MicroVAX 3100 Platform Options

Supplement

Order Number: EK–A0519–UD. D01

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This supplement contains new option information for the *MicroVAX 3100 Platform Options*, EK–A0519–MG, since the last revision. For complete option coverage, use this supplement along with the *MicroVAX 3100 Platform Options* manual.

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Preface

About This Manual

This manual describes the options that you can install in the system enclosures of MicroVAX 3100 platform systems. The option information is listed in alphabetical order. There is one section for each option. Each section contains information under the following headings:

- Description — This subsection briefly describes the option.

- Ordering information — This subsection gives the order numbers for each option variant.

- Option contents — This subsection lists the option components.

- SCSI ID information — This subsection describes how to set the ID of a SCSI device option. In a MicroVAX 3100 platform system, each SCSI device must have a unique SCSI ID. The following table lists the recommended SCSI IDs for the various SCSI devices that the MicroVAX 3100 platform systems support:

SCSI ID	Device
0	RZ2x
1	RZ2x
2	RZ2x
3	RZ2x
4	RRD42, RRD43
5	TZ30, TZK1x, RX26, TLZ06, or TLZ07
6	SCSI controller (INITR)
7	RZ2x or TZK1x

- Installation — This subsection provides instructions that describe how to install the option into a MicroVAX 3100 platform system. Any model-specific information is also described in this subsection.

- Diagnostic support — This subsection provides the diagnostic test command used to test the option.

- Power requirements — This subsection gives the dc (direct current) power requirements of the option.

When the information under a heading is not applicable to an option, that heading is excluded from the section. For example, options that are not SCSI devices do not have the heading SCSI ID Information.

List of Options

This supplement contains descriptions of the following new options that are supported by the MicroVAX 3100 platform:

RRD42 CDROM drive
RRD43 CDROM drive
RZ24L disk drive
RZ25L disk drive
RZ25M disk drive
RZ26 disk drive
RZ26L disk drive
RZ28 disk drive
TLZ06 tape drive
TLZ07 tape drive
TZK10 tape drive
TZK11 tape drive

———————————————— **Caution** ————————————————

Static electricity can damage integrated circuits. Always use the antistatic wrist strap and antistatic pad found in the static-protective field service kit (29-26246-00) when working with the internal parts of a computer.

Handle options with care. Dropping or bumping an option can damage it. Carry or hold the option by its frame or bracket.

1 RRD42-EK CDROM Disk Drive

Description

The RRD42 CDROM drive is a compact disc, read-only memory, SCSI device. It reads data from industry-standard 600 MB discs. Figure 1 shows the RRD42-EK option.

Ordering Information

The order number for the field-installable RRD42 CDROM drive is as follows:

• RRD42-EK

Figure 1   RRD42-EK Option
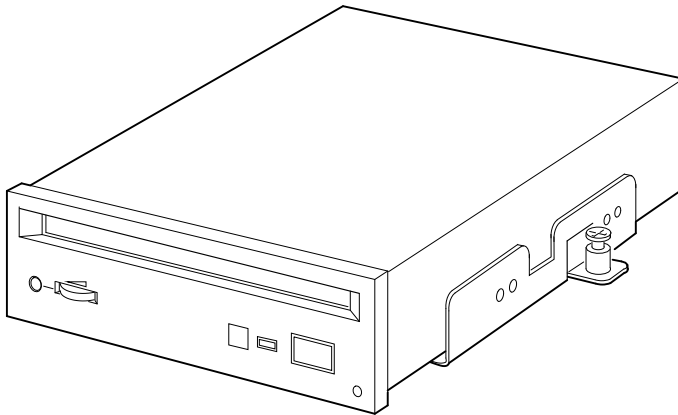
MLO-011312

Option Contents

Each RRD42-EK option contains the following components:

- RRD42-AA CDROM drive

- Mounting bracket (PN 74-42449-01)

- Screws (4) (PN 90-10961-03)

- Bezel insert (for Model 30 systems only) (PN 74-37501-01)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RRD42 CDROM drive, the SCSI ID number is determined by three jumpers. See Figure 2. When installing an RRD42 CDROM drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for more information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RRD42 CDROM drive option.

1. Determine the SCSI ID number to be assigned to the RRD42 CDROM drive option. Typically, the RRD42 CDROM uses SCSI ID 4; however, the system manager may prefer to make this decision.

2. At the console prompt on the system console terminal, enter the SHOW DEVICE command. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Locate the SCSI ID jumper pins on the CDROM drive. See Figure 2.

4. Position the jumpers for the SCSI ID number selected. Table 1 shows the jumper settings for each SCSI ID.

5. Position the jumper wires for parity. See Figure 2.

Figure 2 RRD42 CDROM Drive Jumper Locations

Power Connector

SCSI Cable Connector

SCSI ID Jumper Wires

SCSI ID

Parity 0 1 2
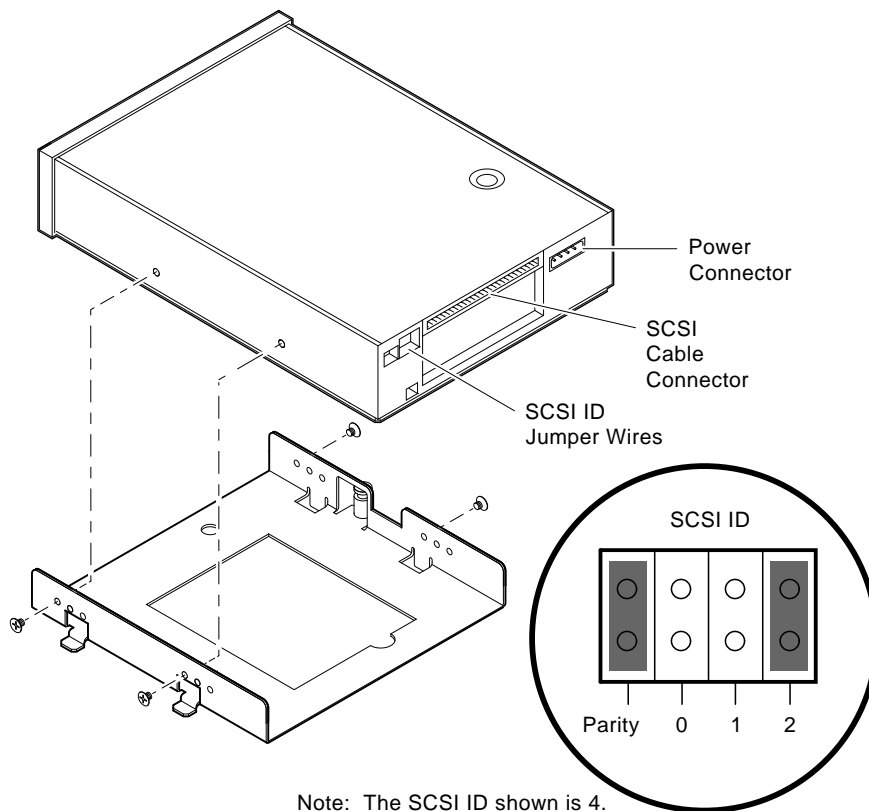
Note: The SCSI ID shown is 4.

MLO-011307

Table 1 RRD42 CDROM SCSI ID Jumper Settings

SCSI ID	Jumper 0	Jumper 1	Jumper 2
0	Out	Out	Out
1	In	Out	Out
2	Out	In	Out
3	In	In	Out
4	Out	Out	In
5	In	Out	In
6	Out	In	In
7	In	In	In

A fourth jumper wire (parity) resides to the left of the SCSI ID jumper wires, and should be installed.

Installation

Before installing the RRD42 CDROM drive option, the enclosure cover must be removed. If you are installing the RRD42 CDROM drive option in a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

You can install an RRD42 CDROM drive in the following MicroVAX 3100 systems:

- A Model 30 system (right storage slot)

- A Model 40, 80, 85, 90, or 95 system (either storage slot in the lower drive-mounting shelf)

The location of the storage slot determines the position of the mounting bracket on the drive. The following sections describe how the mounting bracket should be attached to the CDROM drive.

Preparing to Install an RRD42 Option in a Model 30 System

Before you install an RRD42 CDROM in a Model 30 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 2. Facing the front of the drive, the captive screw should be on the left, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. From inside the enclosure, push the blank bezel insert out of the front bezel.

3. Remove the blank bezel insert from the enclosure. Figure 3 shows the removal of the blank bezel insert from a Model 30 system.

Figure 3 Removing the Blank Bezel Insert (Model 30)

MLO-011306

Preparing to Install an RRD42 Option in a Model 40, 80, 85, 90, or 95 System (Right Storage Slot)
Before you install an RRD42 CDROM drive option in the right storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 2. Facing the front of the drive, the captive screw should be on the left, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf. Figure 4 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

**Figure 4   Opening the Drive Cover and Removing the Blank Bezel Insert
(Models 40, 80, 85, 90, 95)**

Bezel —

Blank Bezel Insert —

GA_EN00246A_92A

_____ **Note** _____

Figure 4 shows a bezel insert being removed for mounting the drive in
the right-hand position; remove the bezel on the left side if the drive is
to be mounted in the left-hand position.

Preparing to Install an RRD42 CDROM Option in a Model 40, 80, 85, 90, or 95 System (Left Storage Slot)

Before you install an RRD42 CDROM option in the left storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as follows: Facing the front of the drive, the captive screw should be on the right, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf. Figure 4 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Installing the RRD42 CDROM Option

After you have prepared the system as described previously, install the RRD42 CDROM drive option as follows:

1. Check the storage slot on the drive-mounting shelf to verify that all spring-lock clips are in the locked position. If they are in the released position, install a lock-out screw to secure them down.

2. Identify the power cable connector that supplies power to the storage slot where the RRD42 CDROM drive will be installed.

3. Connect the power cable to the power connector on the back of the RRD42 CDROM option. See Figure 5.

4. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RRD42 option will be installed.

5. Connect the SCSI cable to the back of the RRD42 option. See Figure 5.

6. Align the tabs on the mounting bracket with the cutouts in the drive-mounting shelf.

7. Tilt the drive slightly to slide the tabs in the drive-mounting shelf cutouts.

Figure 5 Connecting the RRD42 CDROM Power and SCSI Cables
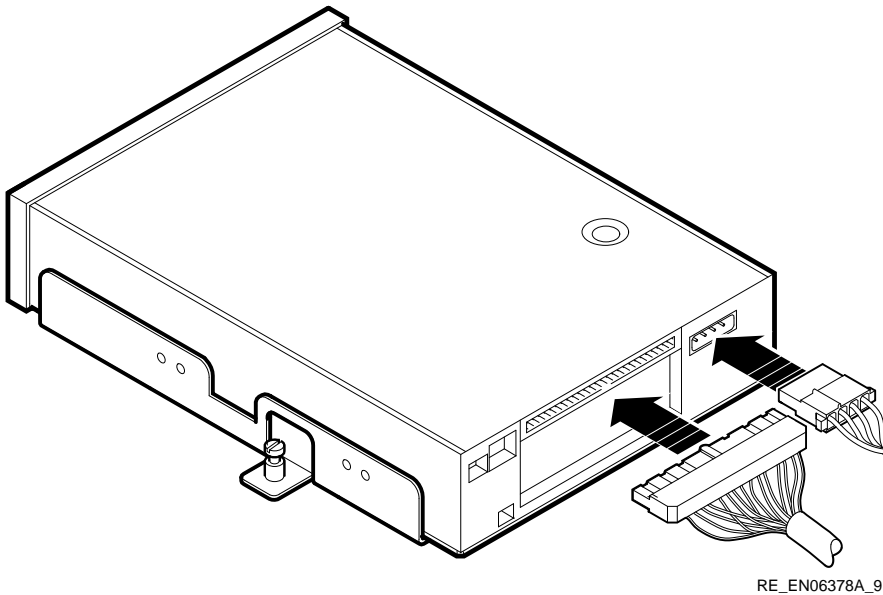
RE_EN06378A_91

8. Lower the CDROM into position and tighten the captive screw on the mounting bracket to secure the tape drive in place. Figure 6 shows the installation of an RRD42 option in the left storage slot of the lower drive-mounting shelf.

Replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 platform systems provide diagnostic support that tests the operation of an RRD42 CDROM drive option.

