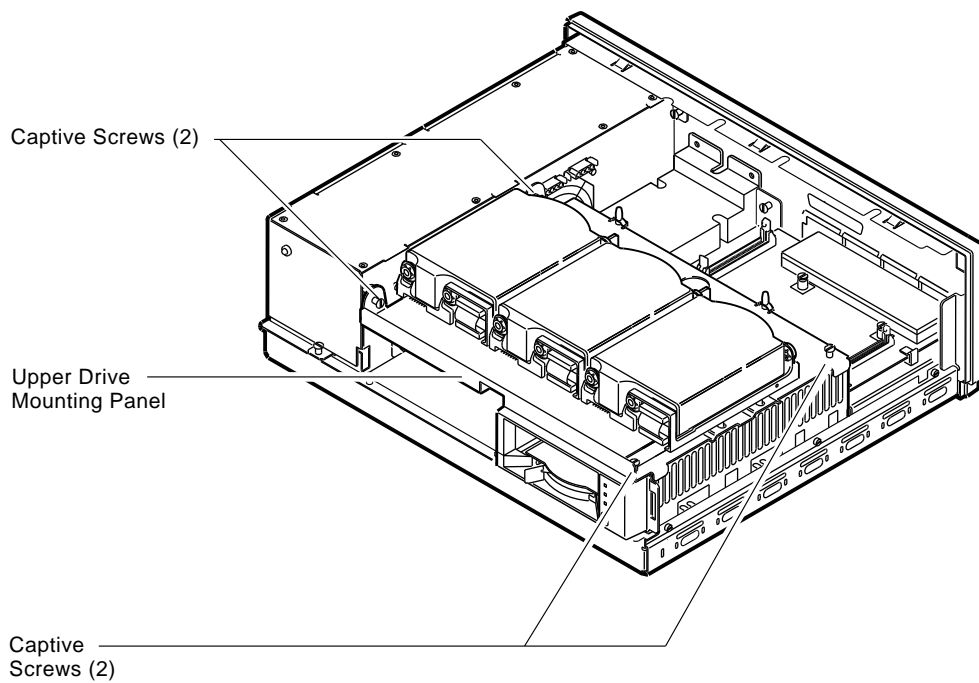


## Upgrade Procedure



RE\_EN05176A\_90

## Upgrade Procedure



RE\_EN05177A\_90

3. Lift the upper drive mounting panel from the lower drive mounting panel and gently set it aside.

### **Step 6: Remove EMI Shield, if Present**

Your system may have an EMI shield located between the upper and lower drive shelves. The shield has several "fingers" touching the upper shelf.

---

#### **Warning**

---

Do not pull the EMI shield directly up out of the system. This may cause injury.

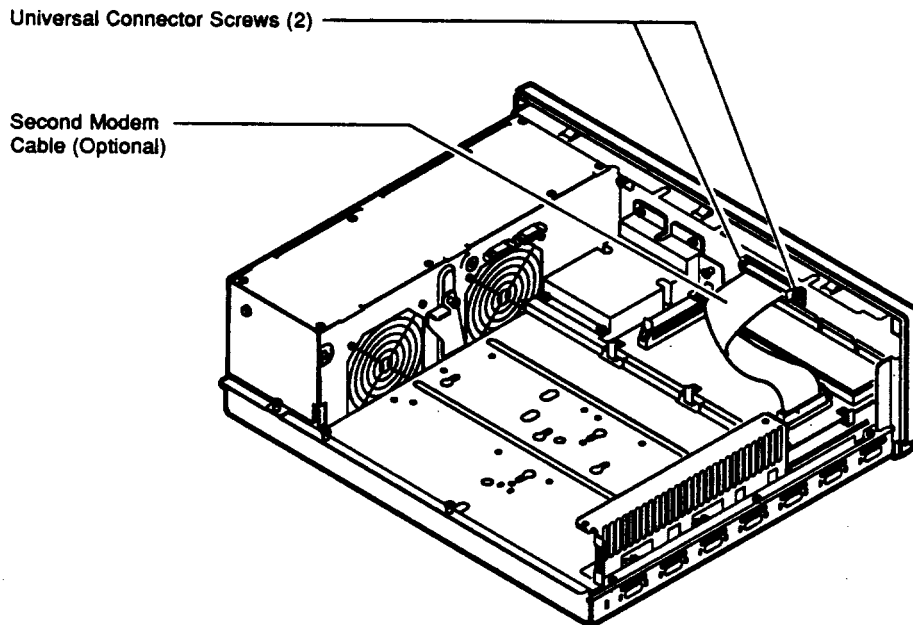
---

## Upgrade Procedure

To remove the shield from the lower shelf:

1. From the front of the enclosure, grasp the shield with both hands near the middle and gently pull it forward (towards the devices on the lower shelf, if present).  
Lift the shield toward the front of the enclosure, simultaneously pulling forward to release the two tabs under the shelf.
2. Remove the SCSI and power cables from the slots in the EMI shield.  
Set the shield aside.

