MicroVAX 3100 Platform Options

Supplement

Order Number: EK–A0519–UD. C01

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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.

Digital Equipment Corporation
Maynard, Massachusetts

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The postpaid Reader's Comments form at the end of this document requests your critical evaluation to assist in preparing future documentation.

FCC NOTICE: The equipment described in this document generates, uses, and may emit radio frequency energy. The equipment has been type tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such radio frequency interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user at his own expense may be required to take measures to correct the interference.

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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
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
RZ24L disk drive
RZ25L 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.

RRD42-EK CDROM Drive Option

Description

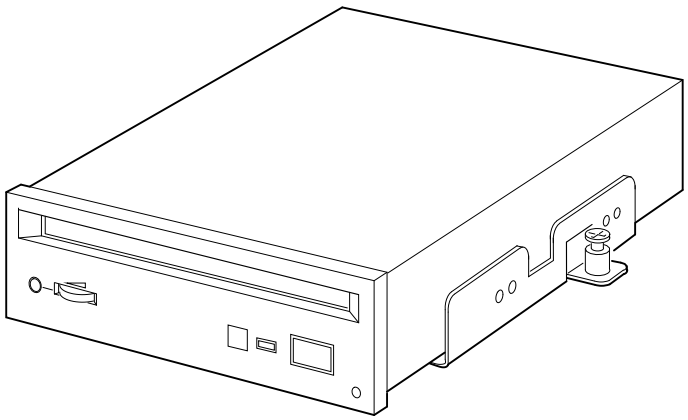
The RRD42 CDROM drive is a compact disc, read-only memory, SCSI device. It reads data from industry-standard 600 MB discs. Figure RRD42–1 shows the RRD42-EK option.

Ordering Information

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

- RRD42-EK

Figure RRD42–1 RRD42-EK Option



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RRD42-EK

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 RRD42–2. 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 RRD42–2.
4. Position the jumpers for the SCSI ID number selected. Table RRD42–1 shows the jumper settings for each SCSI ID.

Figure RRD42–2 RRD42 CDROM Drive Jumper Locations

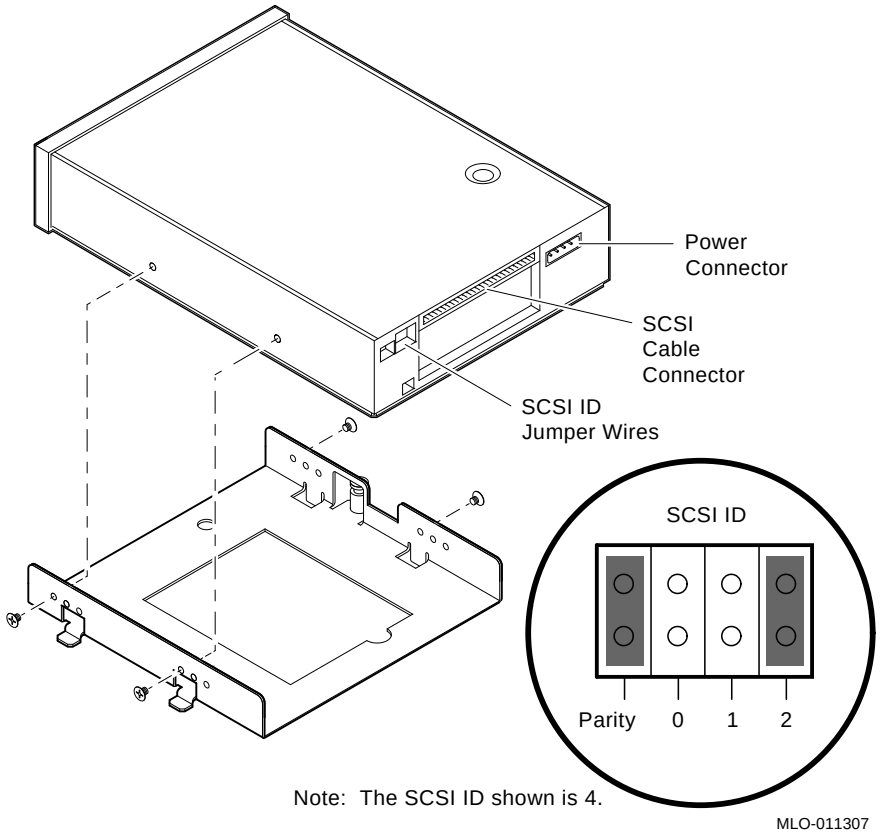


Table RRD42–1 RRD42 CDROM SCSI ID Jumper Settings

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:

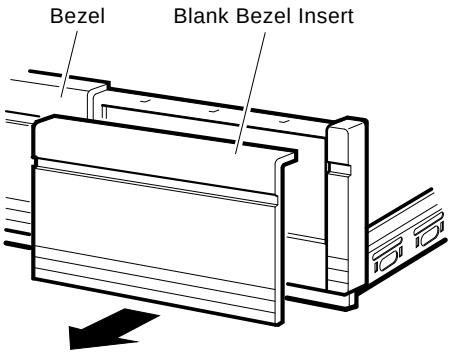
1. Attach the mounting bracket as shown in Figure RRD42–2. Facing the front of the drive, the captive screw should be on the left, and the four screws attaching the mounting bracket to the drive should be attached through the series of bracket holes that are closest to the front of the drive.
2. From inside the enclosure, push the blank bezel insert out of the front bezel.
3. Remove the blank bezel insert from the enclosure. Figure RRD42–3 shows the removal of the blank bezel insert from a Model 30 system.