- If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands at the console prompt to test the operation of the RRD42 option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command at the console prompt to test the operation of the RRD42 option:
  ```
  >>> T E0
  ```

Figure 6   Installing an RRD42 CDROM Option

RRD42 Option

Captive Screw
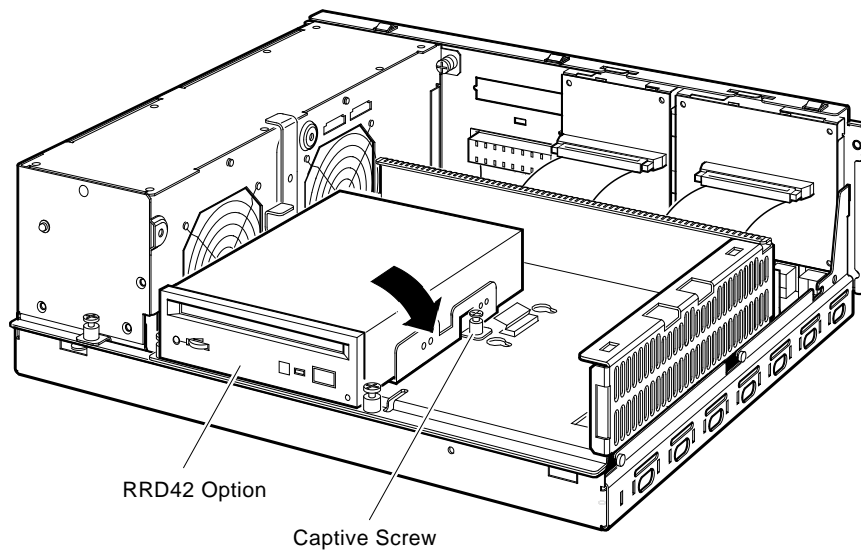
MLO-011316

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.

```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the RRD42 option are as follows:

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	12 V Circuit	
Random seek	0.25	1.50	19.25
Idle	0.25	0.80	10.85

Documentation

The RRD42-EK option includes the following document:

* *MicroVAX 3100 Platform Options Cover Letter*, EK–A0541–CL

2 RRD43-EK CDROM Disk Drive

Description

The RRD43 CD-ROM drive is a compact disc, read-only memory (ROM), Small Computer Systems Interface (SCSI) device. It reads data from industry-standard 600 MB discs.

Ordering Information

The order number for the field-installable RRD43 CDROM drive is as follows:

- RRD43-EK

Figure 7 shows the RRD43 drive and its external features.

Figure 7   RRD43 Compact Disc Drive Front Panel
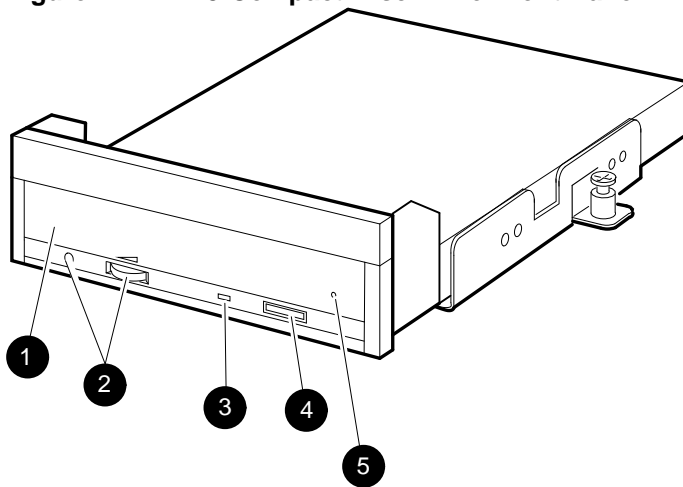
MLO-012261

❶ Disc tray.

❷ Volume control and headphone socket—not used.

❸ Busy LED—This LED turns on when data is read from the disc. It flashes during seek operations.

❹ Eject button—Press this button to eject the disc tray from the RRD43.

❺ Emergency eject hole—Use the emergency eject hole to manually eject the disc tray if a power failure occurs.

Option Contents

Each RRD43-EK option contains the following components:

- RRD43-AA CD-ROM drive

- Bezel insert (not used on the MicroVAX 3100 BA42B-based systems) (74–37501–01)

- Mounting bracket (74–42449–01)

- Screws (4) (90–10556–02)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RRD43 CD-ROM drive, the SCSI ID number is determined by three jumpers (See Figure 8). When installing an RRD43 CD-ROM drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for more information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RRD43-EK CD-ROM drive option.

1. Determine the SCSI ID number to be assigned to the RRD43 CD-ROM drive option. Typically, the RRD43 CD-ROM uses SCSI ID 4; however, the system manager may prefer to make this decision.

2. At the console prompt on the system console terminal, enter the **SHOW CONFIG**, **SHOW DEVICE**, or the **SHOW SCSI** command to list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Locate the SCSI ID jumper pins on the CD-ROM drive. See Figure 8.

4. Position the jumpers for the SCSI ID number selected. Table 2 shows the jumper settings for each SCSI ID.

5. Position the jumper wires for parity (see Figure 8).

Figure 8   RRD43 CD-ROM Drive Mounting Bracket and SCSI ID Jumper Locations

Power Connector

SCSI ID Jumper Wires

SCSI Cable Connector

SCSI ID

1   2   4   Parity

Note: The SCSI ID Shown is 1
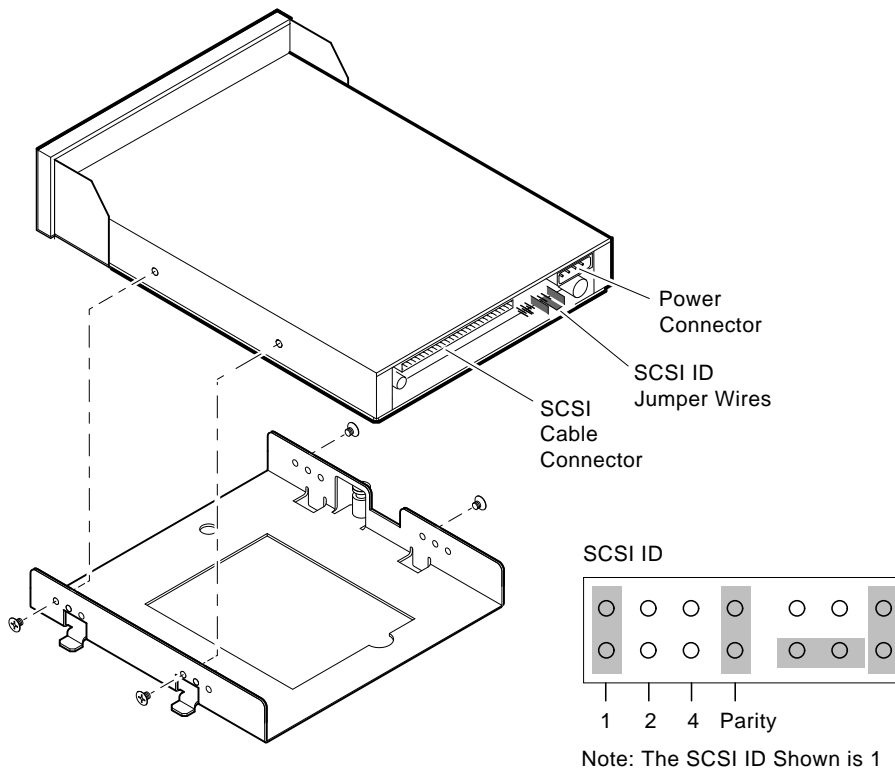
MLO-012257

_____ **Note** _____

Figure 8 shows a mounting bracket being attached for mounting in the right-hand position; the bracket must be reversed for mounting in the left-hand position.

Table 2 RRD43 CD-ROM SCSI ID Jumper Settings

SCSI ID	Jumper 1	Jumper 2	Jumper 4
0	Out	Out	Out
1	In	Out	Out
2	Out	In	Out
3	In	In	Out
4[1]	Out	Out	In
5	In	Out	In
6[2]	Out	In	In
7	In	In	In

[1]Recommended SCSI ID for CD-ROM drives.
[2]Reserved for the SCSI controller.

A fourth jumper wire (parity) resides to the right of the SCSI ID jumper wires and must be installed. When the parity jumper is installed, the drive is in Digital operation mode. When the jumper is removed, the drive is in PC mode.

Installation

Before installing the RRD43 CDROM drive option, the enclosure cover must be removed. If you are installing the RRD43 CDROM drive option in a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

You can install an RRD43 CDROM drive in the following MicroVAX 3100 systems:

- A Model 30 system (right storage slot)

- A Model 40, 80, 85, 90, or 95 system (either storage slot in the lower drive-mounting shelf)

The location of the storage slot determines the position of the mounting bracket on the drive. The following sections describe how the mounting bracket should be attached to the CDROM drive. See Preparing to Install an RRD43 in the Right-Hand Position to begin a right-hand slot installation, or Preparing to Install an RRD43 in the Left-Hand Position in a Model 40, 80, 85, 90, 95 System for the left, before proceeding to the installation itself (Installing the RRD43 CD-ROM Option).

Preparing to Install an RRD43 in the Right-Hand Position

Preparing to Install an RRD43 in a Model 30 System
Before you install an RRD43 CDROM in a Model 30 system, perform the
following steps:

1. Attach the mounting bracket as shown in Figure 8. Facing the front of the
    drive, the captive screw should be on the left, and the four screws attaching
    the mounting bracket to the drive should be attached through the series of
    bracket holes that are closest to the front of the drive.

2. From inside the enclosure, push the blank bezel insert out of the front
    bezel.

3. Remove the blank bezel insert from the enclosure. Figure 9 shows the
    removal of the blank bezel insert from a Model 30 system.

Figure 9   Removing the Blank Bezel Insert (Model 30)
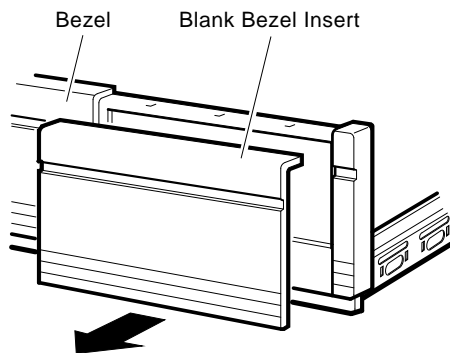
MLO-011306

Preparing to Install an RRD43 in Models 40, 80, 85, 90, 95 System   Before you
install an RRD43 CD-ROM drive option in the right storage slot on the lower
drive-mounting shelf in a MicroVAX 3100 Model 40, 80, 85, 90, or 95, perform
the following steps:

1. Attach the mounting bracket as shown in Figure 8. Facing the front of the
    drive, the captive screw should be on the left, and the four screws attaching
    the mounting bracket to the drive should be attached through the series of
    bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf. Figure 10 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Figure 10   Opening the Drive Cover and Removing the Blank Bezel Insert (Models 40, 80, 85, 90, 95)

Bezel
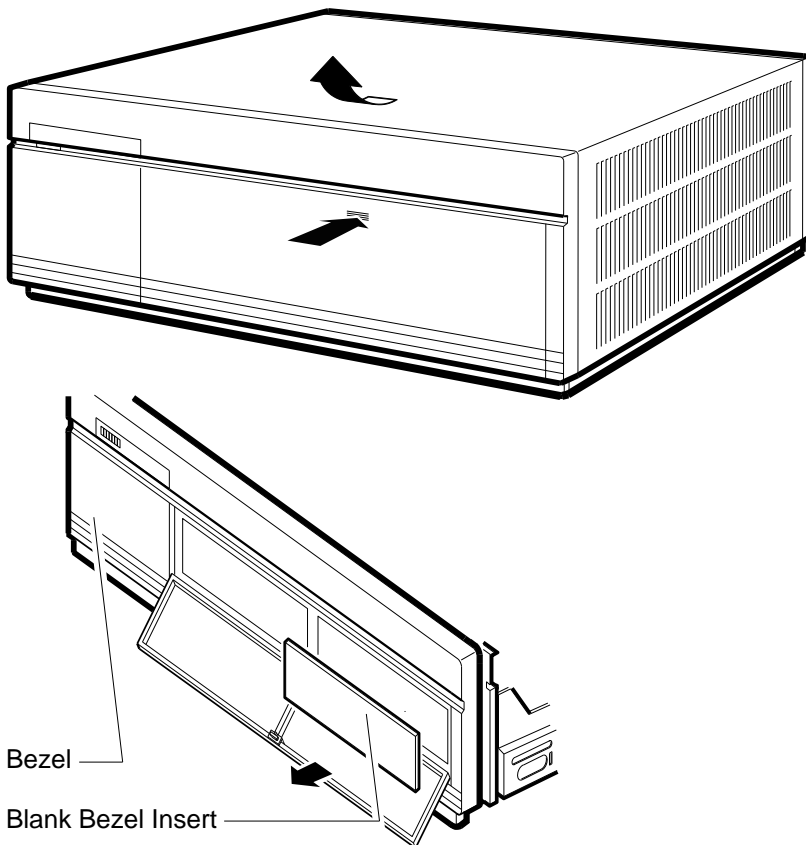
Blank Bezel Insert

GA_EN00246A_92A

─────────────────── **Note** ───────────────────

Figure 10 shows a bezel insert being removed for mounting the drive in the right-hand position; remove the bezel on the left side if the drive is to be mounted in the left-hand position.

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Preparing to Install an RRD43 in the Left-Hand Position in a Model 40, 80, 85, 90, 95 System Before you install an RRD43 CD-ROM drive option in the left storage slot on the lower drive-mounting shelf, perform the following steps:

1. Attach the mounting bracket. Facing the front of the drive, the captive screw should be on the right, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from the inside the enclosure, push out and remove the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf. Figure 10 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Installing the RRD43 CD-ROM Option After you have prepared the RRD43 CDROM option as described previously, install the drive as follows:

1. Check the storage slot on the drive-mounting shelf to verify that all spring-lock clips are in the locked position. If they are in the released position, install a lock-out screw to secure them.

2. Identify the power cable connector that supplies power to the storage slot where the RRD43 CD-ROM drive will be installed.

3. Connect the power cable to the power connector on the back of the RRD43 CD-ROM option. See Figure 11.

4. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RRD43 option will be installed.

5. Connect the SCSI cable to the back of the RRD43 option. See Figure 11.

Figure 11   Connecting the RRD43 CDROM Power and SCSI Cables
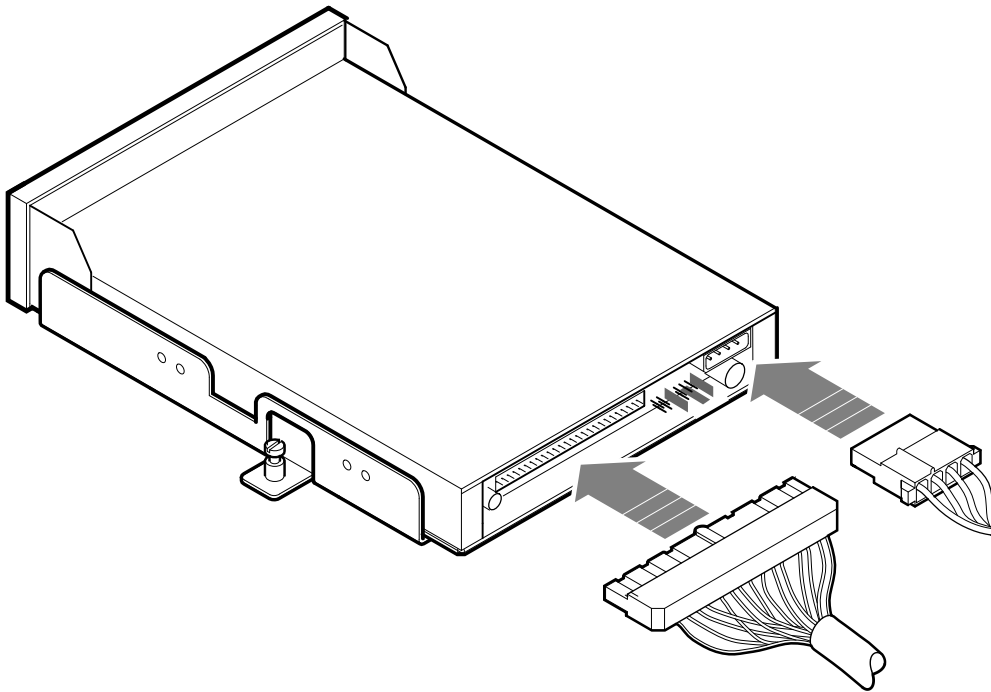
MLO-012259

6. Align the tabs on the mounting bracket with the cutouts in the drive-mounting shelf.

7. Tilt the drive slightly to slide the tabs in the drive-mounting shelf cutouts.

8. Lower the CD-ROM into position and tighten the captive screw on the mounting bracket to secure the CDROM drive in place. Figure 12 shows the installation of an RRD43 option in the left storage slot of the lower drive-mounting shelf.

Figure 12 Installing an RRD43 CDROM Option

RRD43

Captive Screw
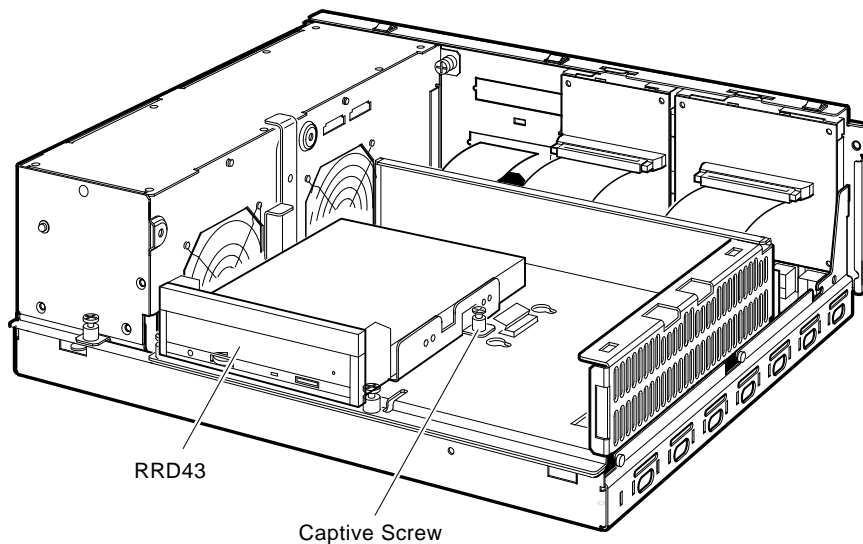
MLO-012260

9. Reinstall the upper drive-mounting shelf and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 platform systems provide diagnostic support that tests the operation of an RRD43 CDROM drive option.

- If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands at the console prompt to test the operation of the RRD43 option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command at the console prompt to test the operation of the RRD43 option:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the console terminal displays an error message similar to the following:

```
? Test_Subtest_E0_04  Loop_Subtest=00  Err_type=FF   DE_SCSI.lis
Vec=0000  Prev_errs=0001  P1=04000001  P2=00000000  P3=00000014  P4=00000000
P5=00000000  P6=00000000  P7=00000000  P8=00000000  P9=00000000  P10=0000005C
Stat=0022 Ext_stat 000E0065 00010000 00120003 00220000 00000047 FFFFFFFF
 FFFFFFFF 00000002 000E0066 00020000 00120003 00220000 00000047 FFFFFFFF
 FFFFFFFF 00000002 000E0067 00030000 00120003 00220000 00000047 FFFFFFFF
 FFFFFFFF 00000002 000E0068 00040000 00120003 00220000 00000047 FFFFFFFF
 FFFFFFFF 00000002 000E0069 00050000 00120003 00220000
 dser=0000 cesr=00000000 icsr=01 pcsts=F800 pcctl=FC13 cctl=00000007
 bcetsts=03E0 bcedsts=0F00 cefsts=00019220 nests=00 mmcdsr=00139000
 mesr=00006000
```

Refer to the your system maintenance manual for more information about the diagnostics.

Power Requirements

Table 3 gives the dc power requirements of the RRD43-EK option.

Table 3   RRD43-EK Power Requirements

+5V
1X transfer rate 950 ma
2X transfer rate 1.0 ma
Less than 7W (maximum)

3 RZ24L-EH Disk Drive

Description

The RZ24L disk drive is a 3.5-inch high-performance SCSI device. It stores up to 245 MB of formatted data on thin-film rigid media disks. The storage medium in the disk drive is fixed (not operator removable).

Ordering Information

The field-installable option variant installed by Digital services personnel in a MicroVAX 3100 platform system is as follows:

- RZ24L-EH

Option Contents

The RZ24L-EH option contains the following components:

- RZ24L-E disk drive

- Mounting bracket (PN 74-44226-01)

- Grommets/screws (4) (PN 12-31734-01)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RZ24L disk drive, the SCSI ID number is determined by three jumpers. See Figure 13. When installing an RZ24L disk drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RZ24L disk drive.

1. Determine the SCSI ID number to be assigned to the RZ24L disk drive option. Typically, the first RZ-series disk in a system uses SCSI ID 1, the second RZ-series disk uses SCSI ID 2, and the third RZ-series disk uses SCSI ID 3; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Locate the SCSI ID jumper pins on the disk drive. See Figure 13.

4. Position the jumpers for the SCSI ID number selected. Table 4 shows the SCSI ID number and the corresponding jumper settings.

   Note: The SCSI ID shown in Figure 13 is 3.

Figure 13 RZ24L SCSI ID Jumper Locations
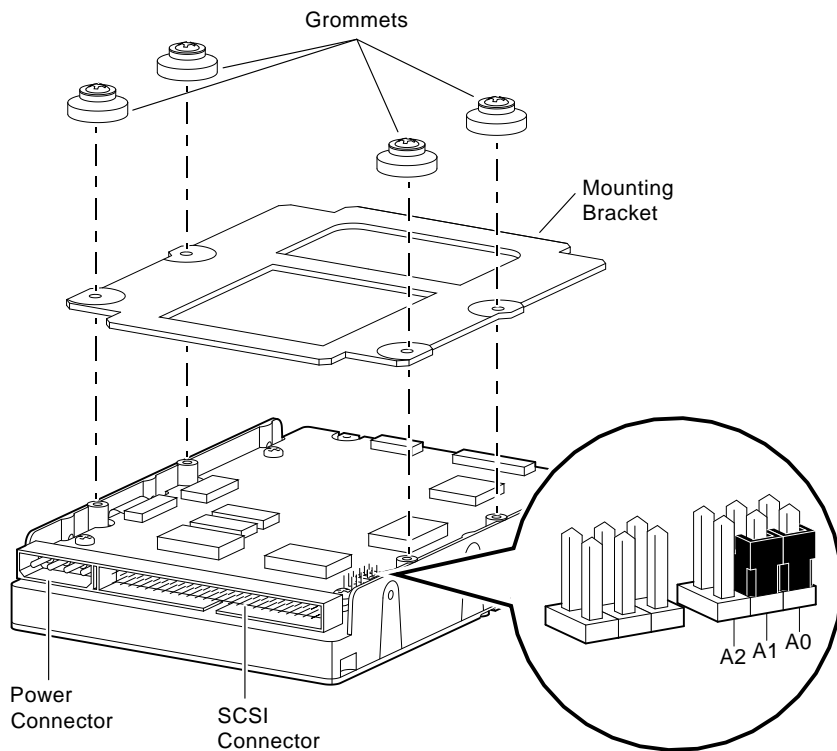
MLO-011305

Table 4   RZ24L SCSI ID Jumper Settings

SCSI ID	Jumper A2	Jumper A1	Jumper A0
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

Installation

Before installing the RZ24L disk drive option, the enclosure cover must be removed. If you are installing the RZ24L disk drive option on the lower drive-mounting shelf of a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

Installing an RZ24L Disk Drive

To install an RZ24L disk drive option, follow these steps:

1. If mounting hardware is already attached to the drive (see Figure 13), go to step 3.

2. Attach the mounting bracket with the four grommets/screws. The grommets fit into the recessed side of the imprinted pockets on the bracket as shown in Figure 13.

3. Identify the storage slot where the RZ24L option will be installed. Your enclosure maintenance manual describes mass storage device orientation.

4. Locate the spring clip and lock-out screw for the storage slot where the RZ24L disk drive option will be installed (Figure 14). Remove the lock-out screw if it has not already been removed.

5. Identify the power cable connector that supplies power to the storage slot where the RZ24L option will be installed.

6. Connect the power cable to the power connector on the back of the RZ24L disk drive option. See Figure 13.

7. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RZ24L disk drive option will be installed.

8. Connect the SCSI cable to the back of the RZ24L disk drive option. See Figure 13.

9. Position the grommets attached to the RZ24L option in the cutouts of the drive-mounting shelf.

10. Slide the RZ24L disk drive option away from the spring clip until the grommets are secure in the cutouts and the spring clip locks the disk drive into position.

Figure 14   Installing an RZ24L Disk Drive
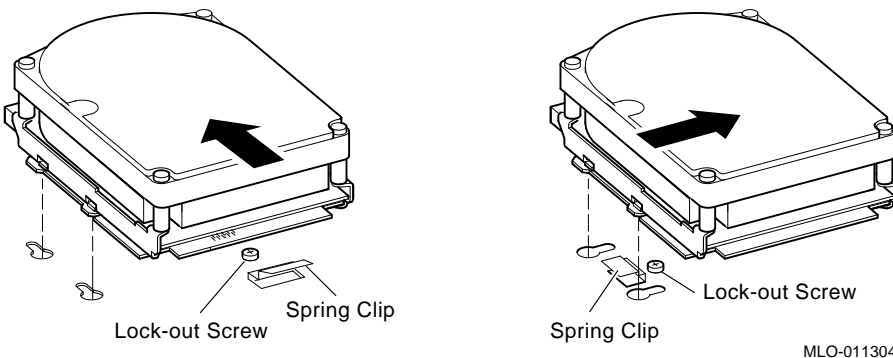
After the RZ24L disk drive option is installed, replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 system provides diagnostic support that tests the operation of an RZ24L disk drive.

- If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands at the console prompt to test the operation of the RZ24L option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command at the console prompt to test the operation of the RZ24L option:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.