## Upgrade Procedure



RE\_EN05178A\_90

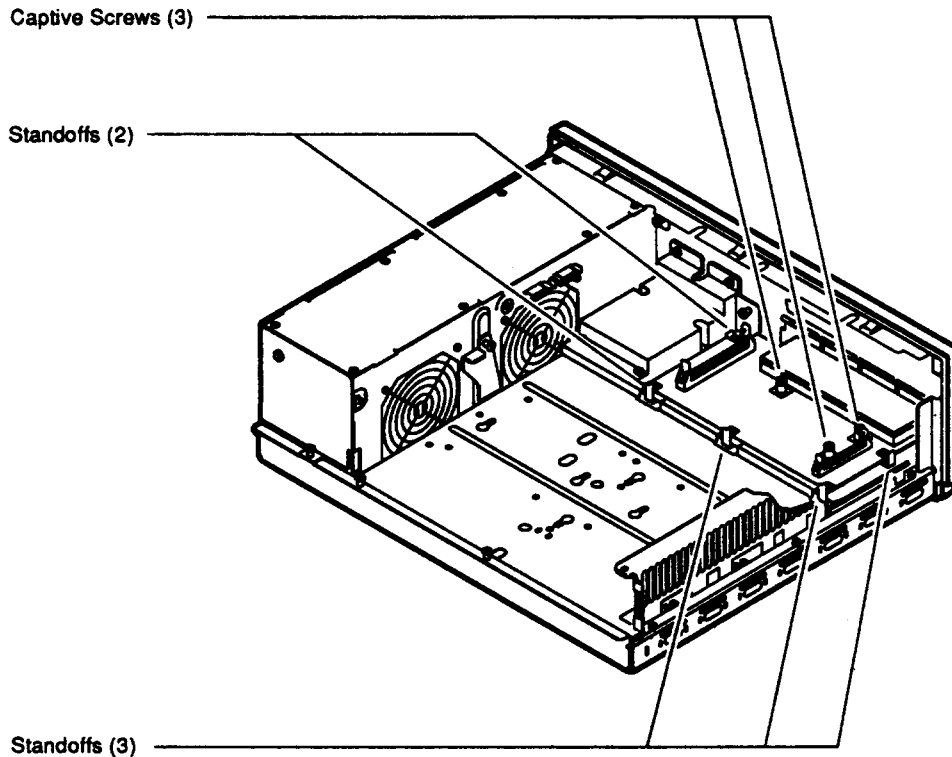
### **Step 7: Remove Communications Option, if Present**

Your system may have a communications option installed on the lower drive shelf.

To remove this option:

1. Disconnect the cable from the second modem port connector on the option.
2. Remove the two universal connector screws, and then remove the second modem cable from the system unit.

3. Disconnect the signal cable from the system module.
4. Unscrew the three captive screws on the communications module.
5. Release the communications module from the five standoffs and remove it from the system unit.



RE\_EN05179A\_90

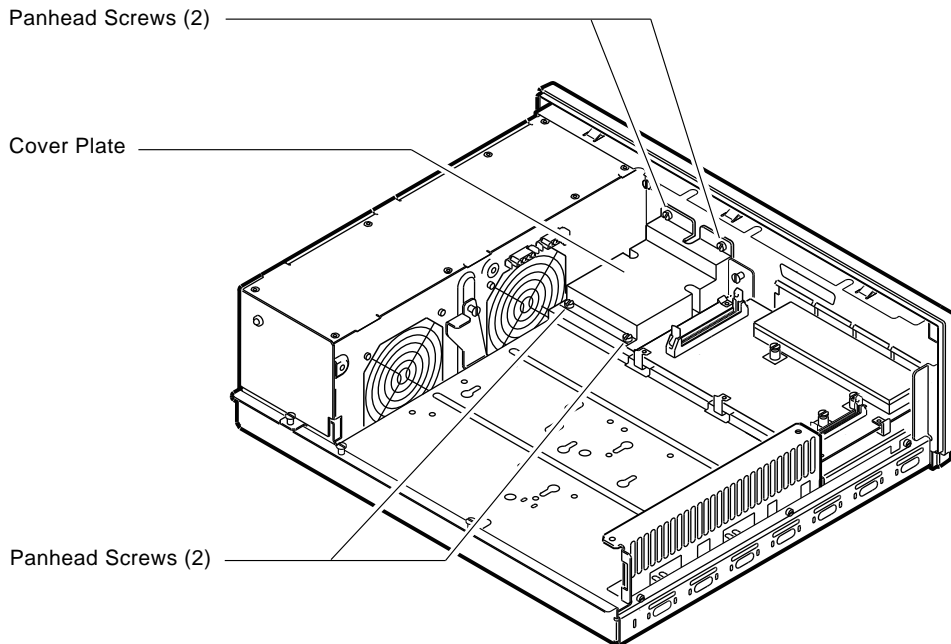
**Step 8:  
Remove Lower  
Drive Mounting  
Panel**

The lower drive mounting panel can contain RZ23 disk drives, RX23 disk drives, a TZ30 tape drive, an RRD42 CD-ROM, or a TZK10 tape drive. To remove the lower drive mounting panel:

1. Disconnect the SCSI cable and the power cable connected to the drives.

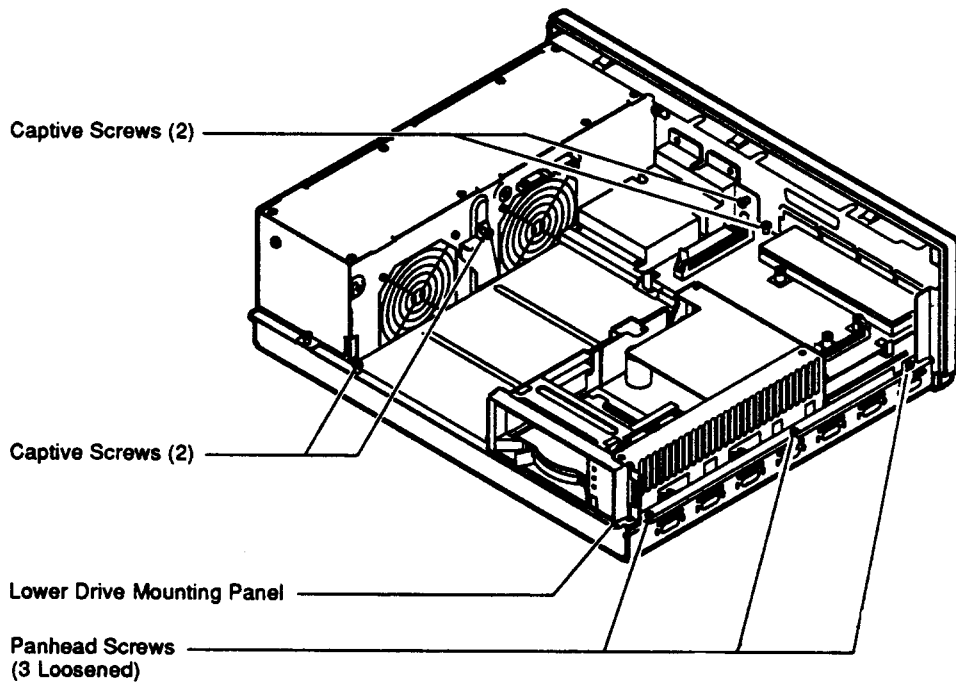
## Upgrade Procedure

2. Remove the two screws securing the cover plate to the lower drive mounting panel. Remove the two screws securing the cover plate to the back panel of the system unit. Remove the cover plate.