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 RRD42–2. 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.

Figure RRD42–3 Removing the Blank Bezel Insert



2. From inside the enclosure, push out the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert from the enclosure.

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. From inside the enclosure, push out the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert from the enclosure.

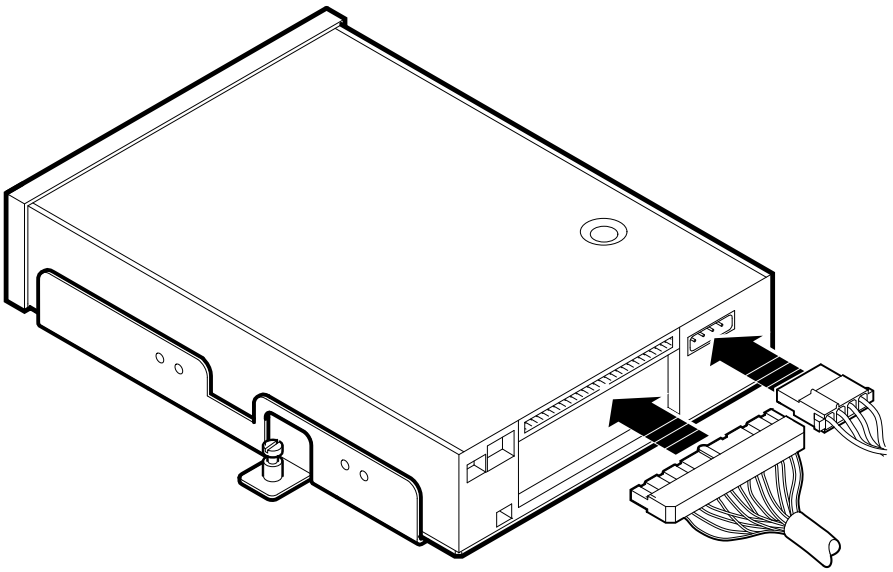
Installing the RRD42 CDROM Option

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.

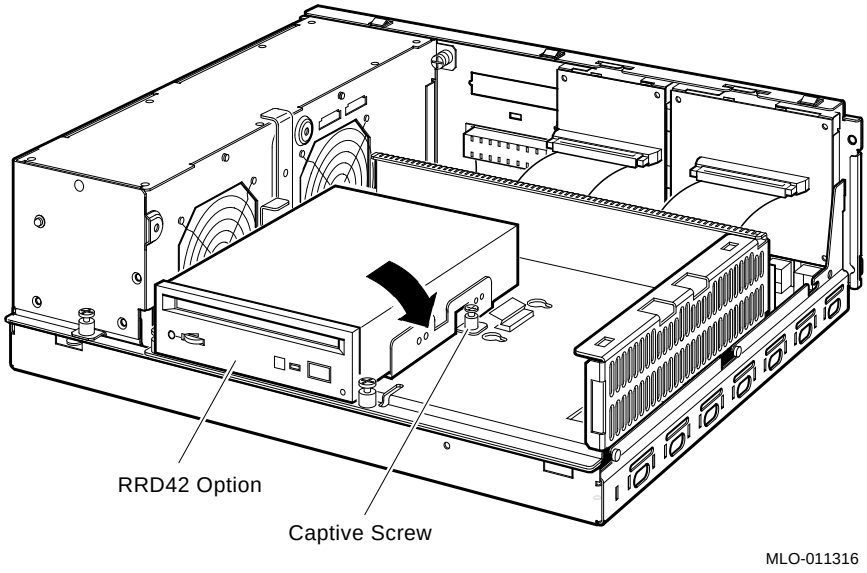
3. Connect the power cable to the power connector on the back of the RRD42 CDROM option. See Figure RRD42–4.
4. Identify the SCSI cable connector that has a pull-tab number that corresponds to the storage slot where the RRD42 option will be installed.
5. Connect the SCSI cable to the back of the RRD42 option. See Figure RRD42–4.

Figure RRD42–4 Connecting the Power and SCSI Cables



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 CDROM into position and tighten the captive screw on the mounting bracket to secure the tape drive in place. Figure RRD42–5 shows the installation of an RRD42 option in the left storage slot of the lower drive-mounting shelf.