```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the RZ24L disk drive option are as follows:

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	**12 V Circuit**	
Random seek	0.30	0.43	6.7
Idle	0.18	0.35	5.1

4 RZ25L-EK Disk Drive

Description

The RZ25L disk drive is a 3.5-inch high-performance SCSI device. It stores up to 535 MB of formatted data on thin-film rigid media disks. The storage medium in the disk drive is fixed (not operator removable).

Ordering Information

There are two field-installable option variants that may be installed by Digital services personnel. The option variant that you should order is determined by the model of the MicroVAX 3100 platform system that you have. The field-installable option variants are as follows:

- RZ25L-EK for MicroVAX 3100 Model 30, 40, 80, 85, 90, or 95 systems

- RZ25L-EF for MicroVAX 3100 Model 10, 10E, 20, or 20E systems

Option Contents

The RZ25L-EK option contains the following components:

- RZ25L-E disk drive

- Mounting bracket (PN 74-44226-01)

- Grommets/screws (4) (PN 12-31734-01)

- Documentation

The RZ25L-EF option contains the following components:

- RZ25L-E disk drive

- Screws (4) (PN 90-09984-07)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RZ25L disk drive, the SCSI ID number is determined by three jumpers. See Figure 15. When installing an RZ25L disk drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RZ25L disk drive.

1. Determine the SCSI ID number to be assigned to the RZ25L disk drive option. Typically, the first RZ-series disk in a system uses SCSI ID 1, the

second RZ-series disk uses SCSI ID 2, and the third RZ-series disk uses SCSI ID 3; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Place the drive on an anti-static surface with the HDA down, and the SCSI connector toward you. Figure 15 shows the drive orientation.

4. Locate the SCSI ID jumper pins on the disk drive. The RZ25L disk drive has two sets of SCSI ID jumpers. You can use either set, but use only one of the two sets of jumpers to set the SCSI ID number. See Figure 15.

5. Position the jumpers for the SCSI ID number selected. Table 5 shows the SCSI ID number and the corresponding jumper settings.

Figure 15   RZ25L SCSI ID Jumper Locations

Grommets

Mounting
Bracket

A0 A1 A2

A2 A1 A0

Power
Connector
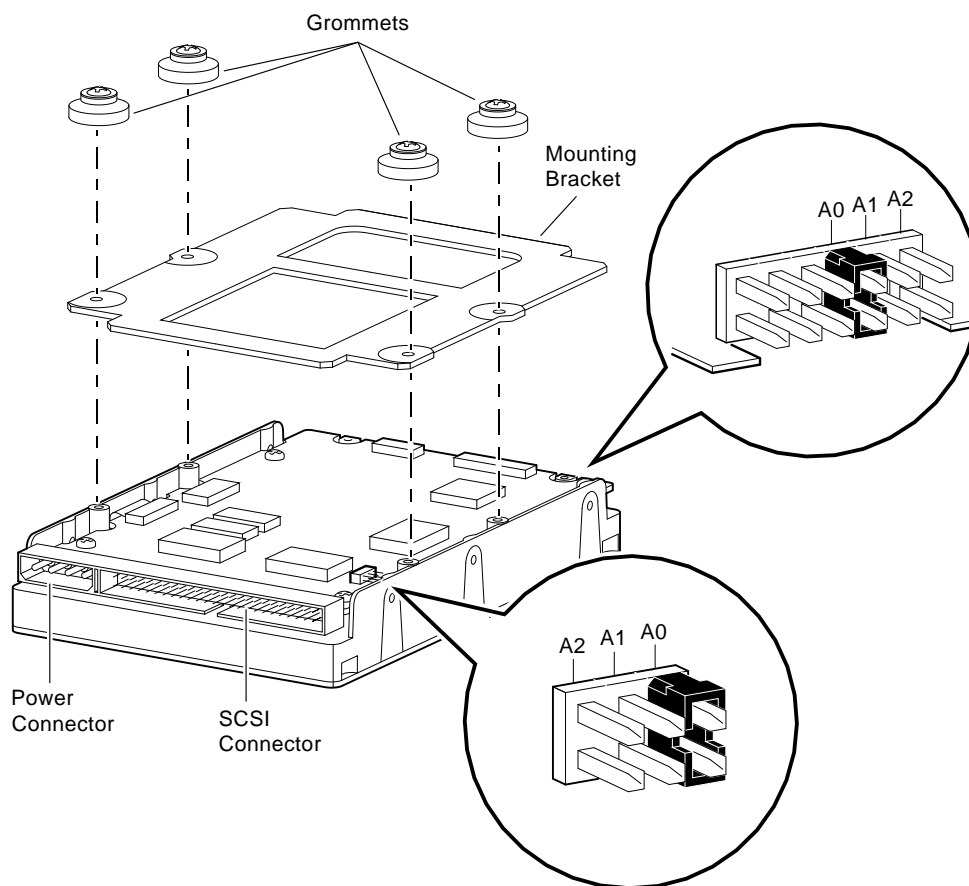
SCSI
Connector

MLO-012054

Table 5 RZ25L SCSI ID Jumper Settings

SCSI ID	Jumper A2	Jumper A1	Jumper A0
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

Installation

Before installing the RZ25L disk drive, the enclosure cover must be removed. If you are installing the RZ25L disk drive option on the lower drive-mounting shelf of a MicroVAX 3100 Model 20, 20E, 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

The RZ25L-EH and RZ25L-EF each have a separate installation procedure. These procedures are described in the following sections.

Installing an RZ25L-EH Disk Drive in a Model 10, 10E, 20, or 20E System

To install an RZ25L-EH disk drive option in a Model 10, 10E, 20, or 20E system, follow these steps:

1. Place the drive on an anti-static work area with the HDA down, and the SCSI connector toward you.

2. Place a screw in each of the mounting holes on the left side of the bottom of the drive. See Figure 16. Do not tighten the screws; leave enough space between the screw head and the drive to slide into the cutouts on the drive mounting shelf.

3. Identify the storage slot where the RZ25L option will be installed. Your enclosure maintenance manual describes mass storage device orientation.

4. Remove the drive mounting shelf as described in your enclosure maintenance manual.

5. Position the screws attached to the RZ25L option in the cutouts of the drive-mounting shelf. See Figure 16.

6. Slide the RZ25L disk drive option toward the back of the enclosure until the screws are secure in the cutouts.

7. Secure the drive to the drive-mounting shelf with the remaining two screws. See Figure 17.

8. Tighten the screws that you inserted in step 2.

9. Insert the drive-mounting shelf in the enclosure.

10. Identify the power cable connector that supplies power to the storage slot where the RZ25L option will be installed.

11. Connect the power cable to the power connector on the back of the RZ25L disk drive option. See Figure 15.

12. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RZ25L disk drive option will be installed.

13. Connect the SCSI cable to the back of the RZ25L disk drive option. See Figure 15.

Figure 16 Installing an RZ25L-EH Disk Drive (Bottom View)
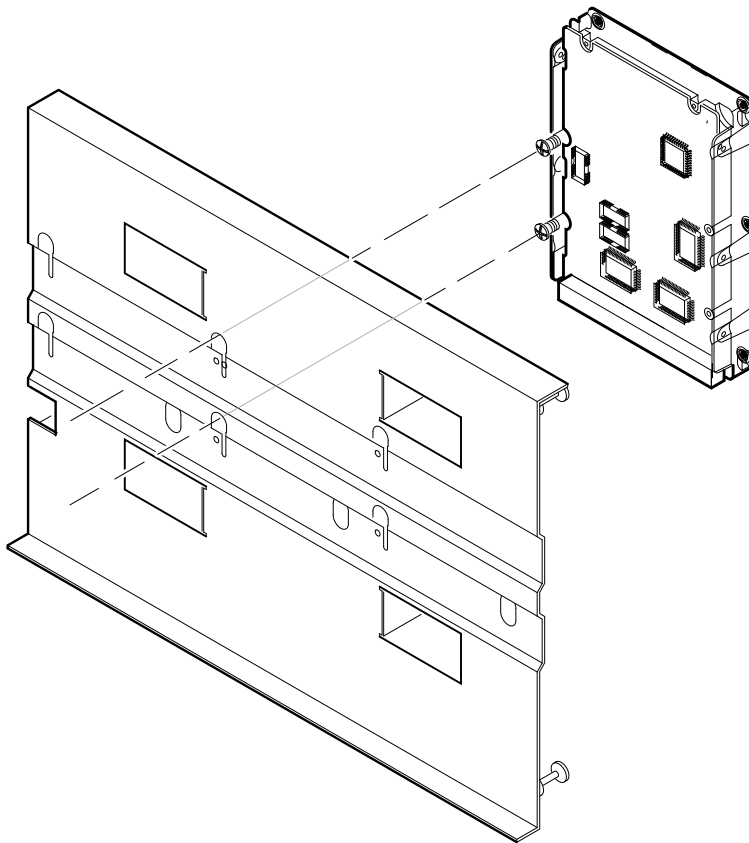
MLO-012052

Figure 17   Securing an RZ25L-EH Disk Drive
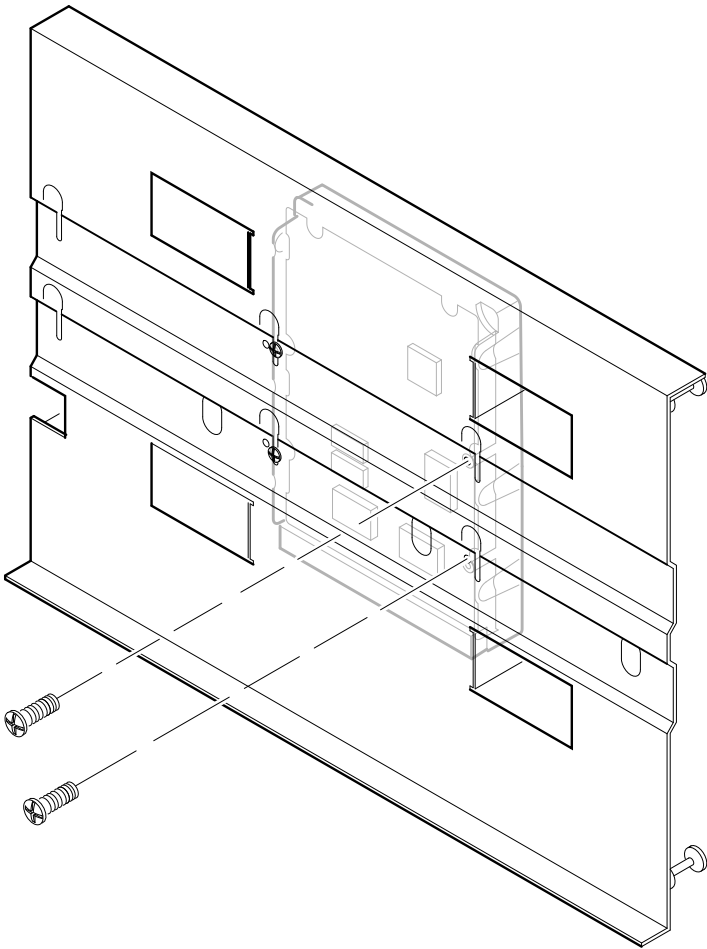
MLO-012053

Installing an RZ25L-EK Disk Drive in a Model 30, 40, 80, 85, 90, or 95 System

To install an RZ25L-EK disk drive option in a Model 30, 40, 80, 85, 90, or 95 system, follow these steps:

1. If mounting hardware is already attached to the drive (see Figure 15), go to step 3.

2. Attach the mounting bracket with the four grommets/screws. The grommets fit into the recessed side of the imprinted pockets on the bracket as shown in Figure 15.