RE\_EN05180A\_90

3. Loosen the four captive screws on the lower drive mounting panel. Two are located near the back panel. Two are located near the power supply. Loosen the three screws on the right side of the panel. Slide the panel forward and away from the system unit.



RE\_EN05181A\_90

**Step 9:  
Remove Device**

To remove the device:

1. Turn the drive mounting panel over, and while supporting the device with one hand, loosen the two screws in the keyhole slots holding the device to the mounting panel. Remove the other two screws.
2. Slide the device to one side and remove it from the mounting panel. Remove the two screws that you loosened earlier.

Upgrade Procedure

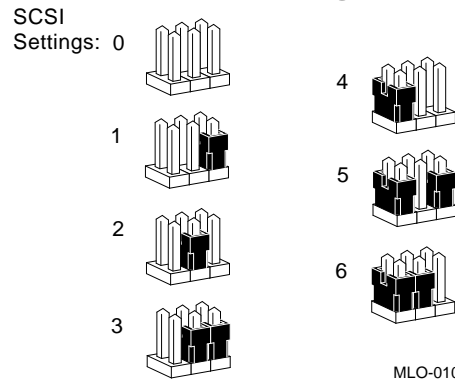
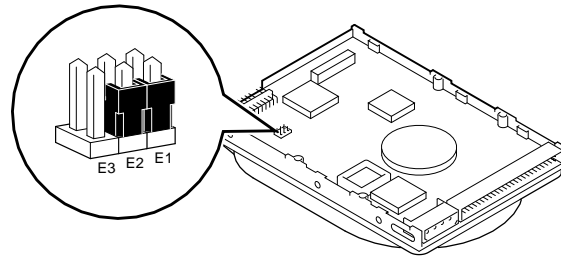
**Step 10: Set SCSI IDs on Drives**

If your DEC 3000 system has a factory-installed disk drive, it is set to SCSI ID 3.

Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is set to SCSI ID 3, then change that setting. SCSI settings not found here can be found in the *DEC 3000 Model 800/800S Options Guide* or in the option documentation.

The following illustrate SCSI ID settings:

RZ23L Drive:

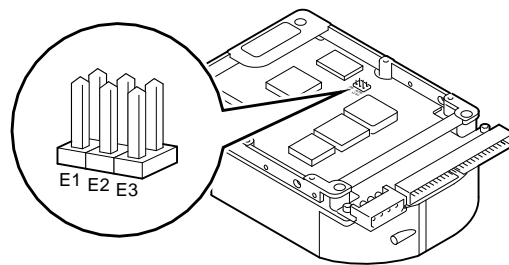


MLO-010587



## Upgrade Procedure

RZ24 Drive:



SCSI  
Settings: 0



1



2



3



4



5



6



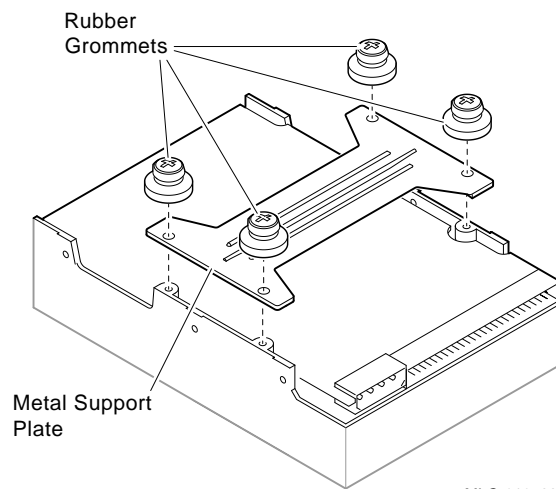
MLO-010586

## Upgrade Procedure

### Step 11: Install New Mounting Bracket

To attach the new mounting bracket and rubber grommets to a fixed disk drive, follow these steps:

1. Place the metal support plate on the disk drive as shown in the following figure.
2. Screw the four rubber grommets (from your accessory kit) onto the plate and the drive until the plate is secure.



MLO-010588

### Step 12: Complete the Upgrade

Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.

Update the customer service contract to the DEC 3000 Model 800S AXP system.

### Step 13: Return Your DECsystem to Digital

Return your DECsystem and any devices that are not upgradeable to Digital.

1. Pack the DECsystem and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

# 10

---

## Upgrading a DECsystem 5500

### Topics Covered in This Chapter

- Options you can upgrade
- Upgrading your system
- Removing drives
- Completing the upgrade

---

### Options You Can Upgrade

#### Internal/External Options

Options that are supported internally or externally on the DEC 3000 Model 800S are listed in the following table:

Drives	Comment
TZK10	
RZ25	
RRD42	

## Options You Can Upgrade

### External Options

Options that are supported externally on the DEC 3000 Model 800S are listed in the following table:

---

Drives	Comment
RZ56	
TLZ04	
SZ12	
RX23	OSF/1 AXP support only
TSZ07	
TZ30	
TKZ08	OSF/1 AXP support only

---

## Upgrade Procedure

### Step 1: If Your System Has Factory-Installed Drives

If your DEC 3000 system has factory-installed drives, you may need to change the SCSI IDs on the drives you are upgrading.

To display the SCSI ID settings of the drives in your DECsystem:

1. Enter the following command to shut down the software and put the system in console mode: `shutdown -h now`
2. Enter `maint` at the prompt (`>>`).
3. Enter `show scsi` at the prompt (`>>>`).