Figure RRD42–5 Installing the RRD42 Option



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
  ```

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

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 RZ24L–1. 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 RZ24L–1.

RZ24L-EH

4. Position the jumpers for the SCSI ID number selected. Table RZ24L–1 shows the SCSI ID number and the corresponding jumper settings.

   Note: The SCSI ID shown in Figure RZ24L–1 is 3.

Figure RZ24L–1 RZ24L SCSI ID Jumper Locations

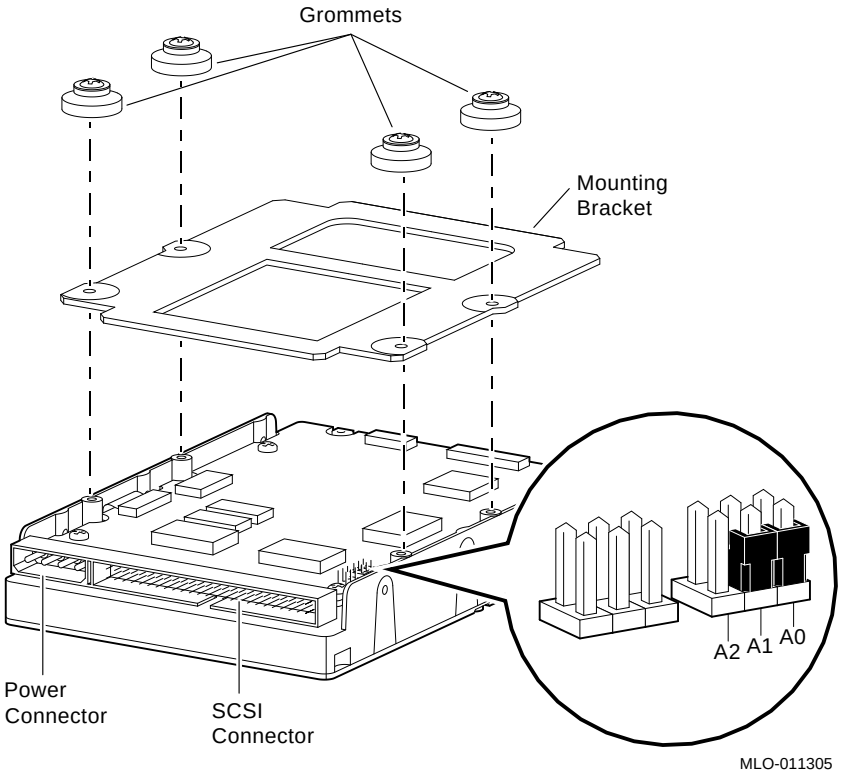


Table RZ24L–1 RZ24L SCSI ID Jumper Settings

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.

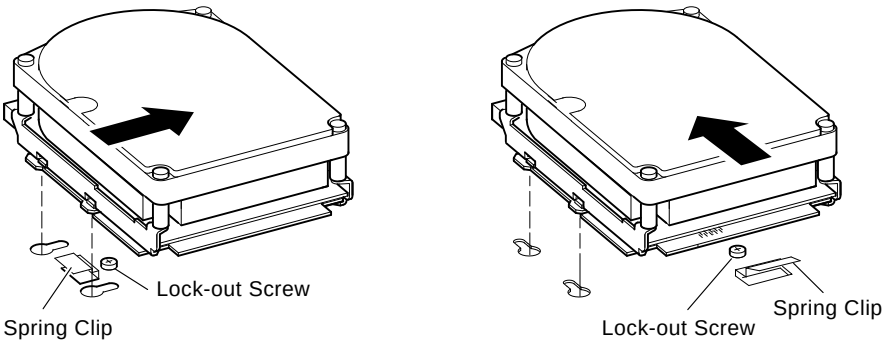
Installing an RZ24L Disk Drive

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

1. If mounting hardware is already attached to the drive (see Figure RZ24L–1), 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 RZ24L–1.
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 RZ24L–2). 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 RZ24L–1.
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 RZ24L–1.
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 RZ24L–2 Installing a 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

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

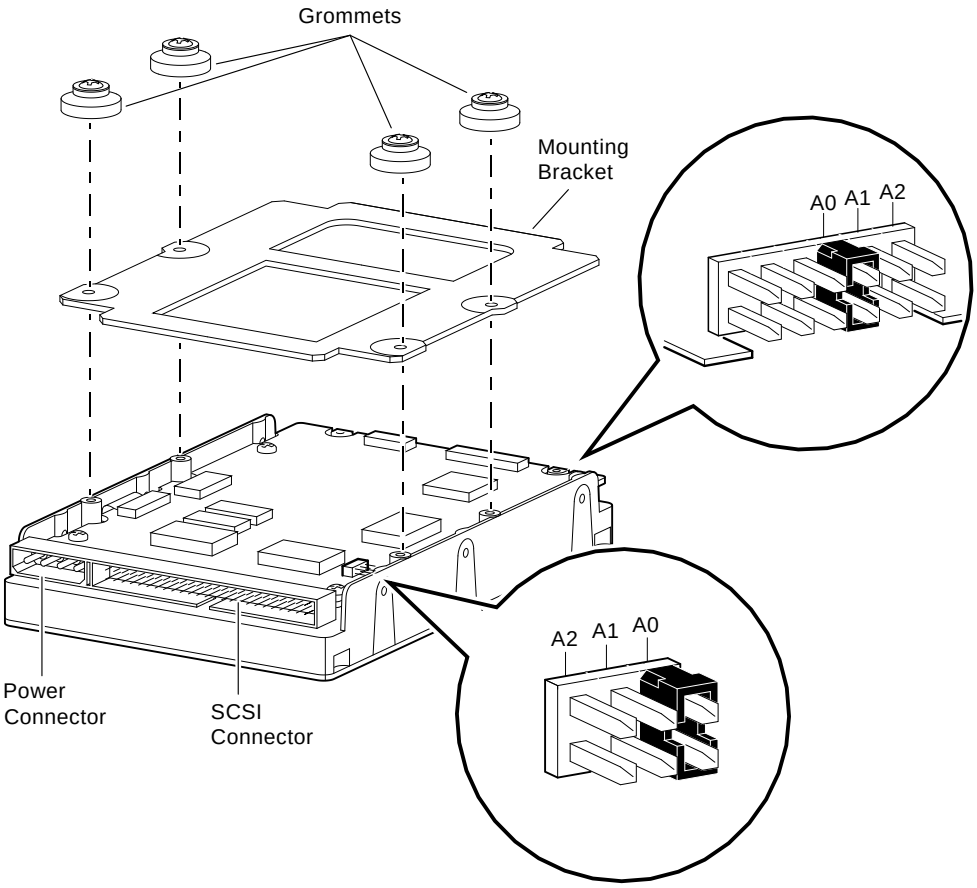
In any system, each SCSI device must have a unique identifier called the **SCSI ID number**. In an RZ25L disk drive, the SCSI ID number is determined by three jumpers. See Figure RZ25L–1. When installing an RZ25L disk drive in a system, set the SCSI ID jumpers to a value that is not used by any of the other SCSI devices in the system. See your system documentation for detailed information about the SCSI bus.