3. Identify the storage slot where the RZ25L option will be installed. Your enclosure maintenance manual describes mass storage device orientation.

4. Locate the spring clip and lock-out screw for the storage slot where the RZ25L disk drive option will be installed (Figure 18). Remove the lock-out screw if it has not already been removed.

5. Identify the power cable connector that supplies power to the storage slot where the RZ25L option will be installed.

6. Connect the power cable to the power connector on the back of the RZ25L disk drive option. See Figure 15.

7. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RZ25L disk drive option will be installed.

8. Connect the SCSI cable to the back of the RZ25L disk drive option. See Figure 15.

9. Position the grommets attached to the RZ25L option in the cutouts of the drive-mounting shelf.

10. Slide the RZ25L disk drive option away from the spring clip until the grommets are secure in the cutouts and the spring clip locks the disk drive into position.

Figure 18   Installing an RZ25L-EK Disk Drive

Spring Clip
Lock-out Screw
Lock-out Screw
Spring Clip
MLO-011304
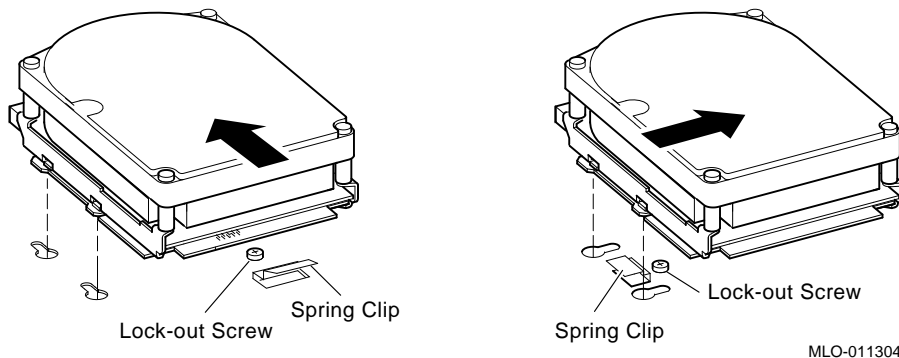
After the RZ25L disk drive option is installed, replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 system provides diagnostic support that tests the operation of an RZ25L disk drive.

- If you are using a MicroVAX Model 10, 10E, 20, 20E, 30, 40, or 80 system, enter one of the following commands at the console prompt to test the operation of the RZ25L option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command at the console prompt to test the operation of the RZ25L option:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.
```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the RZ25L disk drive option are as follows:

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	12 V Circuit	
Random seek	0.88	0.53	10.76
Idle	0.48	0.38	6.96

5 RZ25M-EK Disk Drive

Description

The RZ25M disk drive is a 3.5-inch high-performance SCSI device. It stores up to 545 MB of formatted data on thin-film rigid media disks. The storage medium in the disk drive is fixed (not operator removable).

Ordering Information

The field-installable option variant that may be installed by Digital services personnel in a MicroVAX 3100 Model 40, 85, or 95 is:

• RZ25M-EK

Option Contents

The RZ25M-EK option contains the following components:

• RZ25M-E disk drive

• Mounting bracket (PN 74-44226-01)

• Grommets/screws (4) (PN 12-31734-01)

• Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RZ25M disk drive, the SCSI ID number is determined by three jumpers. See Figure 19. When installing an RZ25M disk drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RZ25M disk drive.

1. Determine the SCSI ID number to be assigned to the RZ25M disk drive option. Typically, the first RZ-series disk in a system uses SCSI ID 1, the second RZ-series disk uses SCSI ID 2, and the third RZ-series disk uses SCSI ID 3; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Place the drive on an anti-static surface with the HDA down, and the SCSI connector toward you. Figure 19 shows the drive orientation.

4. Locate the SCSI ID jumper pins on the disk drive. See Figure 19.

5. Position the jumpers for the SCSI ID number selected. Table 6 shows the SCSI ID number and the corresponding jumper settings.

Figure 19   RZ25M SCSI ID Jumper Locations
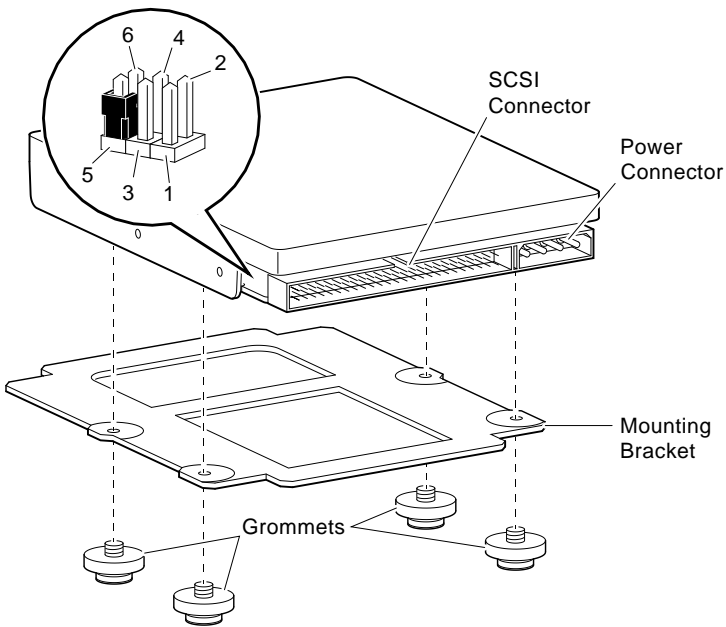
MLO-013146

Table 6   RZ25M SCSI ID Jumper Settings

SCSI ID	Pins 1&2	Pins 3&5	Pins 5&6
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

Installation

Before installing the RZ25M disk drive, the enclosure cover must be removed. If you are installing the RZ25M disk drive option on the lower drive-mounting shelf, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

Installing an RZ25M-EK Disk Drive in a Model 40, 85, or 95 System

To install an RZ25M-EK disk drive option in a Model 40, 85, or 95 system, follow these steps:

1. If mounting hardware is already attached to the drive (see Figure 19), go to step 3.

2. Attach the mounting bracket with the four grommets/screws. The grommets fit into the recessed side of the imprinted pockets on the bracket as shown in Figure 19.

3. Identify the storage slot where the RZ25M option will be installed. Your enclosure maintenance manual describes mass storage device orientation.

4. Locate the spring clip and lock-out screw for the storage slot where the RZ25M disk drive option will be installed (Figure 20). Remove the lock-out screw if it has not already been removed.

5. Identify the power cable connector that supplies power to the storage slot where the RZ25M option will be installed.

6. Connect the power cable to the power connector on the back of the RZ25M disk drive option. See Figure 19.

7. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RZ25M disk drive option will be installed.

8. Connect the SCSI cable to the back of the RZ25M disk drive option. See Figure 19.

9. Position the grommets attached to the RZ25M option in the cutouts of the drive-mounting shelf.

10. Slide the RZ25M disk drive option away from the spring clip until the grommets are secure in the cutouts and the spring clip locks the disk drive into position.

Figure 20   Installing an RZ25M-EK Disk Drive

MLO-011304
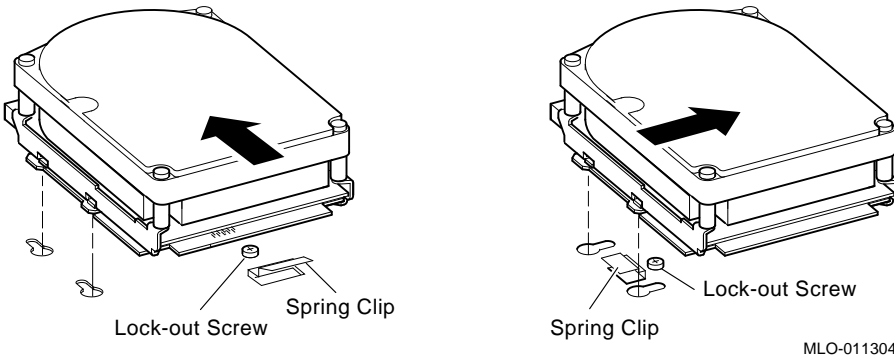
After the RZ25M disk drive option is installed, replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 system provides diagnostic support that tests the operation of an RZ25M disk drive.

- If you are using a MicroVAX Model 40 system, enter one of the following commands at the console prompt to test the operation of the RZ25M option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, or Model 95 system, enter the following command at the console prompt to test the operation of the RZ25M option:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.

```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the RZ25M disk drive option are as follows:

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	**12 V Circuit**	
Random seek	0.35	0.354	6.00
Idle	0.221	0.116	2.50

6 RZ26/RZ26L/RZ28-EK Disk Drives

Description

The RZ26, RZ26L, and RZ28 disk drives are 3.5-inch high-performance SCSI devices. They store data on thin-film rigid media disks. The storage medium in the disk drive is fixed (not operator removable). The following table lists the capacities of the drives.

Drive	Capacity
RZ26	1.05 Gbyte
RZ26L	1.05 Gbyte
RZ28	2.10 Gbyte

Ordering Information

The field-installable option variants installed by Digital services personnel in a MicroVAX 3100 platform system are as follows:

- RZ26-EK

- RZ26L-EK

- RZ28-EK

Option Contents

The RZ26/RZ26L/RZ28-EK option contains the following components:

- RZ26, RZ26L, or RZ28 disk drive

- Mounting bracket (PN 74-44226-01)

- Grommets/screws (4) (PN 12-31734-01)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In the RZ26, RZ26L, and RZ28 disk drives, the SCSI ID number is determined by three jumpers. See Figure 21. When installing an RZ26, RZ26L, or RZ28 disk drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on an RZ26, RZ26L, or RZ28 disk drive option.

1. Determine the SCSI ID number to be assigned to the disk drive option. Typically, the first RZ-series disk in a system uses SCSI ID 1, the second

RZ-series disk uses SCSI ID 2, and the third RZ-series disk uses SCSI ID 3; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Locate the SCSI ID jumper pins on the disk drive. See Figure 21.

4. Position the jumpers for the SCSI ID number selected. Table 7 shows the SCSI ID number and the corresponding jumper settings.

Figure 21   RZ26/RZ26L/RZ28 SCSI ID Jumper Locations

MLO-010179
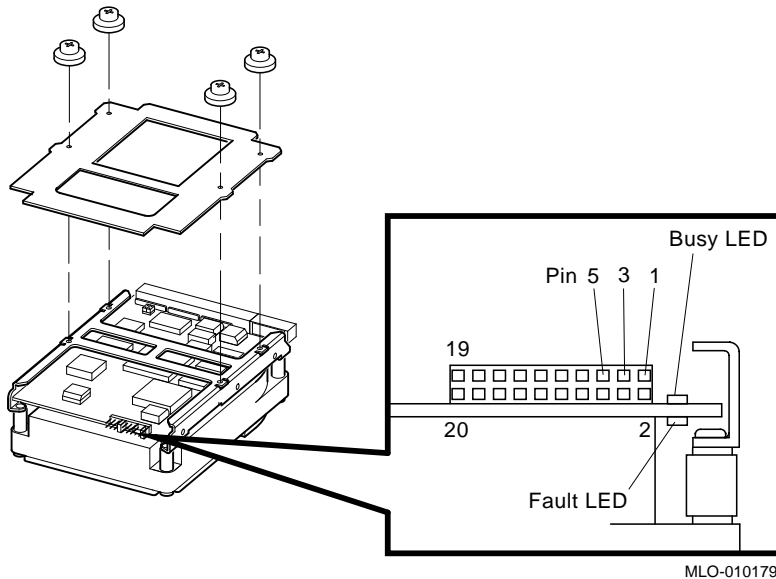
Table 7 RZ26/RZ26L/RZ28 SCSI ID Jumper Settings

SCSI ID	Jumper Pin 5 to Pin 6	Jumper Pin 3 to Pin 4	Jumper Pin 1 to Pin 2
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

Installation

Before installing an RZ26, RZ26L, or RZ28 disk drive option, the enclosure cover must be removed. If you are installing the disk drive option on the lower drive-mounting shelf of a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

Installing an RZ26, RZ26L, or RZ28 Disk Drive

To install an RZ26, RZ26L, or RZ28 disk drive option, follow these steps:

1. If the mounting hardware is already attached to the drive as in Figure 22, go to step 3.

2. Attach the mounting bracket with the four grommets/screws. The grommets fit into the recessed side of the imprinted pockets on the bracket as shown in Figure 22.