## Upgrade Procedure

```
>> maint
>>>show scsi
SCSI Node 0
  -tz(0,0*) (TLZ04)
SCSI Node 1
  -rz(0,1,*) (RZ56)
.
.
>>>exit
>>
```

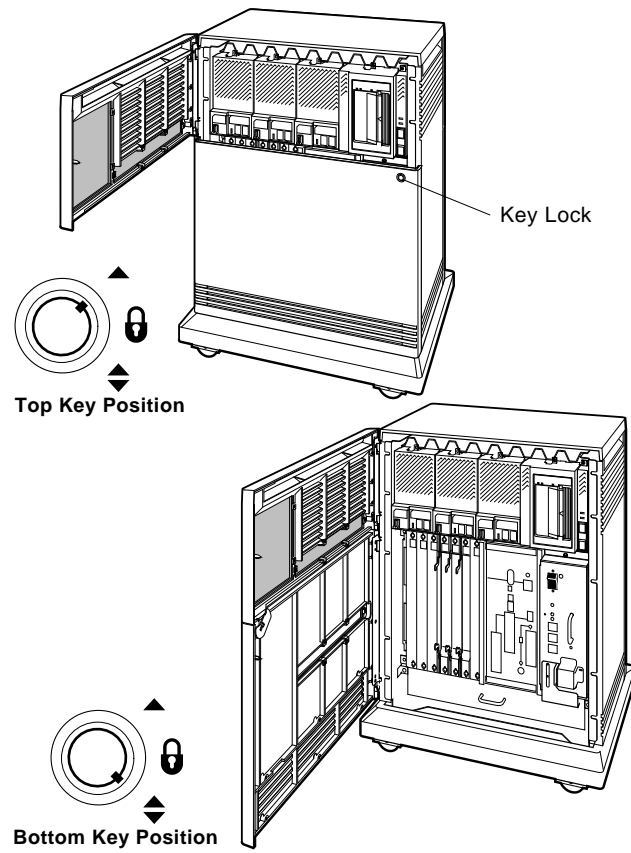
This display shows a TLZ04 set to SCSI ID 0 and an RZ56 set to SCSI ID 1.

Write down your system drives and SCSI ID settings here. You will need them for future use.

### Step 2: Shut Down System

1. To access the power switch, you must turn the keylock to the bottom position. Pull the door open (as shown in the following figure).
2. Turn off the power switch.  
**Caution:** After you turn off the system, wait 15 seconds before unplugging the power cord.
3. Remove external cables.

**Figure 10-1 Keylock Positions**

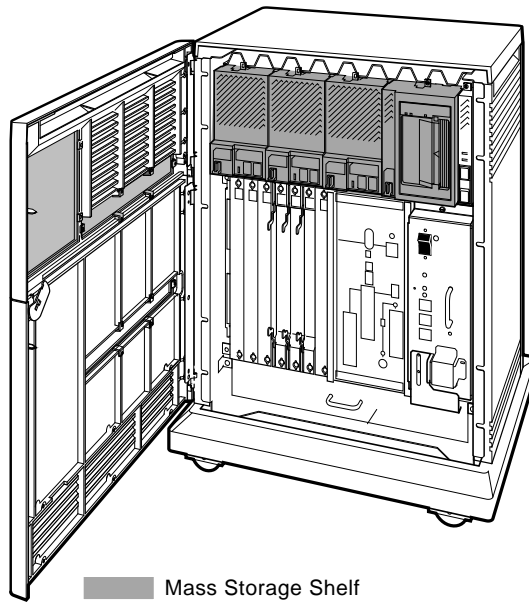


MLO-004207

**Step 3: Locate the RZ56E**

The DECsystem 5500 mass storage shelf extends across the top of the enclosure.

**Figure 10-2 Mass Storage Shelf**

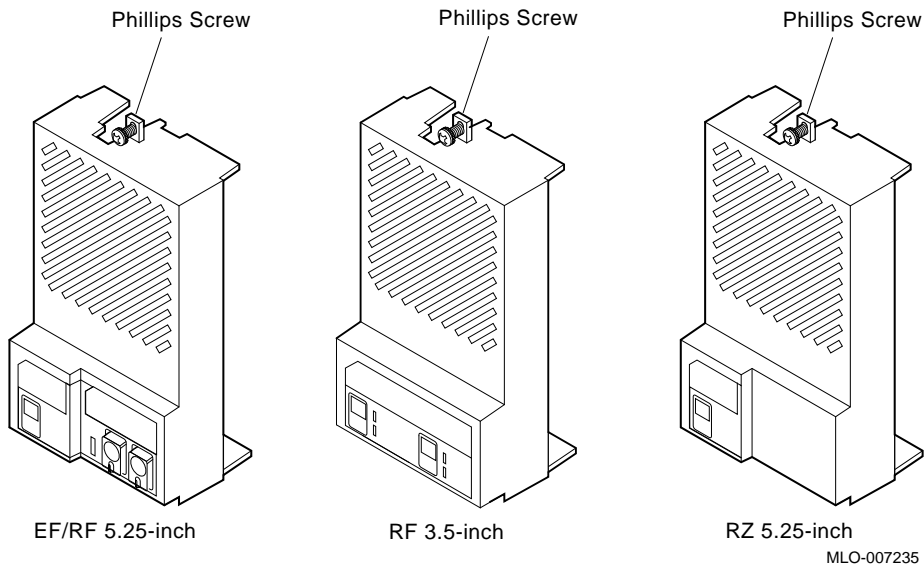


MLO-006704

## Upgrade Procedure

Note that the front panel of the RZ56E drive, unlike the front panel for the EF/RF and RF series drives, has no buttons or indicators, only a plug for the bus node ID.

**Figure 10-3 Front Panel Assemblies**





**Step 4:  
Remove the  
RZ56E**

To remove the drive:

1. Loosen the captive Phillips screw that secures the front panel. See Figure 10-3.
2. Separate the front panel from the enclosure, being careful of the remote front panel cable, which is connected to the front panel.
3. Unplug the remote front panel cable from the module inside the front panel, and set the front panel aside. See Figure 10-4.
4. Loosen the upper and lower captive screws that hold the drive in place. See Figure 10-4.