RZ25L

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 RZ25L–1 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 RZ25L–1.
5. Position the jumpers for the SCSI ID number selected. Table RZ25L–1 shows the SCSI ID number and the corresponding jumper settings.

Figure RZ25L–1 RZ25L SCSI ID Jumper Locations



RZ25L

Table RZ25L–1 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 RZ25L–2. 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 RZ25L–2.

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 RZ25L–3.
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 RZ25L–1.
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 RZ25L–1.

Figure RZ25L–2 Installing a RZ25L-EH Disk Drive (Bottom View)

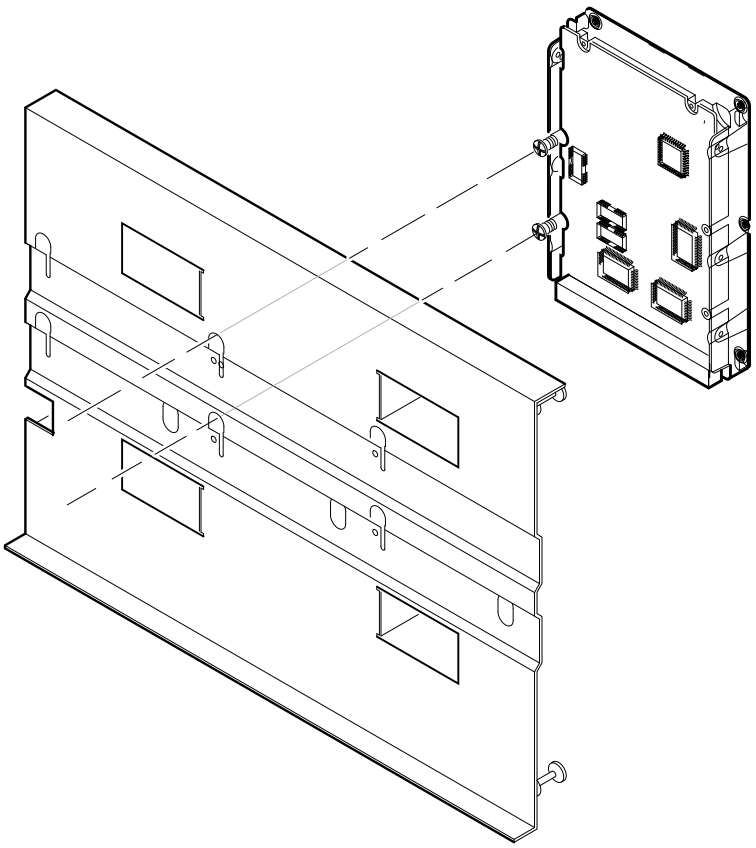


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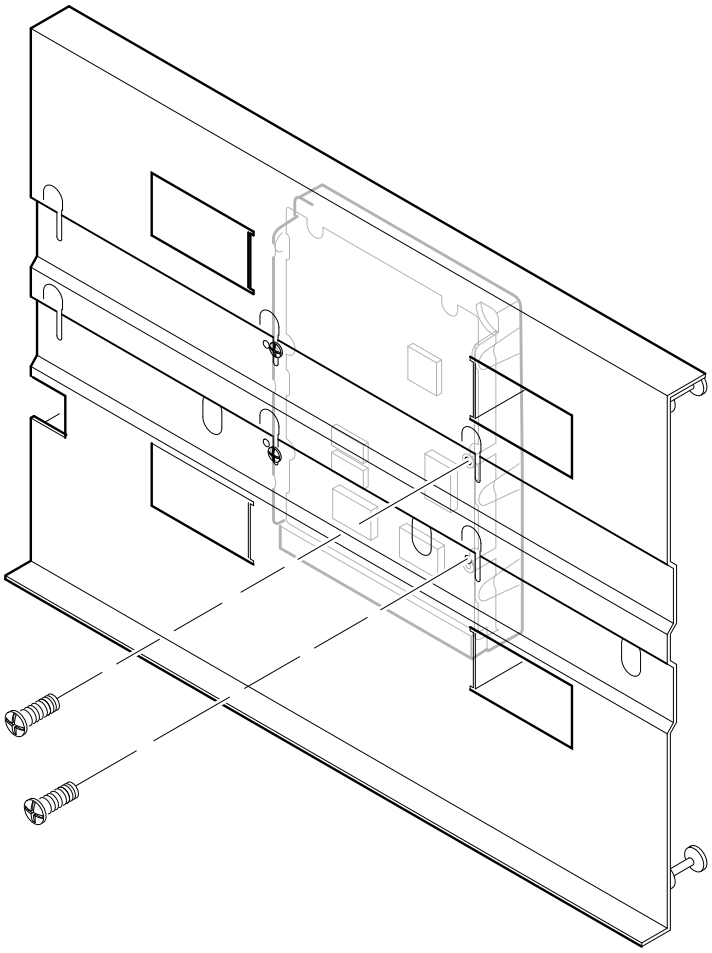
Figure RZ25L–3 Securing a RZ25L-EH Disk Drive



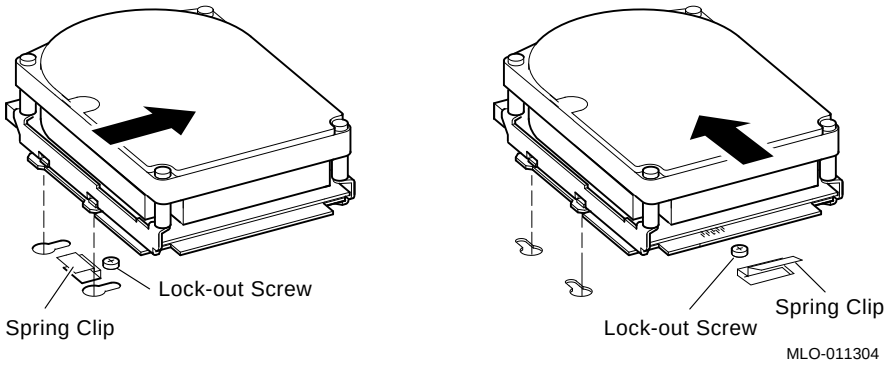
Installing an RZ25L-EK Disk Drive in a Model 30, 40, 80, 85, 90, or 95 System

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 RZ25L–1), 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 RZ25L–1.

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 RZ25L–4). 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 RZ25L–1.
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 RZ25L–1.
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 RZ25L–4 Installing a RZ25L-EK Disk Drive



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

RZ26/RZ26L/RZ28-EK Disk Drive

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 RZ26/RZ26L/RZ28–1. 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.