3. Identify the storage slot where the disk drive option is to be installed. The enclosure maintenance manual describes mass storage device orientation.

4. Locate the spring clip and lock-out screw for the storage slot where the disk drive will be installed. See Figure 23. Remove the lock-out screw if it has not already been removed.

5. Identify the power cable connector that supplies power to the storage slot where the disk drive will be installed.

6. Connect the power cable to the power connector on the back of the disk drive. See Figure 24.

7. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the disk drive will be installed.

8. Connect the SCSI cable to the back of the disk drive. See Figure 24.

9. Position the grommets attached to the disk drive in the cutouts of the drive-mounting shelf. See Figure 23.

Figure 22   RZ26/RZ26L/RZ28 Disk Drive Mounting Bracket

Grommets

Mounting
Bracket
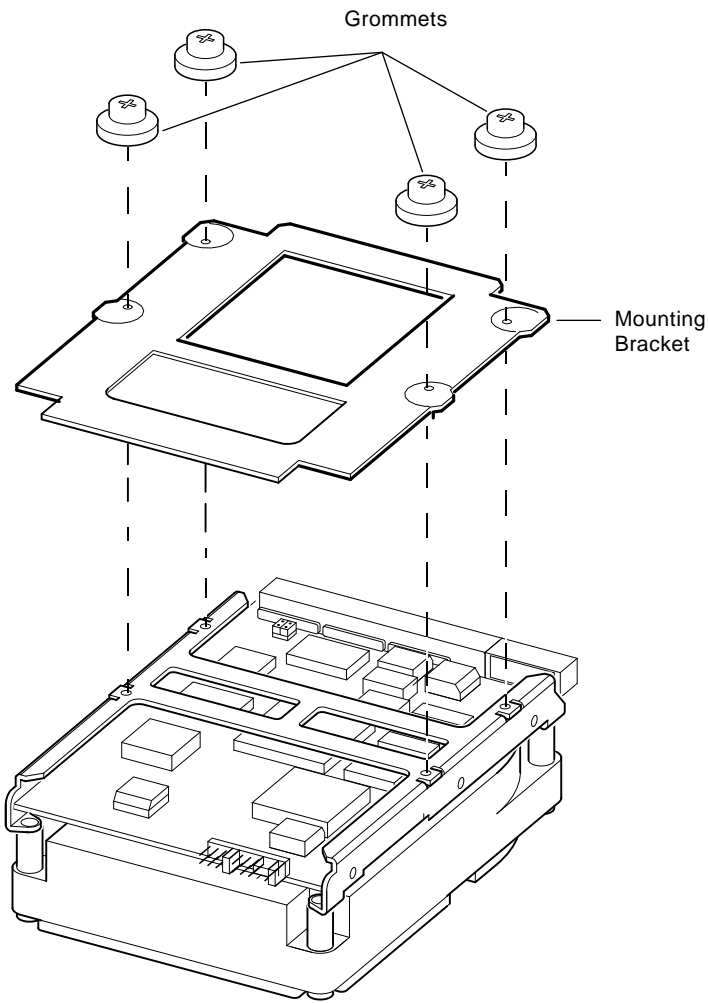
MLO-011302

Figure 23 Installing an RZ26/RZ26L/RZ28 Disk Drive

Spring Clip
Lock-out Screw
Lock-out Screw
Spring Clip

MLO-011304
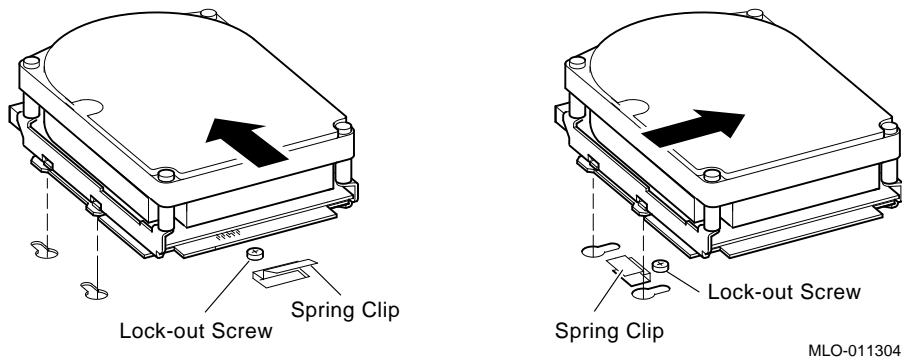
Figure 24 Connecting the RZ26/RZ26L/RZ28 Disk Drive Cables

MLO-011311
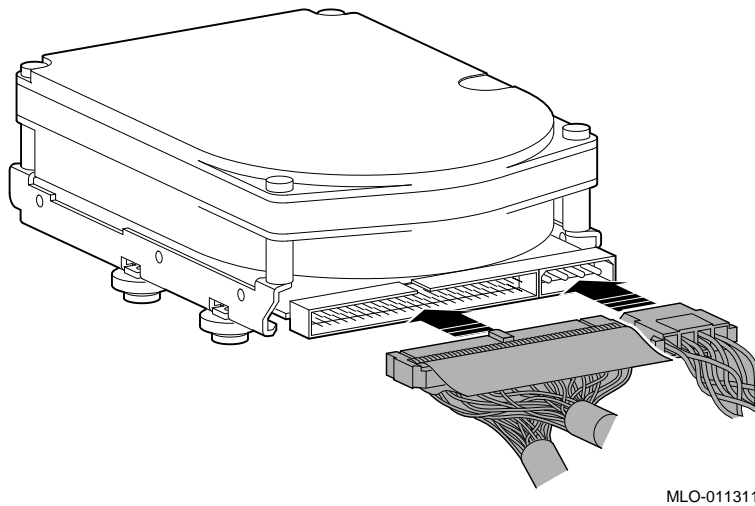
10. Slide the disk drive away from the spring clip until the grommets are secure in the cutouts and the spring clip locks the disk drive into position.

After the disk drive is installed, replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 system provides diagnostic support that tests the operation of an RZ26, RZ26L, or RZ28 disk drive.