---

**Caution**

---

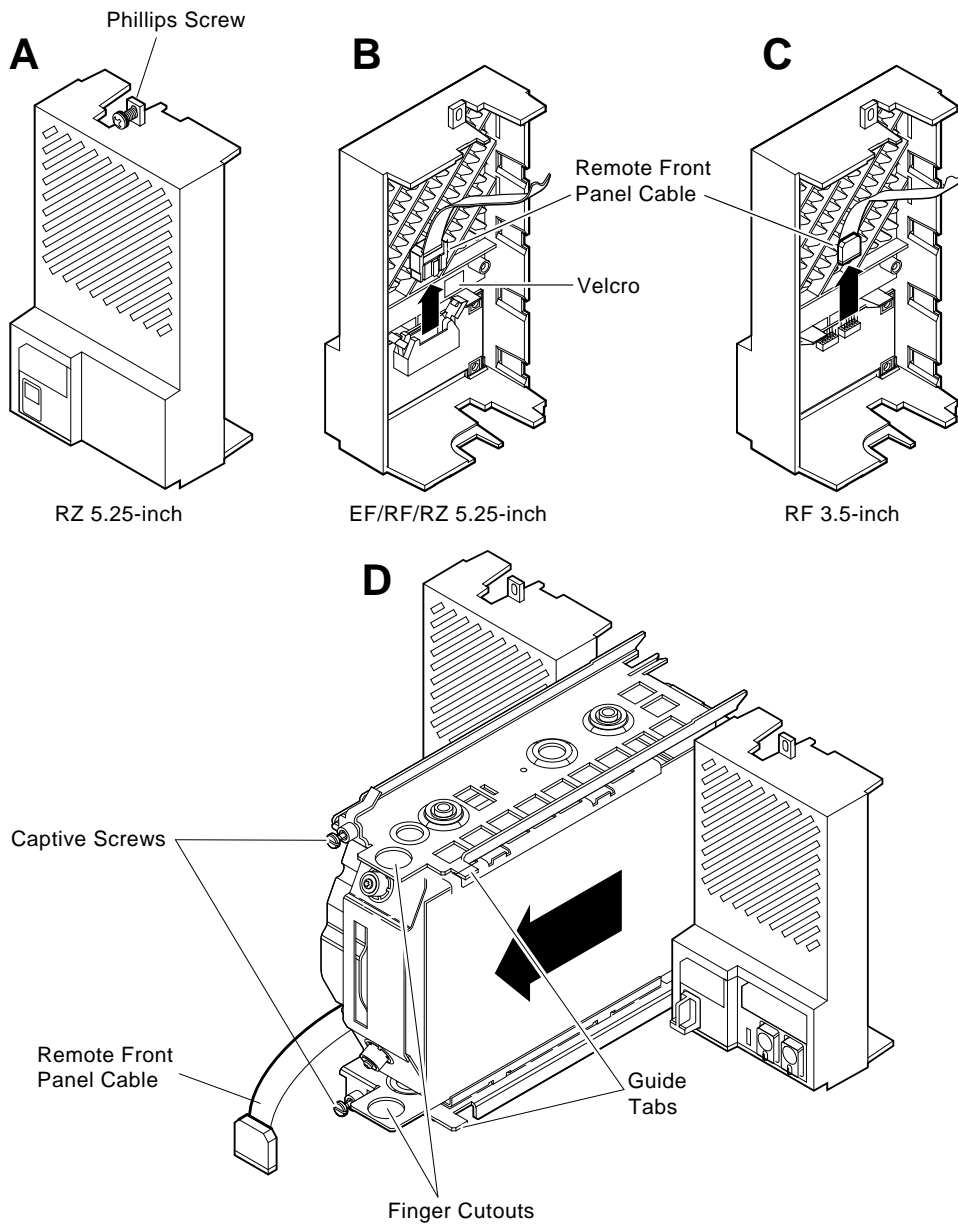
Do not touch the drive module. The drive module contains sensitive electronic circuitry.

---

5. Using the upper and lower finger cutouts on the drive bracket, carefully pull the drive out of its backplane connector and slide the drive out of the enclosure. Support the weight of the drive at the underside of the lower bracket as the drive clears the enclosure.

Upgrade Procedure

Figure 10-4 Remove RZ56E



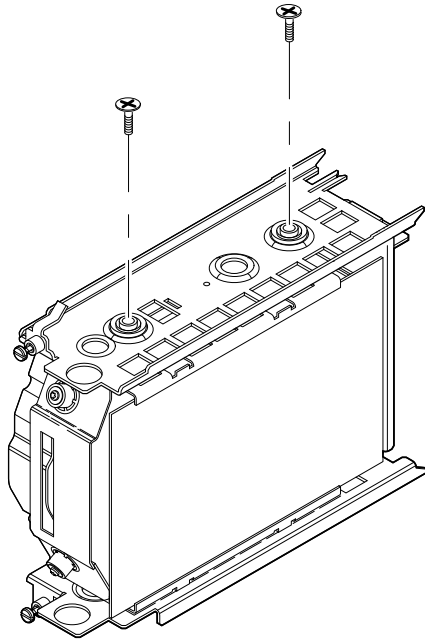
MLO-007247

**Step 5:  
Remove Drive  
Bracket from  
RZ56E**

To remove the drive bracket:

1. Place the drive with its bracket on an antistatic mat.
2. Remove the two Phillips screws at the rubber shock bushing that secure the top bracket to the drive assembly.