RZ26/RZ26L/RZ28-EK

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 RZ26/RZ26L /RZ28–1.
4. Position the jumpers for the SCSI ID number selected. Table RZ26/RZ26L /RZ28–1 shows the SCSI ID number and the corresponding jumper settings.

Figure RZ26/RZ26L/RZ28–1 SCSI ID Jumper Locations

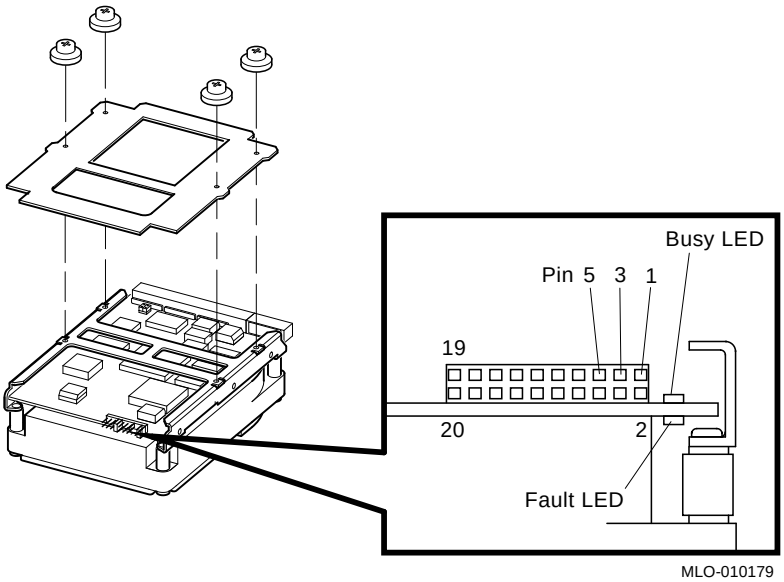


Table RZ26/RZ26L/RZ28–1 SCSI ID Jumper Settings

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.

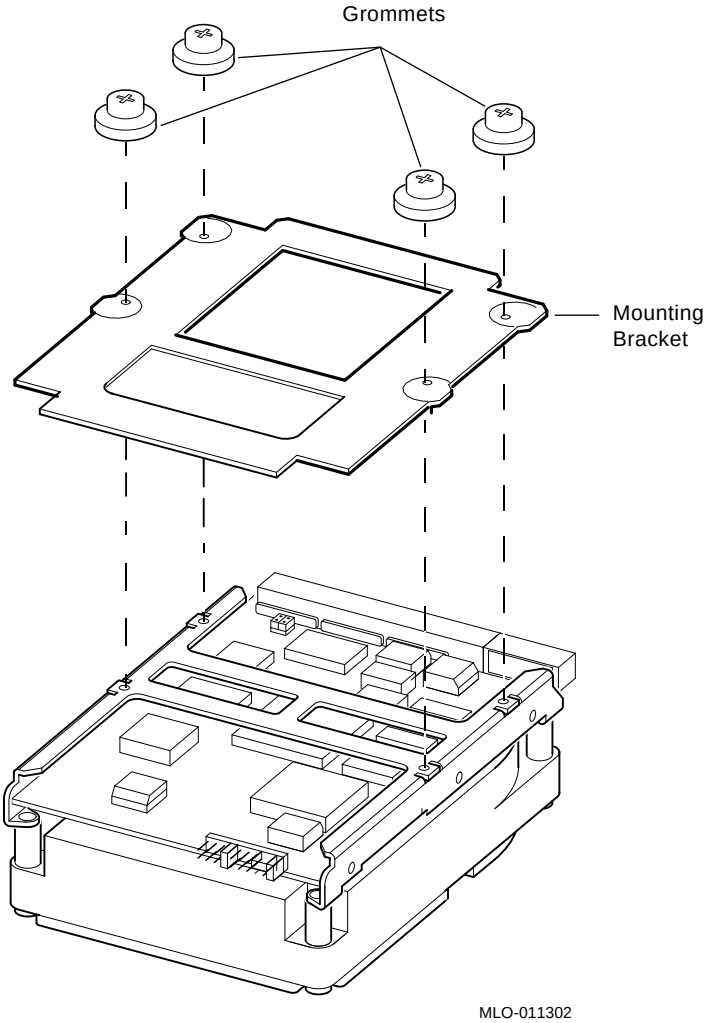
Installing an RZ26, RZ26L, or RZ28 Disk Drive

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 RZ26/RZ26L/RZ28–2, 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 RZ26/RZ26L/RZ28–2.
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 RZ26/RZ26L/RZ28–3. 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 RZ26/RZ26L/RZ28–4.

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 RZ26/RZ26L /RZ28–4.
9. Position the grommets attached to the disk drive in the cutouts of the drive-mounting shelf. See Figure RZ26/RZ26L/RZ28–3.

Figure RZ26/RZ26L/RZ28–2 RZ26 Disk Drive with Mounting Bracket (Bottom View)



RZ26/RZ26L/RZ28-EK

Figure RZ26/RZ26L/RZ28–3 Installing an Disk Drive

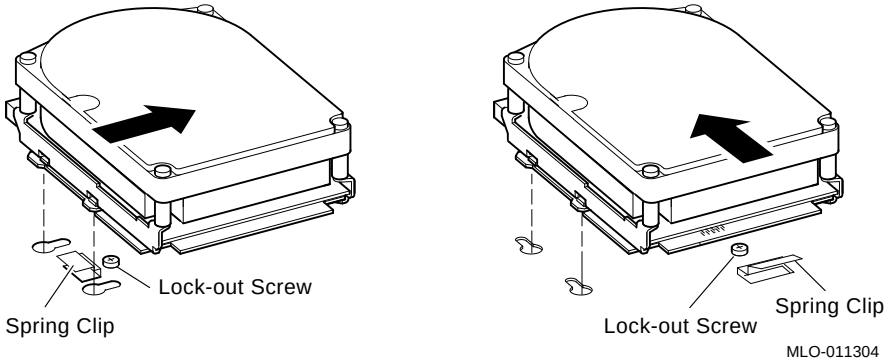
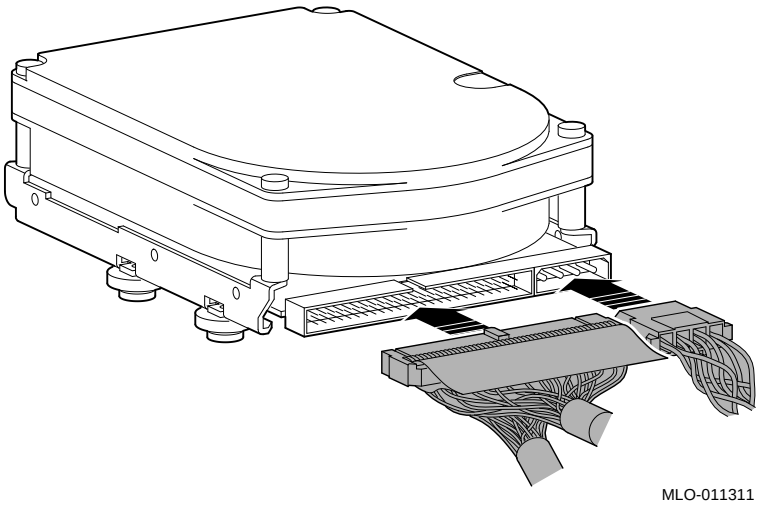


Figure RZ26/RZ26L/RZ28–4 Connecting the Cables



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

RZ26/RZ26L/RZ28-EK

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

TLZ06/07-HG Tape Drive Option

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

TLZ06/07-HG

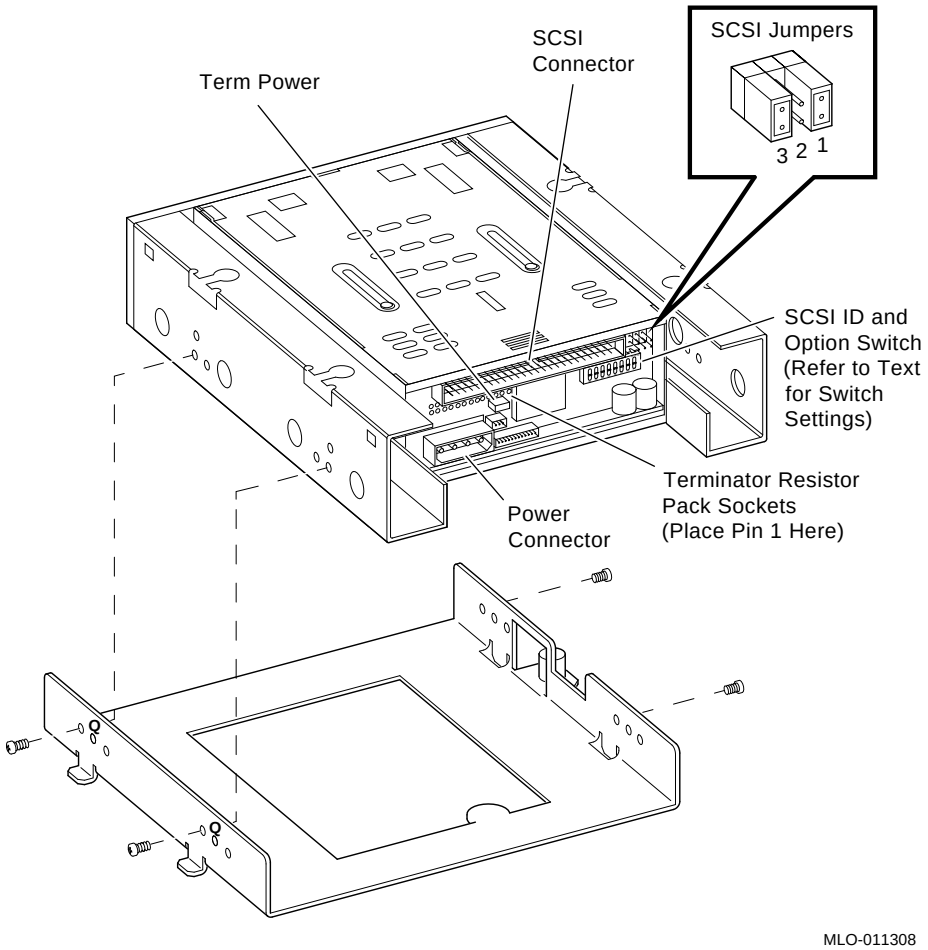
SCSI ID Information

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 TLZ06/TLZ07–1.