- If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands at the console prompt to test the operation of the RZ26, RZ26L, or RZ28 option:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command at the console prompt to test the operation of the RZ26, RZ26L, or RZ28 option:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.
```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the RZ26, RZ26L, and RZ28 options are as follows:

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	12 V Circuit	
RZ26			
Random seek	0.76	1.56	13.80
Idle	0.71	0.64	11.23
RZ26L			
Random seek	0.90	0.90	1.30
Idle	0.90	0.30	8.5

Mode	Current (Amps)		Power (Watts)
	5 V Circuit	**12 V Circuit**	
RZ28			
Random seek	1.00	1.70	15.00
Idle	1.04	0.53	11.50

7 TLZ06-HG/TLZ07-HG Tape Drives

Description

The TLZ06 and TLZ07 tape drives are 4-millimeter, digital audio tape (DAT), digital data storage (DDS) cartridge SCSI devices. They read data from and write data to industry-standard tape cartridges. The following table lists the supported tape cartridges.

Cartridge	Capacity	Capacity with Compression
TLZ04-CA (60 m)	1.3 GB	Up to 2.6 GB
TLZ06-CA (90 m)	2.0 GB	Up to 4.0 GB
TLZ07-CA (120 m)*	4.0 GB	Up to 8.0 GB

* The TLZ07-CA tape cartridge is only compatible with the TLZ07 tape drive.

Ordering Information

The order numbers for the field-installable TLZ06 and TLZ07 options are:

* TLZ06-HG

* TLZ07-HG

Option Contents

The TLZ06-HG and TLZ07-HG tape drive options contain the following components:

* TLZ06 or TLZ07 tape drive

* Mounting bracket (PN 74-42449-01)

* Screws (4) (PN 90-10961-03)

* Bezel insert (for Model 30 systems only) (PN 74-37501-01)

* Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In a TLZ06/07 tape drive, the SCSI ID number can be set with jumpers or switches. See Figure 25.
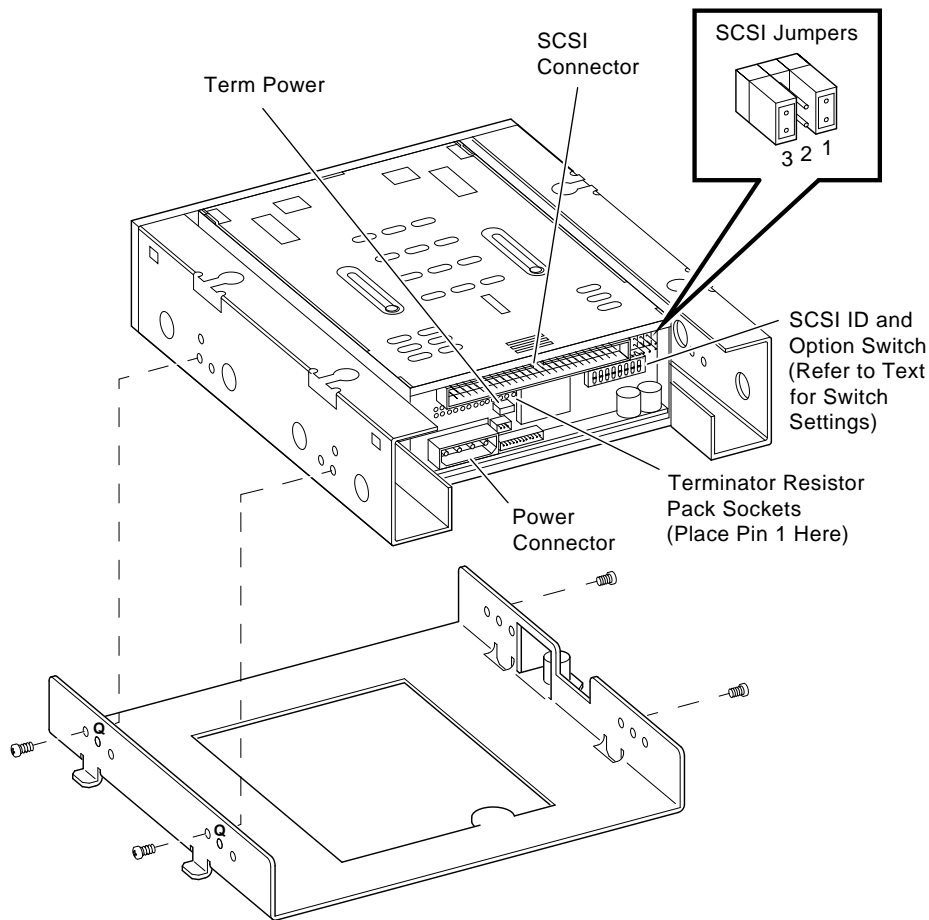
_____ **Note** _____

The SCSI ID jumper pins are logically ORed with the SCSI ID switches. Setting a switch is equivalent to installing a jumper.

_____

Figure 25 TLZ06/TLZ07 Tape Drive Jumper Locations

MLO-011308

When installing a TLZ06/07 tape drive in a system, set the SCSI ID jumpers or switches to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on a TLZ06/07 tape drive option.

1. Determine the SCSI ID number to be assigned to the TLZ06/07 tape drive option. Typically, a TLZ06/07 tape drive uses SCSI ID 5; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Set the SCSI ID number.

- To set the SCSI ID number with the jumpers:

  a. Locate the SCSI ID jumper pins on the tape drive. See Figure 25; SCSI ID 5 is shown.

  b. Position the jumpers for the SCSI ID number selected. Table 8 shows the jumper settings for each SCSI ID number.

  c. Verify that the SCSI ID switches are *not* set, because the logic recognizes a SCSI ID bit set if *either* a switch is on *or* a jumper is installed.

Table 8   TLZ06/07 SCSI ID Jumper Settings

SCSI ID	Jumper 3	Jumper 2	Jumper 1
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

- To set the SCSI ID number with the switches:

  a. Locate the SCSI ID switches on the tape drive. See Figure 25.

  b. Position the switches for the SCSI ID number selected. Table 9 shows the switch settings for each SCSI ID number.

  c. Verify that the SCSI ID jumpers are *not* installed, because the logic recognizes a SCSI ID bit set if *either* a jumper is installed *or* a switch is on.

Table 9 TLZ06/TLZ07 SCSI ID Switch Settings

SCSI ID	Switch 3	Switch 2	Switch 1
0	Off	Off	Off
1	Off	Off	On
2	Off	On	Off
3	Off	On	On
4	On	Off	Off
5	On	Off	On
6	On	On	Off
7	On	On	On

The default switch settings for the SCSI ID and option switches on the TLZ06/07 tape drive are all off except for switches S4, S5, S6, and S8 which are on.

Media Recognition System

The media recognition system (MRS) is a quality standard for tapes that is supported by the TLZ07 tape drive. MRS is not supported by the TLZ06 tape drive. Cassette tapes that meet this standard are labeled **MRS** or **Media Recognition System**, and contain identifying information at the beginning of the tape.

When the media recognition system is enabled on the TLZ07 cassette tape drive (switch S4 on the SCSI ID and option switchpack set to off), the TLZ07 drive reads the header information on the cassette tapes to determine if the tape meets the MRS standard. Although it can read any 4 mm cassette tape, with MRS enabled the drive will only write to tapes that meet the MRS standard. If a write operation is iniated with MRS enabled and the cassette tape does not meet the MRS standard, a write-lock error message displays on the console terminal.

When the media recognition system is disabled (SCSI ID and option switchpack, switch S4 on), the TLZ07 cassette tape drive will write to any MRS tape as well as tapes that do not meet the MRS standard.

Installation

Before installing the TLZ06/07 tape drive option, the enclosure cover must be removed. If you are installing the TLZ06/07 tape drive option in a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

You can install a TLZ06/07 option in the following:

- A Model 30 system (right storage slot)
- A Model 40, 80, 85, 90, or 95 system (either slot in the lower drive-mounting shelf)
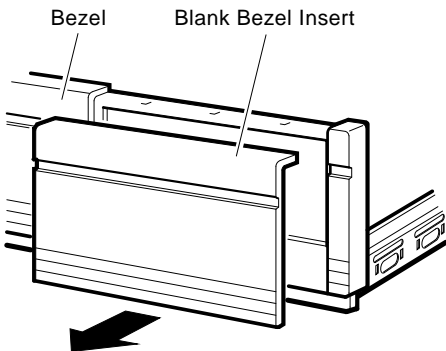
The location of the storage slot determines the position of mounting bracket on the drive. The following sections describe how the mounting bracket should be attached to the tape drive.

Preparing to Install a TLZ06/07 Option in a Model 30 System

Before you install a TLZ06/07 option in a Model 30 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 25. Facing the front of the drive, the captive screw should be on the left, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. From inside the enclosure, push the blank bezel insert out of the front bezel.

3. Remove the blank bezel insert.

4. Clip the Model 30 bezel insert to the front bezel. Figure 26 shows the removal of the blank bezel insert from a Model 30 system.

Figure 26   Removing the Blank Bezel Insert (Model 30)
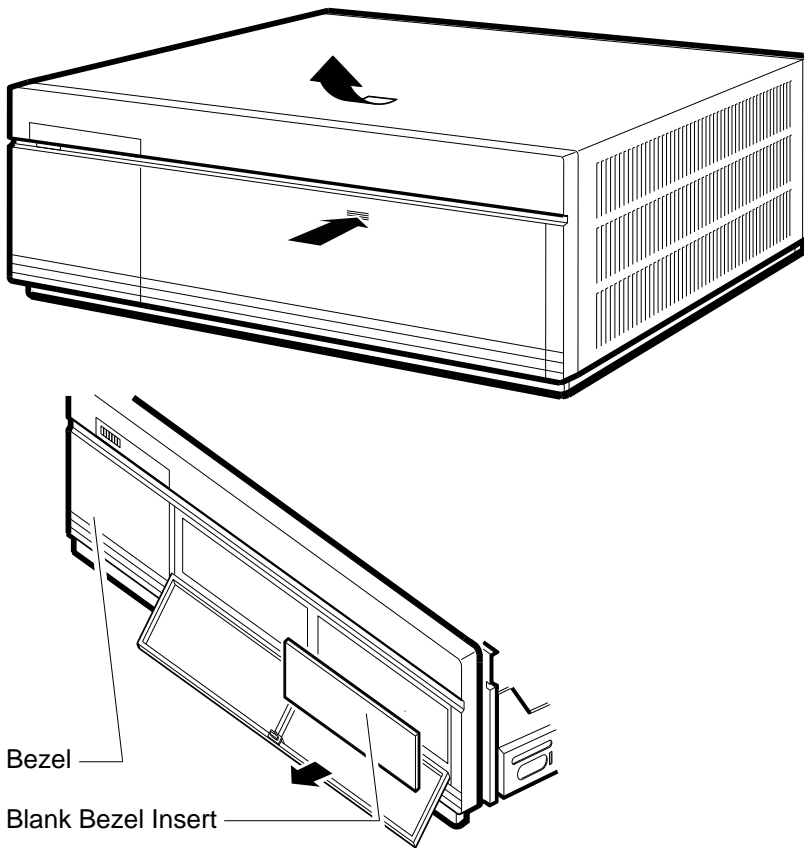

Bezel   Blank Bezel Insert

MLO-011306

Preparing to Install a TLZ06/07 Option in a Model 40, 80, 85, 90, or 95 System (Right Storage Slot)
Before you install a TLZ06/07 option in the right storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 25. Facing the front of the drive, the captive screw should be on the left, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf. Figure 27 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Figure 27 Opening the Drive Cover and Removing the Blank Bezel Insert (Models 40, 80, 85, 90, 95)

Bezel

Blank Bezel Insert

GA_EN00246A_92A

_____ **Note** _____

Figure 27 shows a bezel insert being removed for mounting the drive in the right-hand position; remove the bezel on the left side if the drive is to be mounted in the left-hand position.

Preparing to Install a TLZ06/07 Option in a Model 40, 80, 85, 90, or 95 System (Left Storage Slot)

Before you install a TLZ06/07 option in the left storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as follows: Facing the front of the drive, the captive screw should be on the right, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf. Figure 27 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Installing the TLZ06/07 Option

After you have prepared the system as described previously, install the TLZ06/07 tape drive option as follows:

1. Check the storage slot on the drive-mounting shelf to verify that any spring-lock clips are in the locked position. If they are in the released position, install a lock-out screw to secure them down.

2. Identify the power cable connector that supplies power to the storage slot where the TLZ06/07 option will be installed.

3. Connect the power cable to the power connector on the back of the TLZ06/07 drive.

4. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the TLZ06/07 option will be installed.

5. Connect the SCSI cable to the back of the TLZ06/07 option.

6. Align the tabs on the tape drive mounting bracket with the cutouts in the drive-mounting shelf.

7. Tilt the drive slightly to slide the tabs in the drive-mounting shelf cutouts.

8. Lower the tape drive into position and tighten the captive screw on the mounting bracket to secure the tape drive in place.

Replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 platform systems provide diagnostic support that tests the operation of a TLZ06/07 tape drive option.

Enter one of the following commands at the console prompt to verify the operation of the TLZ06/07 option:

- If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands:
  ```
  >>> T SCSI
  >>> T 10
  ```

- If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command:
  ```
  >>> T E0
  ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.

```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the TLZ06/07 tape drive option are as follows:

Current (Amps)		Power (Watts)
5 V Circuit	12 V Circuit	
0.89	0.20	9.00

8 TZK10-HG/TZK11-HG Tape Drives

Description

The TZK-series tape drives are quarter-inch cartridge (QIC) SCSI devices.
They read data from and write data to industry-standard tape cartridges. The
following table lists the supported tape cartridges.

Cartridge	Capacity	Format
DC9200XL	Up to 2.5 GB	QIC-2GB
DC9200	Up to 2.0 GB	QIC-2GB
DC9100L	Up to 1.2 GB	QIC-1GB
DC9100	Up to 1.0 GB	QIC-1GB
DC6525	Up to 525 MB	QIC-525
DC6320	Up to 320 MB	QIC-525