**Figure 10-5 Remove Bracket Screws**

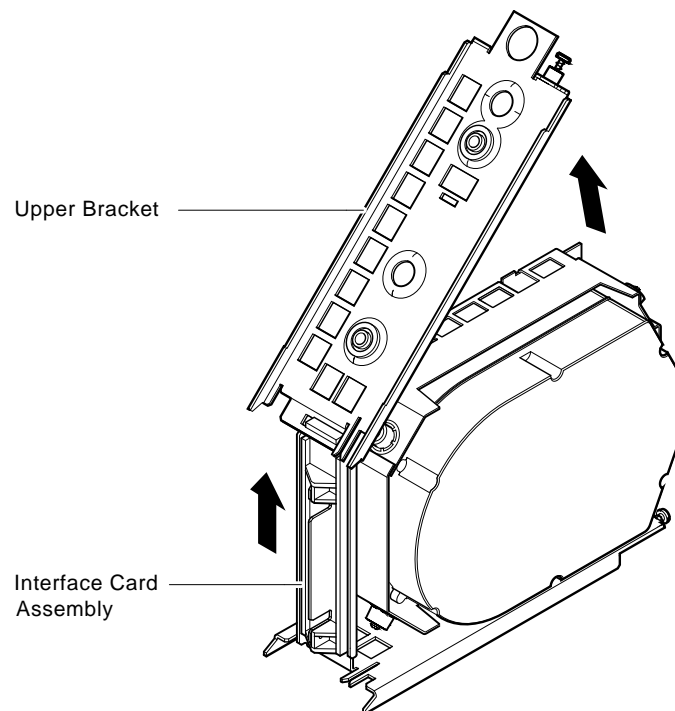


MLO-004213

## Upgrade Procedure

3. Slide the interface card assembly up and lift off the top bracket. Place the bracket aside.

**Figure 10-6 Remove Drive Top Bracket**

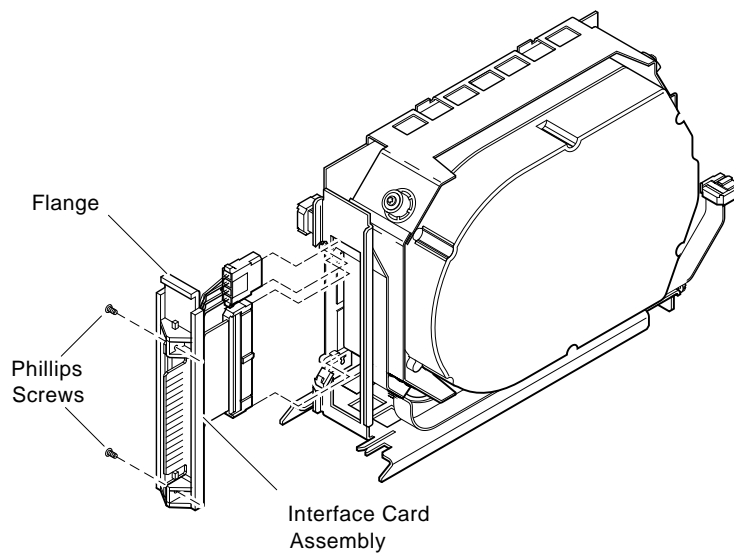


MLO-004214

## Upgrade Procedure

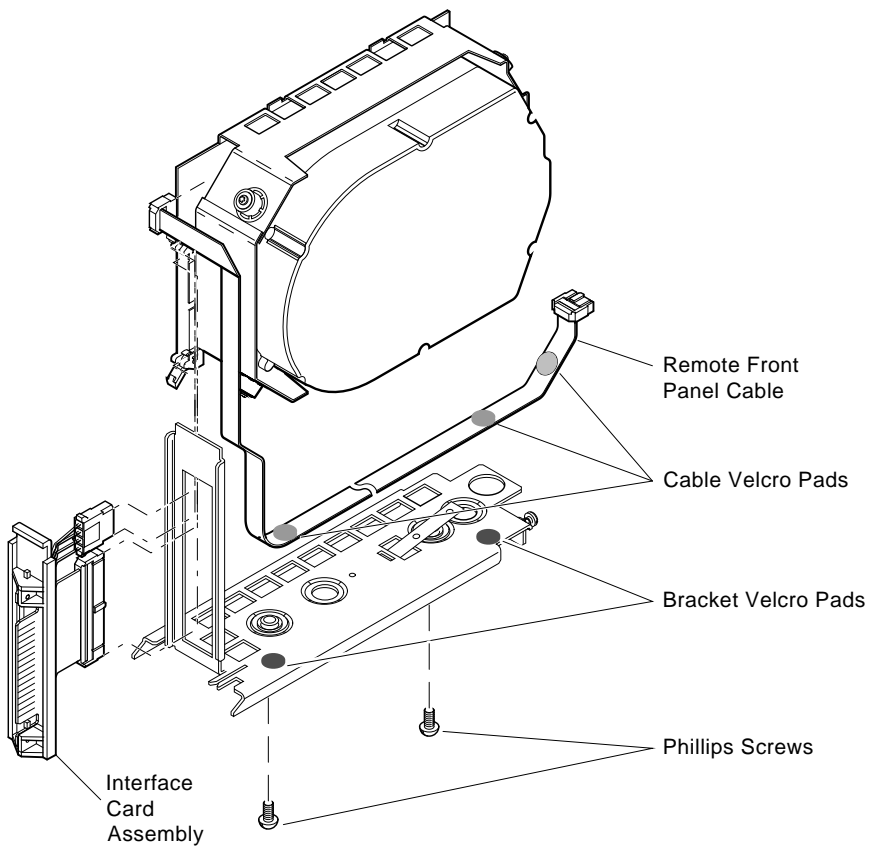
4. Unplug the 4-pin power cable and the SCSI cable from their connectors on the drive controller module.
5. Unplug the remote front panel cable from the controller module on the drive.

**Figure 10-7 Disconnect Cables**



MLO-004257

**Figure 10–8 Remove the Bottom Bracket**



MLO-004258

6. Remove the bottom bracket by removing the two Phillips screws at the rubber shock bushings that secure the bracket to the drive assembly. Put the bottom bracket and the screws aside.

**Step 6:  
Remove TLZ04  
Tape Drive**

Use the following instructions to remove the tape drive. Refer to Figure 10-9.

1. Locate the TLZ04 tape drive on the mass storage shelf. As you face the shelf, the TLZ04 is on the far right.
2. Loosen the captive Phillips screw that secures the front panel to the mass storage shelf.
3. Unplug the ID cable from the TLZ04 front panel and set the front panel aside (Figure 10-9B).
4. Loosen the upper and lower captive screws that hold the drive in place (Figure 10-9C).