Note

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

Figure TLZ06/TLZ07–1 TLZ06/07 Tape Drive Jumper Locations



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 TLZ06 /TLZ07–1; SCSI ID 5 is shown.
     b. Position the jumpers for the SCSI ID number selected. Table TLZ06 /TLZ07–1 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 TLZ06/TLZ07–1 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 TLZ06 /TLZ07–1.
     b. Position the switches for the SCSI ID number selected. Table TLZ06 /TLZ07–2 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 TLZ06/TLZ07–2 TLZ06/07 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.

TLZ06/07-HG

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)

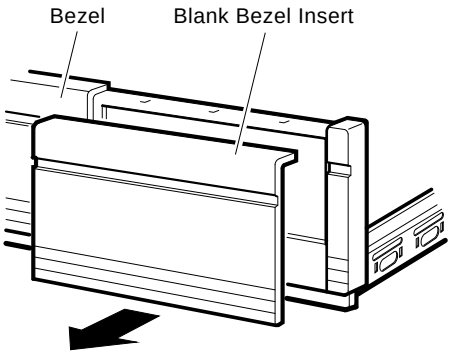
The location of the storage slot determines the position of mounting bracket on the drive. The following sections describe how the mounting bracket should be attached to the tape drive.

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 TLZ06/TLZ07–1. 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 TLZ06/TLZ07–2 shows the removal of the blank bezel insert from a Model 30 system.

Figure TLZ06/TLZ07–2 Removing the 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 TLZ06/TLZ07–1. 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 out the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert.

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. From inside the enclosure, push out the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert.

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

TZK-Series Tape Drive Option

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