DC6250	Up to 250 MB	QIC-150
DC6150/DC600XTD	Up to 150 MB	QIC-150
DC615/DC600A	Up to 120 MB	QIC-120
DC300/DC300XLP	Up to 45 MB	QIC-24

Ordering Information

The order numbers for the field-installable TZK-series options are as follows:

- TZK10-HG

- TZK11-HG

Option Contents

Each TZK-series tape drive option contains the following components:

- TZKxx tape drive

- Mounting bracket (PN 74-42449-01)

- Screws (4) (PN 90-10961-03)

- Bezel insert (for Model 30 systems only) (PN 74-37501-01)

- Dress bezel insert (for Model 30 systems only) (PN 74-42531-01)

- Documentation

SCSI ID Information

In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In a TZK-series tape drive, the SCSI ID number is determined by three jumpers. See Figure 28. When installing a TZK-series tape drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

The following procedure describes how to set the SCSI ID number on a TZK-series tape drive option.

1. Determine the SCSI ID number to be assigned to the TZK-series tape drive option. Typically, a TZK-series tape drive uses SCSI ID 5; however, the system manager may prefer to make this decision.

2. At the system console, enter the SHOW DEVICE command from console mode. This will list the SCSI ID numbers for the existing devices in the system. Verify that you are using a number that is not currently assigned to another device.

3. Locate the SCSI ID jumper pins on the tape drive. See Figure 28.

4. Position the jumpers for the SCSI ID number selected. Table 10 shows the jumper settings for each SCSI ID number.

The jumper wires on either side of the SCSI ID select jumpers are installed by default. The jumper to the right of the SCSI ID select pins enables the terminator power (TERMPWR). In the TZK10 drive, the jumper to the left of the SCSI ID select pins enables parity. In the TZK11 drive, the jumper to the left of the SCSI ID select pins is a Vendor/Product ID Select (VSEL) switch. This jumper should be installed in a TZK11 that resides in a MicroVAX 3100 system. It should be removed if the TZK11 resides in system with an operating system from a vendor other than Digital.

Figure 28 TZK10/TZK11 Tape Drive Jumper Locations
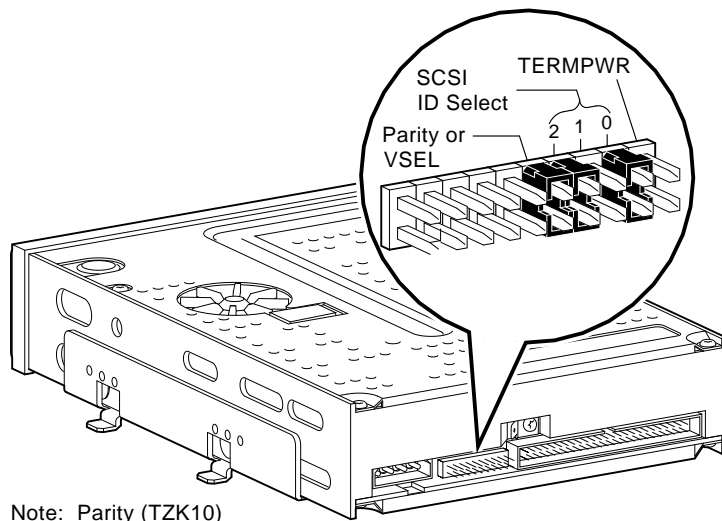
Note: Parity (TZK10)
      VSEL (TZK11)

MLO-011309

Table 10 TZK10/TZK11 SCSI ID Jumper Settings

SCSI ID	Jumper 2	Jumper 1	Jumper 0
0	Out	Out	Out
1	Out	Out	In
2	Out	In	Out
3	Out	In	In
4	In	Out	Out
5	In	Out	In
6	In	In	Out
7	In	In	In

Installation

Before installing the TZK-series tape drive option, the enclosure cover must be removed. If you are installing the TZK-series tape drive option in a MicroVAX 3100 Model 40, 80, 85, 90, or 95 system, the upper drive-mounting shelf must also be removed. See the appropriate enclosure maintenance manual for these removal procedures.

You can install a TZK-series option in the following:

- A Model 30 system (right storage slot)

- A Model 40, 80, 85, 90, or 95 system (either slot in the lower drive-mounting shelf)

The location of the storage slot determines the position of mounting bracket on the drive. The following sections describe how the mounting bracket should be attached to the tape drive.

Preparing to Install a TZK-Series Option in a Model 30 System

Before you install a TZK-series option in a Model 30 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 29. Facing the front of the drive, the captive screw should be on the left, and the screws attaching the mounting bracket to the drive should be attached through the bracket holes labeled *Q*.

2. Attach the dress bezel insert to the front flange of the TZK-series option. See Figure 29.

Figure 29 Attaching the TZK10/TZK11 Dress Bezel Insert and Mounting Bracket

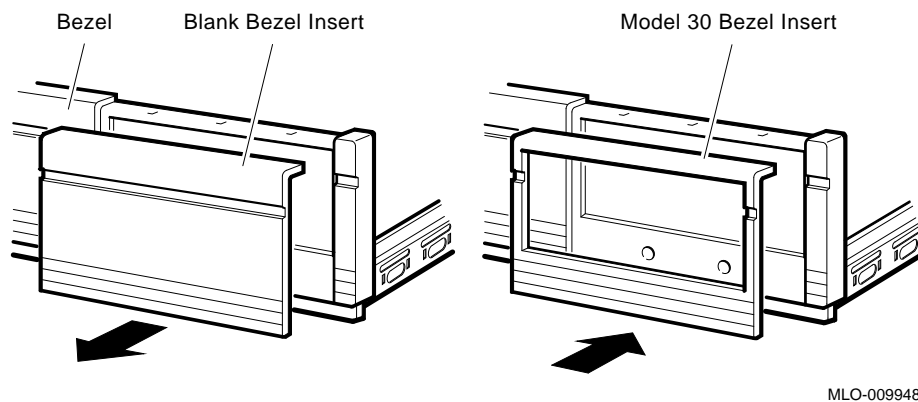

Mounting Bracket

Dress Bezel
(Model 30 only)
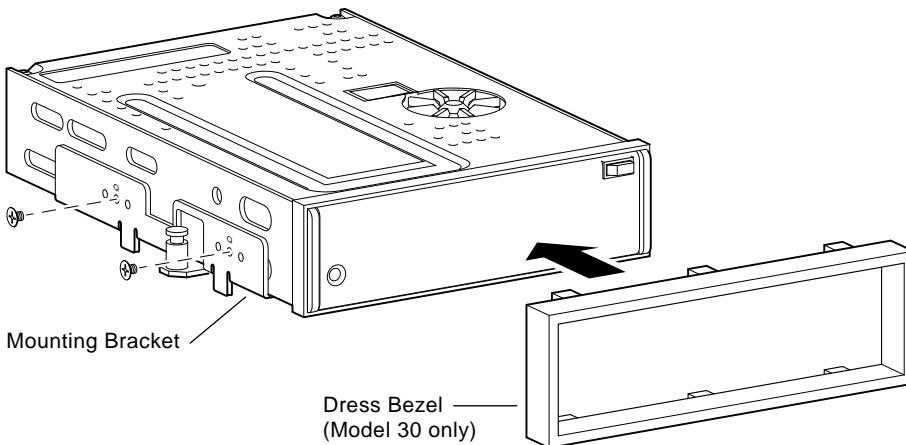
MLO-011303

3. From inside the enclosure, push the blank bezel insert out of the front bezel.

4. Remove the blank bezel insert from the enclosure.

5. Clip the Model 30 bezel insert to the front bezel. Figure 30 shows the removal of the blank bezel insert, and the installation of the Model 30 bezel insert on a Model 30 system.

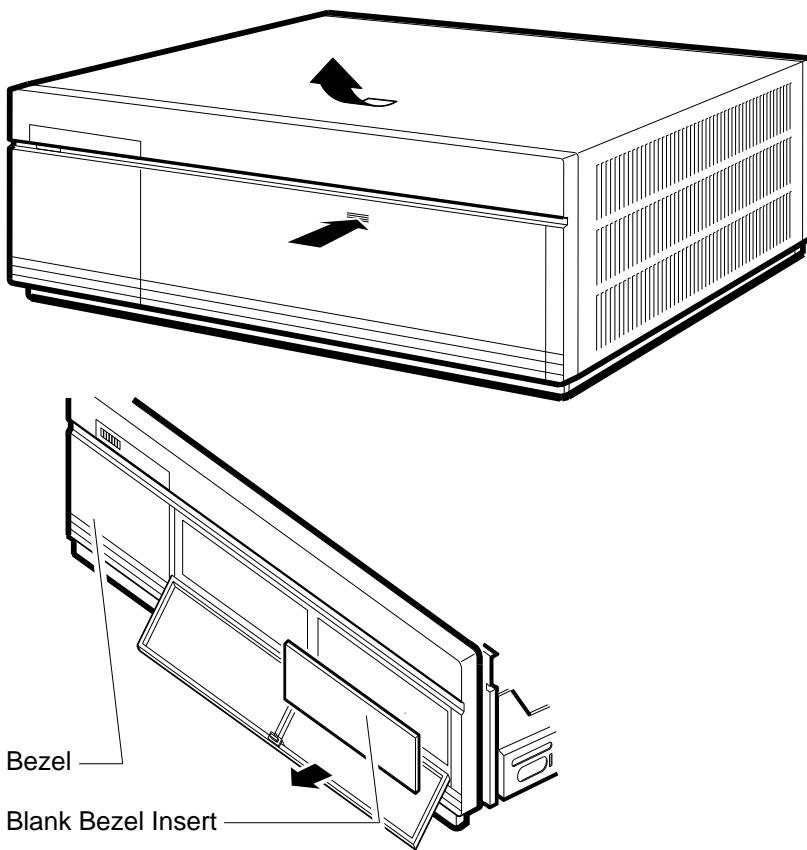**Figure 30   Installing the TZK10/TZK11 Tape Drive Bezel Insert**

Bezel   Blank Bezel Insert   Model 30 Bezel Insert

MLO-009948

Preparing to Install a TZK-Series Option in a Model 40, 80, 85, 90, or 95 System (Right Storage Slot)
Before you install a TZK-series option in the right storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as shown in Figure 29. Facing the front of the drive, the captive screw should be on the left, and the screws attaching the mounting bracket to the drive should be attached through the bracket holes labeled Q.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf. Figure 31 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Figure 31 Opening the Drive Cover and Removing the Blank Bezel Insert (Models 40, 80, 85, 90, 95)

Bezel

Blank Bezel Insert

GA_EN00246A_92A

_____ **Note** _____

Figure 31 shows a bezel insert being removed for mounting the drive in the right-hand position; remove the bezel on the left side if the drive is to be mounted in the left-hand position.

Preparing to Install a TZK-Series Option in a Model 40, 80, 85, 90, or 95 System (Left Storage Slot)

Before you install a TZK-series option in the left storage slot on the lower drive-mounting shelf in a Model 40, 80, 85, 90, or 95 system, perform the following steps:

1. Attach the mounting bracket as follows: facing the front of the drive, the captive screw should be on the right, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes labeled *Q*.

2. Open the drive cover on the front of the enclosure by pushing the latch, and from inside the enclosure, push out and remove the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf. Figure 31 shows the removal of the blank bezel insert from a Model 40, 80, 85, 90, or 95 system.

Installing the TZK-Series Option

After you have prepared the system as described previously, install the TZK-series tape drive option as follows:

1. Check the storage slot on the drive-mounting shelf to verify that any spring-lock clips are in the locked position. If they are in the released position, install a lock-out screw to secure them down.

2. Identify the power cable connector that supplies power to the storage slot where the TZK-series option will be installed.

3. Connect the power cable to the power connector on the back of the TZK-series drive. (See Figure 32.)

4. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the TZK-series option will be installed.

5. Connect the SCSI cable to the back of the TZK-series option. (See Figure 32.)

6. Align the tabs on the tape drive mounting bracket with the cutouts in the drive-mounting shelf.

7. Tilt the drive slightly to slide the tabs in the drive-mounting shelf cutouts.

8. Lower the tape drive into position and tighten the captive screw on the mounting bracket to secure the tape drive in place.

Figure 32 Connecting the TZK10/TZK11 Tape Drive Power and SCSI Cables
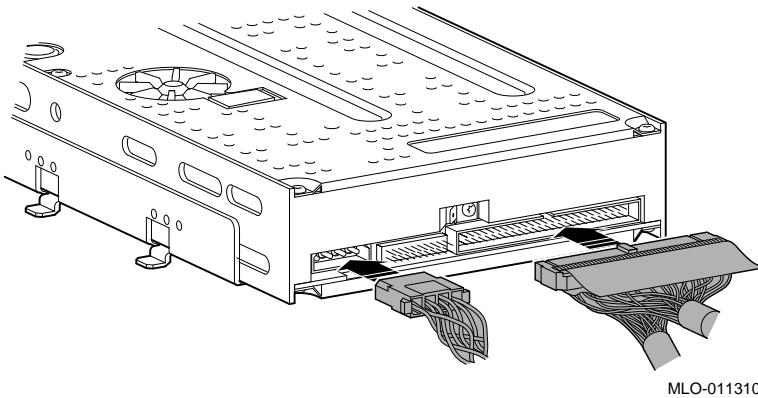
MLO-011310

Replace the upper drive-mounting shelf (if removed) and the enclosure cover.

Diagnostic Support

The MicroVAX 3100 platform systems provide diagnostic support that tests the operation of a TZK-series tape drive option.

The following procedure describes how to test the TZK-series option.

1. Install a blank tape in the TZK-series tape drive.

2. Enter one of the following commands at the console prompt to test the operation of the TZKxx option:

   • If you are using a MicroVAX Model 30, 40, or 80 system, enter one of the following commands:
     ```
     >>> T SCSI
     >>> T 10
     ```

   • If you are using a MicroVAX Model 85, 90, or 95 system, enter the following command:
     ```
     >>> T E0
     ```

A successful pass of the test is indicated when the console displays the console prompt.

If the test fails, the LED display on the back of the system unit displays a code in the range A0 to A5 (hexadecimal), and the console terminal displays a hard error message containing the test number (10) and the test mnemonic (SCSI). The following is an example of an error printout.
```
?? 001 10 SCSI 0050
```

See your system maintenance manual for more information about the diagnostics.

Power Requirements

The power requirements for the TZK-series tape drive options are as follows:

Drive	Current (Amps)		Power (Watts)
	5 V Circuit	12 V Circuit	
TZK10	1.00	1.75	25.00
TZK11	1.20	2.00	33.00

A
Related Documentation

System Documentation

The following table provides the order numbers for MicroVAX 3100 platform system documentation.

Document	Order Number
MicroVAX 3100 Platform KA45 CPU System Maintenance	EK–A0513–MG
MicroVAX 3100 Platform KA47 CPU System Maintenance	EK–A0514–MG
MicroVAX 3100 Platform KA52 CPU System Maintenance	EK–473AA–MG
MicroVAX 3100 Model 85/90/95 KA50/51/55 CPU System Maintenance	EK–M3100–SM
MicroVAX 3100 Platform BA42A Enclosure Maintenance	EK–A0510–MG
MicroVAX 3100 Platform BA42B Enclosure Maintenance	EK–A0511–MG
MicroVAX 3100 BA42B Enclosure System Options	EK–M3100–OP
MicroVAX 3100 Model 85/90/95 BA42B Enclosure Maintenance	EK–M3100–MG

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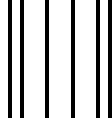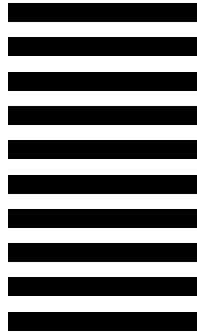
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