---

**Caution**

---

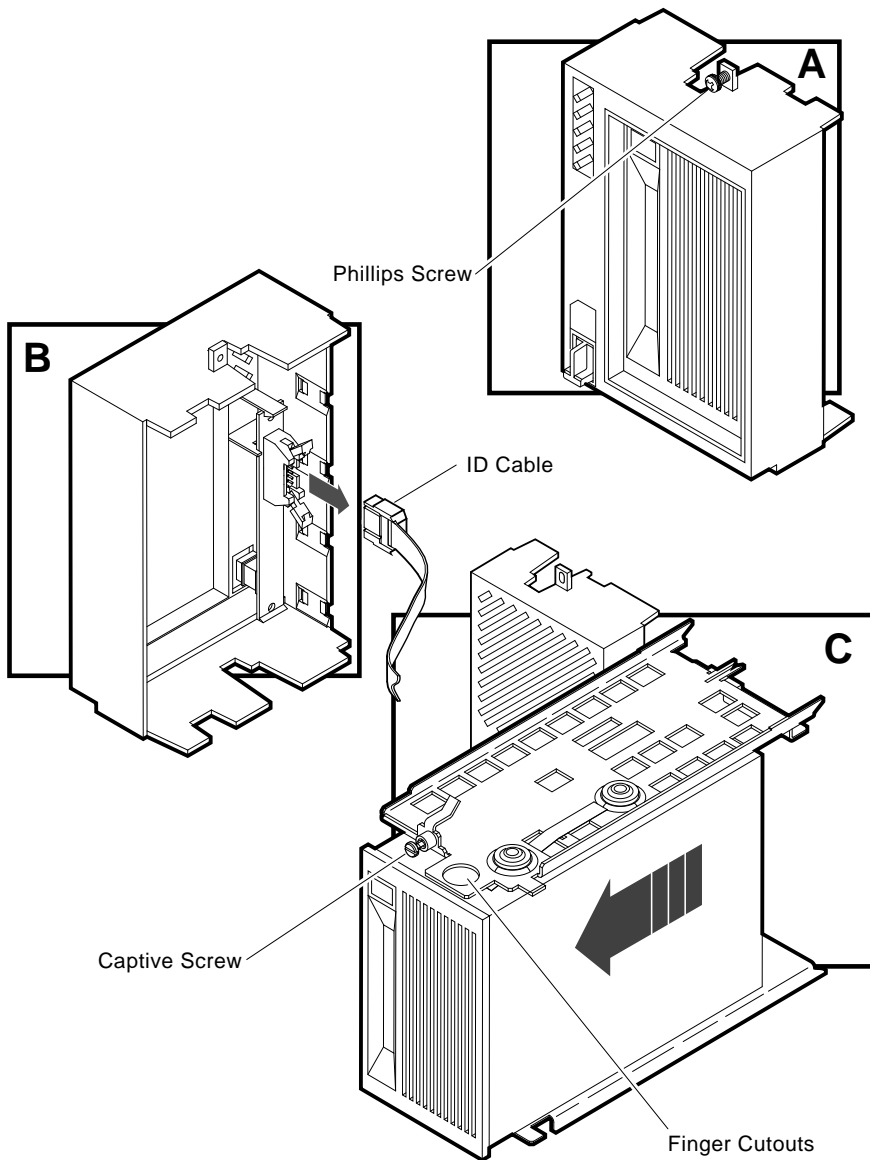
Do not touch the drive module. The drive module contains sensitive electronic circuitry.

---

5. Using the upper and lower finger cutouts on the drive brackets, carefully pull the drive out of its backplane connector and slide the drive out of the enclosure. Support the weight of the drive at the underside of the lower bracket as the drive clears the enclosure (Figure 10-9C).

Upgrade Procedure

Figure 10-9 Remove the TLZ04 Tape Drive



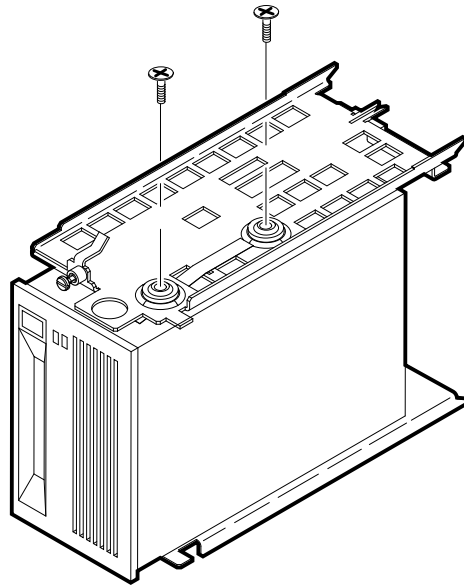
MLO-005795



**Step 7:  
Remove the  
Top Mounting  
Bracket**

1. Place the drive on an antistatic mat.
2. Remove the two Phillips screws at the rubber shock bushings that secure the top bracket to the tape drive (Figure 10–10).