TZKxx-HG

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 TZKxx–1. 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 TZKxx–1.
4. Position the jumpers for the SCSI ID number selected. Table TZKxx–1 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 TZKxx–1 TZK-Series Tape Drive Jumper Locations

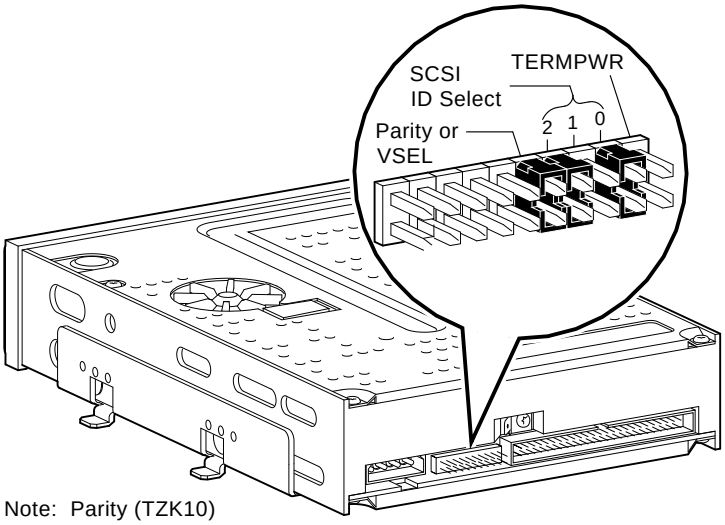


Table TZKxx–1 TZK-Series SCSI ID Jumper Settings

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.

TZKxx-HG

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 TZKxx–2. 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 TZKxx–2.
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 TZKxx–3 shows the removal of the blank bezel insert, and the installation of the Model 30 bezel insert on a Model 30 system.

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 TZKxx–2. 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*.

Figure TZKxx–2 Attaching the Dress Bezel Insert and Mounting Bracket

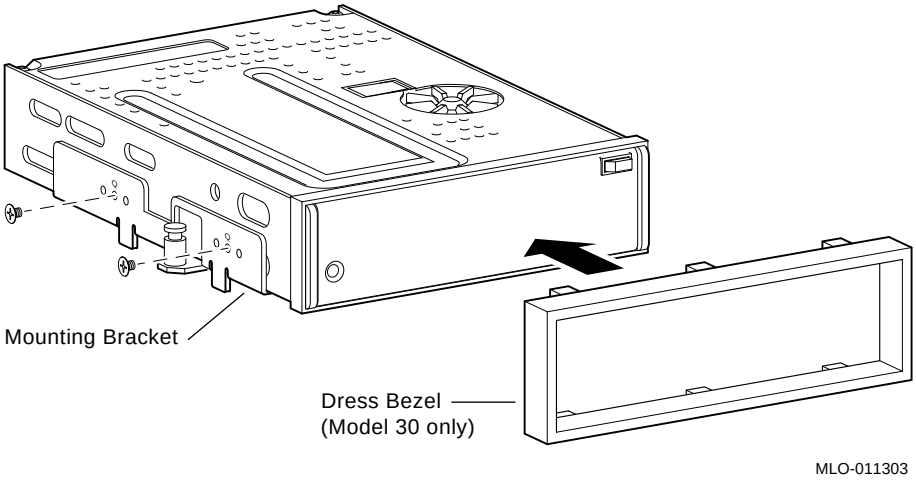
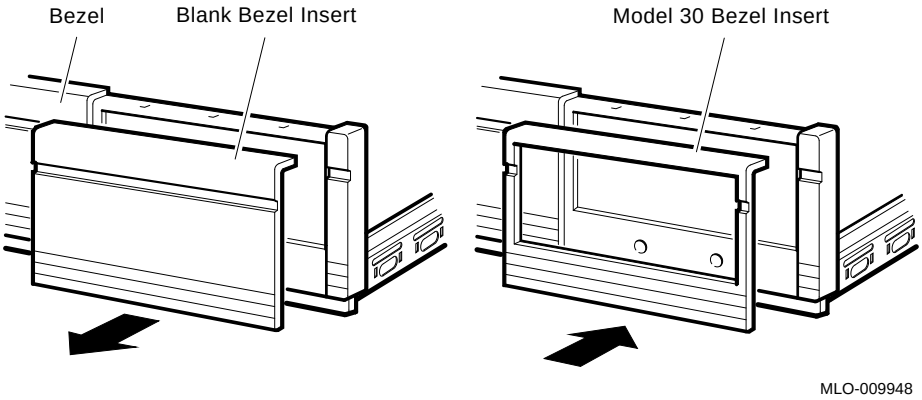


Figure TZKxx–3 Installing the Bezel Insert



2. From inside the enclosure, push out the blank bezel insert that covers the right storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert from the enclosure.

TZKxx-HG

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. From inside the enclosure, push out the blank bezel insert that covers the left storage slot on the lower drive-mounting shelf.
3. Remove the blank bezel insert from the enclosure.

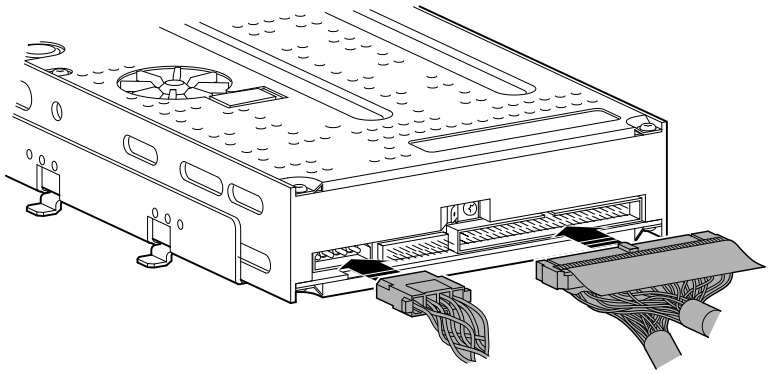
Installing the TZK-Series Option

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 TZKxx–4.)
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 TZKxx–4.)
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.

Figure TZKxx–4 Connecting the Power and SCSI Cables



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.

TZKxx-HG

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 Platform BA42A Enclosure Maintenance	EK–A0510–MG
MicroVAX 3100 Platform BA42B Enclosure Maintenance	EK–A0511–MG

How to Order Additional Documentation

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If you need help deciding which documentation best meets your needs, call 800-DIGITAL (800-344-4825) and press 2 for technical assistance.

Electronic Orders

If you wish to place an order through your account at the Electronic Store, dial 800-234-1998, using a modem set to 2400- or 9600-baud. You must be using a VT terminal or terminal emulator set at 8 bits, no parity. If you need assistance using the Electronic Store, call 800-DIGITAL (800-344-4825) and ask for an Electronic Store specialist.

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[1]Call to request an Internal Software Order Form (EN–01740–07).

Reader's Comments

MicroVAX 3100 Platform Options Supplement

EK–A0519–UD. C01

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Thank you for your assistance.

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Completeness (enough information)	☐	☐	☐	☐
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Organization (structure of subject matter)	☐	☐	☐	☐
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Examples (useful)	☐	☐	☐	☐
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Page layout (easy to find information)	☐	☐	☐	☐

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