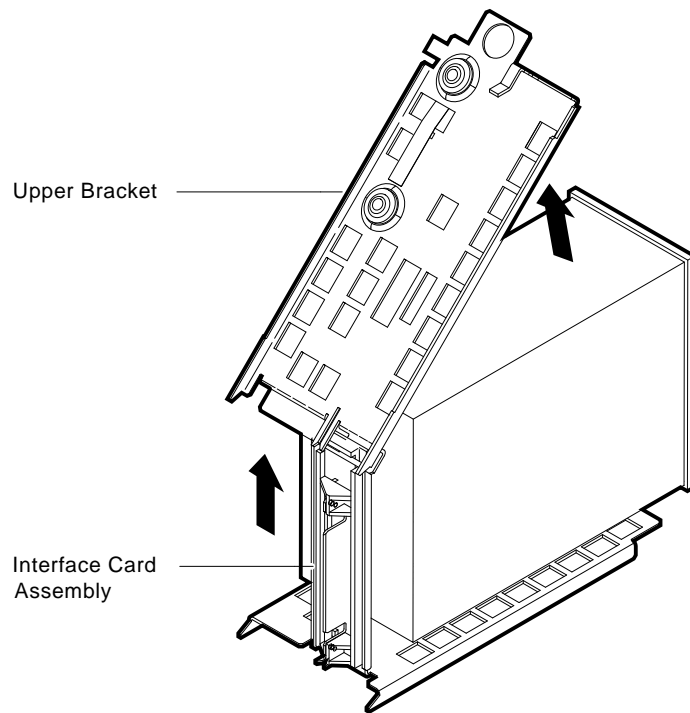
**Figure 10–10 Remove Bracket Screws**



MLO-005799

3. Slide the interface card assembly up and lift off the top bracket (Figure 10–11). Put the bracket aside.

**Figure 10–11 Remove the Drive Top Mounting Bracket**



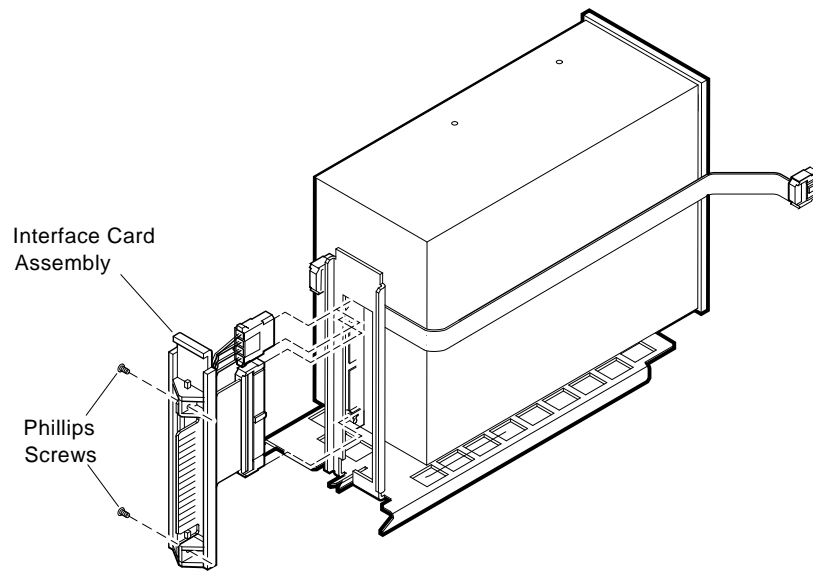
MLO-005800

**Step 8:  
Remove  
the Bottom  
Mounting  
Bracket**

Remove the bottom mounting bracket as follows:

1. Unplug the 4-pin power cable and the SCSI cable from their connectors on the drive controller module.
2. Unplug the remote front panel cable from the controller module on the drive.

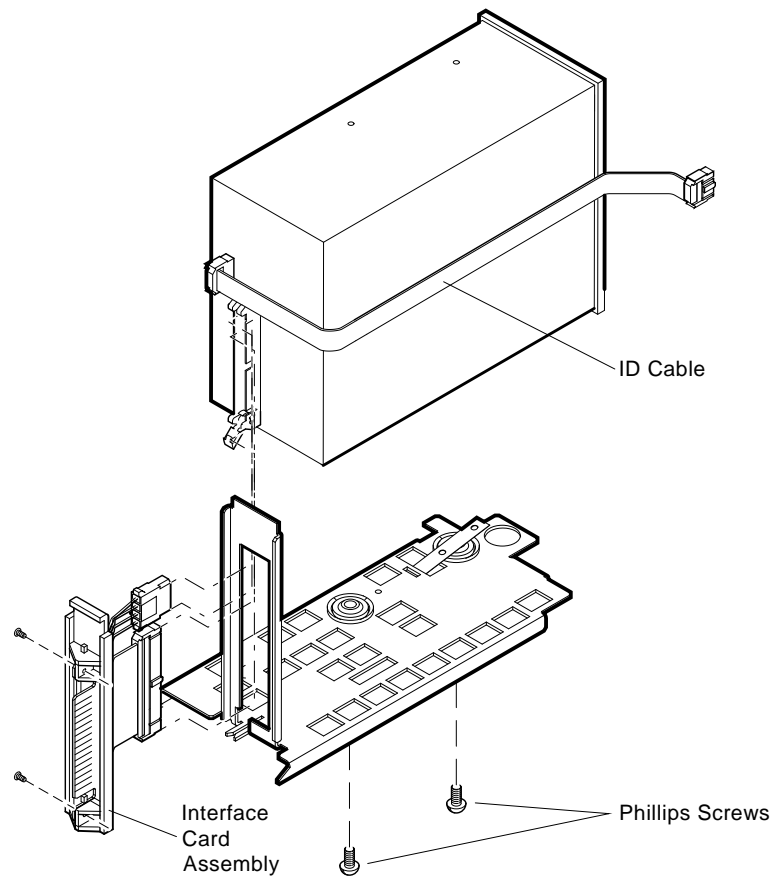
**Figure 10–12 Disconnect Cables**



MLO-005801

3. Remove the bottom bracket by removing the two Phillips screws at the rubber shock bushings that secure the bracket to the drive assembly. Put the bottom bracket and the screws aside.

**Figure 10–13 Remove the Bottom Bracket**



MLO-005802

**Step 9: Set the SCSI IDs on the Drives**

If your DEC 3000 AXP system has a factory-installed disk drive, it is set to SCSI ID 3. Check the SCSI ID settings you noted earlier. If one of the drives you are upgrading is also set to SCSI ID 3, change that setting.

Settings for drives can be found in the *DEC 3000 Model 800 /800S Options Guide* or in the options documentation.

**Step 10:  
Complete the  
Upgrade**

Instructions for installing options that you have removed from your current system can be found in the *DEC 3000 Model 800/800S Options Guide*. Follow the instructions in the *DEC 3000 Model 800/800S Owner's Guide* to complete the upgrade.

Update the customer service contract to the DEC 3000 Model 800S AXP system.

**Step 11:  
Return Your  
DECsystem to  
Digital**

Return your DECsystem and any devices that are not upgradeable to Digital.

1. Pack the DECsystem and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.



# 11

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## Upgrading a DECsystem 5900

### Digital Service Upgrade Only

Call Digital Services for installation.

The DECsystem 5900 is upgraded to a DEC 3000 Model 800S AXP server by removing the DECsystem 5900 CPU from the system enclosure, and installing the rackmountable Model 800S system. This upgrade requires the purchase of the Model 800S rackmount conversion kit (PE5XH-CD). Digital Services must perform this in-cabinet upgrade.

---

### Upgrade Procedure

To upgrade your current system, follow these steps:

#### Step 1: Call Digital Services

Digital Services will perform the in-cabinet upgrade.

#### Step 2: Return Your DECsystem to Digital

Return your DECsystem and any devices that are not upgradeable to Digital.

1. Pack the DECsystem and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

#### Step 3: Update Service Contract

Update the customer service contract to the DEC 3000 Model 800S AXP system.





# 12

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## Upgrading Other Systems

### **No Options Can Be Upgraded**

There are no options that you can move from other systems, such as the DECsystem 5400/5800, and install on your DEC 3000 Model 800S.

---

### **Upgrade Procedure**

To upgrade your current system, follow these steps:

#### **Step 1: Return Your System to Digital**

Return your system and any devices that are not upgradeable to Digital.

1. Pack the system and devices securely in packing material.
2. Attach the return-address label that was in your upgrade kit.

#### **Step 2: Update Service Contract**

After installing the DEC 3000 Model 800S, update the customer service contract to the DEC 3000 Model 800S AXP system.

